



TAIWAN FERTILIZER CO., LTD.

CORPORATE SOCIAL RESPONSIBILITY REPORT

2017

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About this Report

This is the fourth Corporate Social Responsibility (CSR) Report published by Taiwan Fertilizer Co. Ltd. (hereinafter referred to as TFC, Taiwan Fertilizer Corporation, the Company and We). The compilation of this CSR Report was based on the guidelines set forth in the Global Reporting Initiative (GRI) and the GRI Standards Core Option.

To demonstrate TFC’s efforts and performance, our efforts made in economic, social and environmental aspects are compiled in this Report. Meanwhile, we also respond to our stakeholders’ expectations and demands in this Report, aiming at building a long-term partnership with our customers and the social groups for the promotion of social inclusion and for the objective of sustainable growth. In addition to the disclosure of related indicators of the material topics, performance and conducts in terms of Corporate Governance, Employee Care, Customer Care, Environmental Protection and Social Participation are also disclosed in this Report.

GRI 102-10,102-45,102-48,102-50,102-51,102-52,102-53,102-54,102-55,102-56

Statistics Basis of the Report

The statistical data for this Report come from TFC’s internal statistics and data collection, and are presented in International Generic Indicators. The estimates in this Report will be noted in each relevant chapter and section. All the financial data were from public consolidated financial reports audited and verified by KPMG in accordance with the International Financial Reporting Standards (IFRS), and were all calculated in New Taiwan Dollars.

The Editing, Auditing and Assurance of the Report

The accuracy and veracity of data and contents disclosed in this Report were assured by the independent and credible SGS Taiwan Ltd. with the AA 1000 Assurance standard (2008) Type 1, Moderate level assurance . Please refer to Appendix 2 for the detailed SGS Assurance Report and statements, and Appendix 3 for the GRI Content Index.

To continuously enhance the transparency in sustainability information, this Report is available in both English and Chinese, and the contents of this TFC CSR Report can also be downloaded on TFC’s official website in Corporate Sustainability Section. In the future, the CSR Report with third-party assurance will continue to be published annually to actively disclose TFC’s mission, commitment, strategy, specific practices and future objectives concerning sustainability to our stakeholders for effective stakeholder engagement, laying important cornerstone of sustainable development for the enterprise.



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Restatement of Information

Restatement of some historical data in this Report due to changes in calculation methods or information after external verification would be described in the text.

Major Changes in Ownership

- PeiFeng Technology & Fertilizer. Co. Ltd. which TFC has 100% ownership of was established on June 6, 2017. The nature of business includes the manufacturing and wholesale of fertilizers.
- Mitagri Co., Ltd changed from TFC's 100% owned subsidiary to an invested company of which TFC holds 33% of share in August, 2017.

Reporting Period

From January 1st to December 31st, 2017.

Boundary of Reporting

TFC's CSR Report covers the economic, social and environmental performance of TFC's Taipei Head Office and the factories in Keelung, Miaoli, Taichung and Hualien. Part of the information disclosure includes that of subsidiaries included in the consolidated financial statements with TFC and TFC invested enterprises, excluding the invested enterprises of Hasbo Biotech Co., Ltd, TAIFER (CAYMAN) INTERNATIONAL GROUP CO., LTD., and TAIFER INTERNATIONAL (SAMOA) CO., LTD.

The disclosure of financial performance includes consolidated financial statements with TFC and TFC invested enterprises.

Report Release Schedule

- Previous edition: June, 2017
- Current edition: June, 2018



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Message from the Chairman

As the leading fertilizer manufacturer in Taiwan, TFC shoulders the heavy responsibility of assisting the national agricultural development. We also respond to the Sustainable Development Goals (SDGs) and work in line with the government’s sustainable development policy. We constantly innovate and work on R&D while preserving the crop production efficiency to provide more environmentally friendly fertilizer products and agricultural materials, aiming at the goal to promote Taiwan to become a treasure island with eco-friendly agriculture, bringing a win-win-win situation to the soil, farmers and society and jointly create an environmentally friendly, safe and healthy world.

GRI 102-14

Integrity Management and Strong Governance

In 2017, TFC was awarded TCSA's Taiwan Top 50 Corporate Sustainability Reports-Gold Award in the Traditional Manufacturing Industry Category and Social Inclusion Award. In addition, we were also ranked in the Annual Corporate Governance Evaluation the top 20% of TWSE/TPEX listed companies for four years in a row, indicating the affirmation of our corporate governance performance.

In order to implement the principle of shareholder equality, TFC formulates and publishes its Annual Financial Statements, Annual Reports, the Shareholders’ Meeting Agenda Handbook, and both Chinese and English Corporate Social Responsibility Reports. In addition, we also release immediate operational information in English on our official website every month to ensure all our shareholders can obtain public, transparent and immediate information of the Company. Furthermore, based on the Articles of Incorporation, TFC implements the candidate nomination system for the election of directors and independent directors. In 2018, the Company plans to set up an Audit Committee during the re-election process of the 34th session of the BOD and adjust the seats for independent directors to three, which will further improve the corporate governance system of the Company.

To balance economic and environmental sustainability, in recent years, TFC has been committed to reducing costs and enhancing market competitiveness while at the same time upgrading its products and technical services comprehensively. Over the past year, with the efforts of all employees, TFC successfully turned deficit into surplus, making the operations more stable. At the same time, TFC was also awarded the Top 500 Excellent Taiwan Exporters & Importers in 2017 by Bureau of Foreign Trade, MOEA. TFC also promoted the Fertilizer Demonstration Field Project with ASEAN countries and the test results were fruitful and received positive feedback from the market. Currently, the Company is implementing a production expansion plan of eco-friendly fertilizers (namely the “Investment Plan of West Wharf Area, West 10 of Taichung Harbor) to actively make the deployment in the international market. It is expected that after the commencement in 2020, it can not only meet the fertilizer demands in the domestic market, but also enable the eco-friendly fertilizer products to be marketed to Southeast Asian countries.



Friendly Agriculture and Innovative Services

Under the joint promotion of TFC and the government, Taiwan has the highest prevalence rate of organic compound fertilizer in the world. With the philosophy of eco-friendly farming, we continuously work on innovative R&D. In 2017, TFC successfully introduced “Hay Won” nitrophosphate organic compound fertilizer series and Phosphorus-based Biotech Organic Compound Fertilizer series, which not only have the dual effect of improving the agricultural ecological environment and improving the farmers’ income, making it an important turning point for Taiwan’s eco-friendly agriculture to reach the policy of changing traditional chemical fertilizers to organic ones comprehensively.

Furthermore, TSF not only set up organic demonstration farms, we even cooperated with external organic farms and communities to jointly conduct trials with the organic cultivation techniques and organic materials set up by TFC so as to reduce the barriers for farmers to apply organic cultivation and expand Taiwan’s organic farming area. We also signed a strategic alliance agreement with K.K. Orchard to conduct field organic experiments with its contracted farmers’ thousands of hectares of land to jointly promote Taiwan’s organic fertilizers and agricultural products to overseas markets.

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To comprehensively improve service quality, TFC implemented a number of service innovation and upgrade plans internally, such as the first production recording and tracking system for fertilizers, round the clock delivery service and a complete service network. Meanwhile, the Company also expanded the hardware facilities in the factories and efficiently dispatches manpower. Externally, TFC actively handles fertilizer storage operations and successively established fertilizer supply centers throughout Taiwan to increase the convenience for farmers and to respond to the government's policy of unifying the national fertilizer prices for farmers to reduce farmers' costs. Our innovative services from raw material safety, production management, shipment and supply to after-sale services have significantly improved our overall service quality.

Resources Recycling and Green Economy

In terms of the R&D of fertilizers, TFC not only continues the R&D of microbial fertilizers, it even launched its 10 Biotech Organic Fertilizer in August 2017, which can effectively accelerate the conversion of rice stalks into soil organic fertilizers, improving the environmental problem of PM 2.5 caused by incineration of straw. In addition, we also use the core fertilizer production technology to turn biogas residues into fertilizers and launched the 12 Biotech Organic Fertilizer in October the same year to prevent problems of water pollution.

At the same time, in terms of the electronic grade chemicals, the Green Circular Park was established in TFC's Miaoli Factory, and in 2017, the Company even successfully made breakthroughs in the purification technology of electronic grade chemical NMP, innovating the business model to a one-stop service from providing electronic grade chemicals to the recycling of them, solving the customers' problems of treating the electronic liquid waste.

Our Hualien Factory has been making every effort to develop the deep ocean water (DOW) industry from water extraction, cold energy utilization, and raw material development to the application of the energy saving DSW multi-stage culture system and the safe and healthy aquaculture model. The Company even signed a 5-year university-industry cooperation agreement with National Cheng Kung University with its academic strength and strong R&D capacity. Cheng Kung University's R&D team for prawn farming will be stationed at the Hualien Factory in 2018, activating the DOW industry and also the land use of the Hualien Factory.

TFC will continue the promotion of the use of recycled raw materials and recycling of resources to create a profitable circular economy business model which not only separates economic development from resource consumption but also promote the common prosperity and benefits of the enterprise and society.

Value Creation and Social Care

Taiwan Fertilizer not only plays the roles of the producer and supplier, but also the bridge linking the land and the farmers in Taiwan. Starting from the basic agricultural education of crops and fertilizer applications, TFC holds a series of education lectures on sustainable agriculture, fertilization demonstration fields and soil testing activities to help farmers to implement rationalization of fertilization. Meanwhile, Taiwan Fertilizer Foundation also provides "Scholarship for the Agricultural Operation Plan" to encourage young students to combine business management and agricultural management, aiming at cultivating more vital forces for agriculture in the society.

For more than seven decades, Taiwan Fertilizer has always considered itself the "good partner of farmers and the guardian of the land", taking the needs of the farmers and eco-friendly land as the priority. In the face of the challenges and transformation of eco-friendly agriculture, we do not choose to stick to old rules, instead, we accelerate the R&D and innovation, being committed to promoting the green innovation of fertilizers and agricultural materials. Looking into the future, as an enterprise to lead national agriculture, we will follow the green trend in the international community, innovate and update our products and services, working on the promotion of industrial upgrading in the country. In addition, we will also make efforts to fulfill our corporate social responsibility in the fields of sustainable agriculture, environmental protection, employee care, agriculture education and charitable activities by working with the Taiwanese society to safeguard sustainability.



Chairman of Taiwan Fertilizer Co., LTD.

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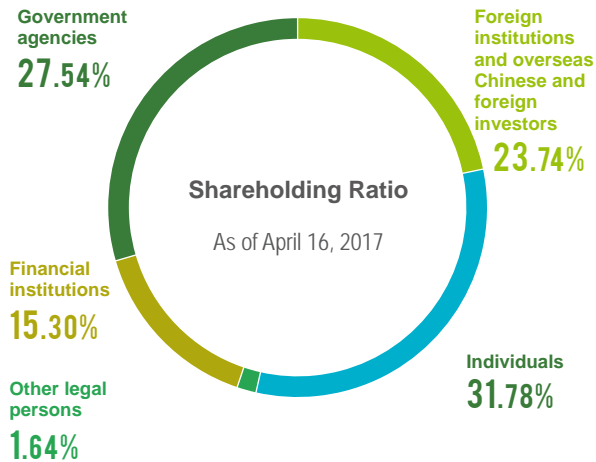
GRI 102-1,102-2,102-3,102-4,102-5,102-6,102-7,102-16

About TFC

Taiwan Fertilizer Co., Ltd. was established on May 1st, 1946. Originally a state-owned enterprise responsible for manufacturing and supplying domestic fertilizer products in line with the government's agricultural policy, TFC has established the largest scale of modern fertilizer production. TFC was successfully transformed into a listed private corporation on September 1st, 1999. The Head Office is located in Zhongshan District, Taipei, Taiwan.

The main business of TFC includes manufacturing and sale of fertilizer products (single super phosphate, nitrophosphate organic compound fertilizer, organic compound fertilizer, ammonium sulphate), chemical products (nitric acid) and import sales and procurement of liquid ammonia, urea, potassium chloride, and electronic chemicals, providing high-quality products and services to meet the full range of needs of farmers and all the customers. At the same time, TFC also adopts the diversification strategy and expands to real estate development and the deep ocean water (DOW) industry to continuously pursue growth of the operating profits and has achieved great results in economic, environmental and social aspects.

Shareholder Structure



Company Profile

| | | | |
|---------------------------|---|---|-------------------------|
| Capital | NTD 9.8 billion | Consolidated revenue | NTD 11,658,986 thousand |
| Fertilizer business scale | Taiwan's largest fertilizer manufacturer and supplier | Net income after tax | NTD 1,619,126 thousand |
| Chemical business scale | Taiwan's largest liquid ammonia supplier Taiwan's largest nitric acid supplier | Production of major fertilizer products | 863,448 metric tons |
| Production bases | 3 (Taichung Factory, Miaoli Factory, Hualien Factory) | Number of employees | 677 |



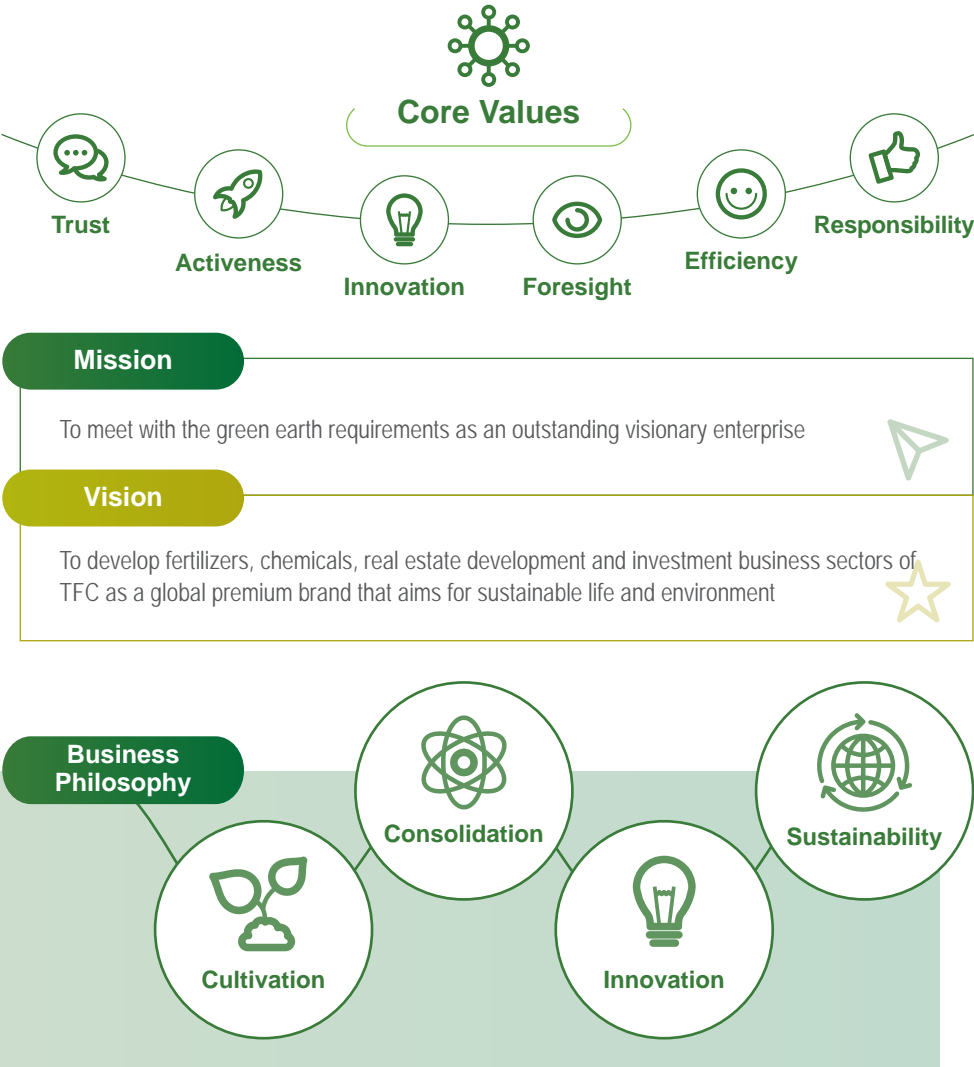
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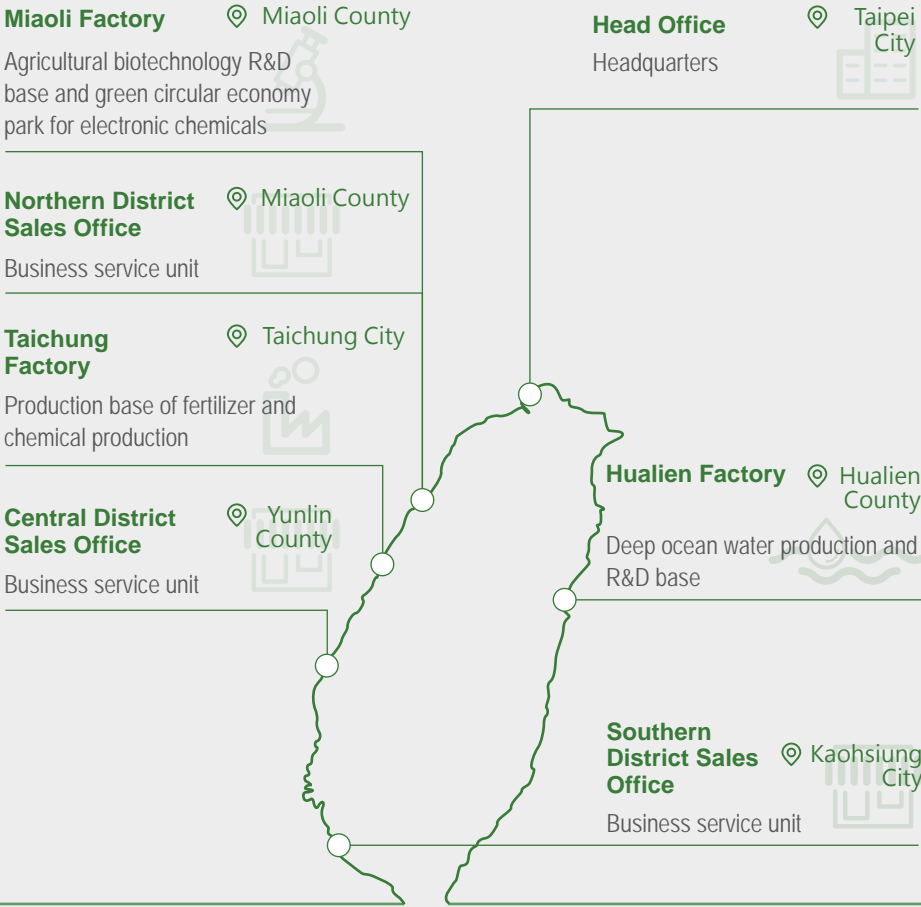
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Corporate Culture



Business Bases

In recent years, TFC has successfully integrated various production bases. Currently, our Taichung Factory is the production base of fertilizer and chemical production, Miaoli Factory serves as the agricultural biotechnology R&D base and green circular economy park for electronic chemicals, and Hualien Factory serves as the production and R&D base for deep ocean water.



With the industrial transformation and urban expansion, TFC is now actively working on the land activation development projects of the old production factories, including Nankang, Keelung Factory 1, Keelung Factory 2, Hsinchu Factory, and Kaohsiung Factory after the relocation.

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Major Products and Markets

Market : Taiwan Southeast Asia Europe and America



Fertilizer

- Single nutrient fertilizers
- Organic compound fertilizer series
- “Hey Won”nitrophosphate organic compound fertilizer series
- Biotec organic compound fertilizer
- Organic fertilizer series
- Instant water soluble fertilizer series
- Biopower stimulants series
- Taifer biopower phosphate-solubilizing bacteria biofertilizer
- Dolomite



Chemical products

- Urea for Industrial
- Melamine
- Sulfamic acid
- Anhydrous ammonia
- Nitric acid
- Sulfuric acid
- Oleum
- Chemical storage service



Real estate

- Residential real estate
- Commercial real estate



Resale of urea

- Urea



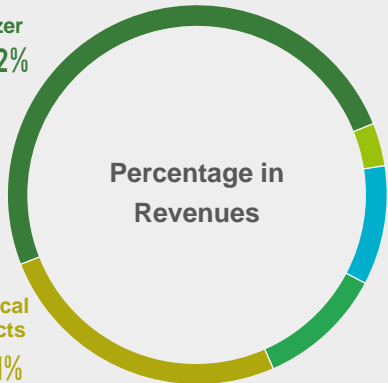
Electronic Chemical products

- Etchant series
- Photoresist Stripper series
- Cleaner series
- Organic solvent series



Fertilizer
49.42%

Chemical products
27.81%



Electronic chemical products
2.31%

Resale of urea
7.51%

Real estate
12.95%

Group Overview

Al-Jubail Fertilizer Company

Founded in 1979, Al-Jubail Fertilizer Company is a successful example of joint venture by TFC and Saudi Basic Industries Corporation (SABIC). It mainly manufactures products of urea, 2-EH and DOP, enabling TFC to obtain stable revenues with low cost of raw materials.

Taifer Chemicals International Inc.

Taifer Chemicals International Inc. is mainly responsible for the development of real estate. In addition to the management of gas stations in Keelung and Miaoli, it also manages the commercial office building of “Taiwan Hall” in Ulaanbaatar, the capital of Mongolia. In the future, it will actively participate in the development and management of TFC’s self-owned or self-developed real estate.

PeiFeng Technology & Fertilizer. Co. Ltd.

PeiFeng Technology & Fertilizer. Co. Ltd. was approved to be established on June 6, 2017, mainly responsible for the production of nitrophosphate organic compound fertilizers and assisting TFC in the implementation of chemical trading business.

Taiwan Yes Deep Ocean Water Co., Ltd.

Taiwan Yes Deep Ocean Water Co., Ltd. mainly develops deep ocean water (DOW) related products. It is devoted to becoming an expert in deep ocean minerals to introduce the health benefits of the natural deep ocean minerals to people all over the world. With the most advanced process technology, automated equipment and the largest deep ocean water manufacturing factory in Asia, Taiwan Yes produces high-quality deep sea natural minerals and high-quality packaged drinking water, deep sea salt and other deep ocean water series products.

Mitagri Co., Ltd¹

The purpose of the establishment of Mitagri Co., Ltd. is to restructure the export supply chain of the agricultural products and strengthen the international marketing of Taiwan’s agricultural products. At present, it is committed to constructing an export system with stable supply and ensured quality, strengthening Taiwan’s agricultural production, collection, quality management, branding and overseas marketing, and striving to improve the “arrived quality” when it comes to export. The operational objective is to expand the penetration rate of the existing export markets, expand the emerging export markets and strengthen the weak exporting items.

Taifer (Cambodia) Co. Ltd.

Taifer (Cambodia) Co. Ltd. is mainly responsible for the import and export sale of the local fertilizer in Cambodia, aiming at speeding up the promotion of fertilizer and grasping the demands of fertilizer to facilitate the export of TFC’s excellent fertilizer products as well as the fertilizer management techniques to ASEAN countries.

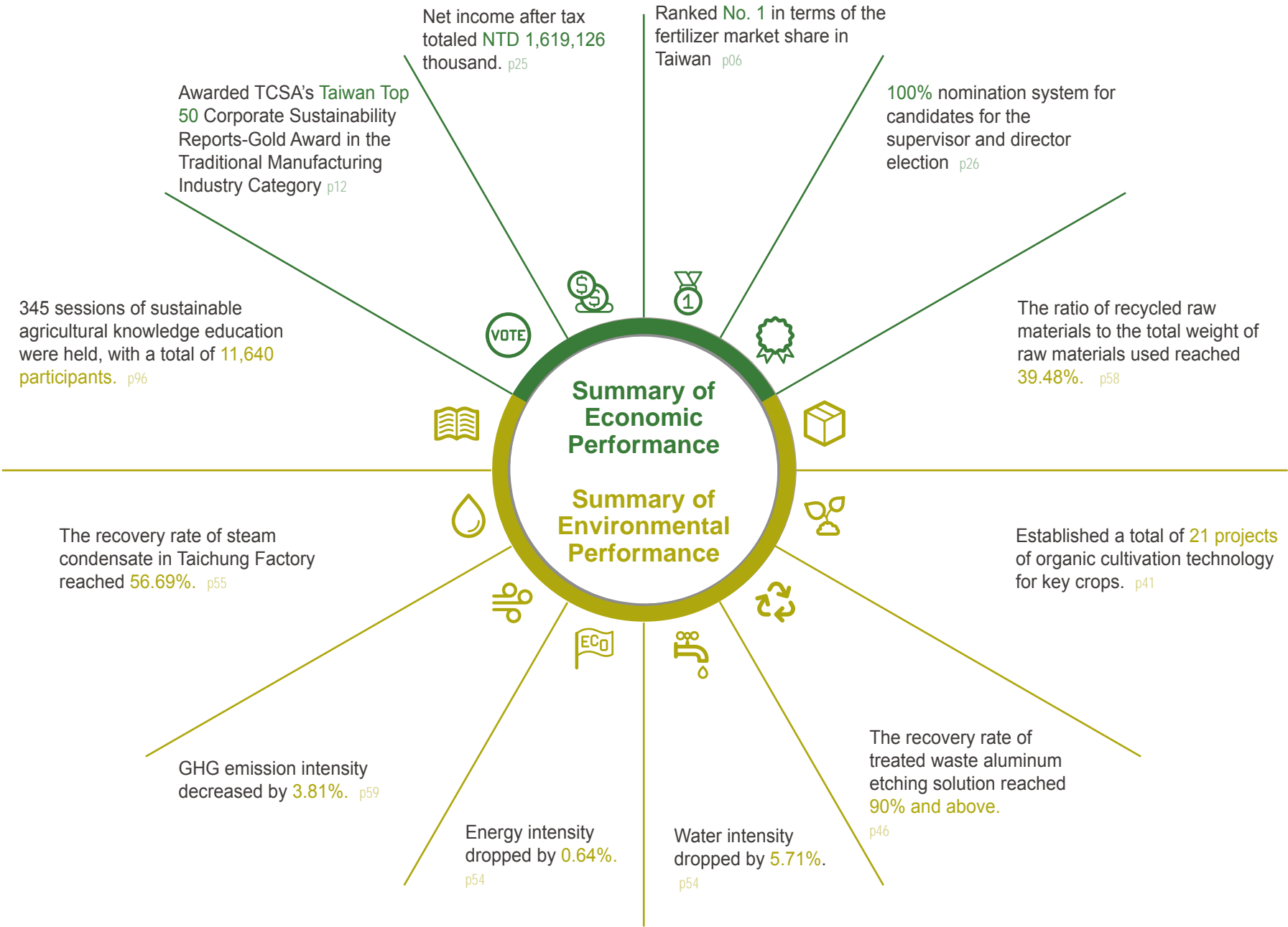
Note1 : Mitagri Co. Ltd. was changed to an invested company of which TFC holds 33% of share in August, 2017.

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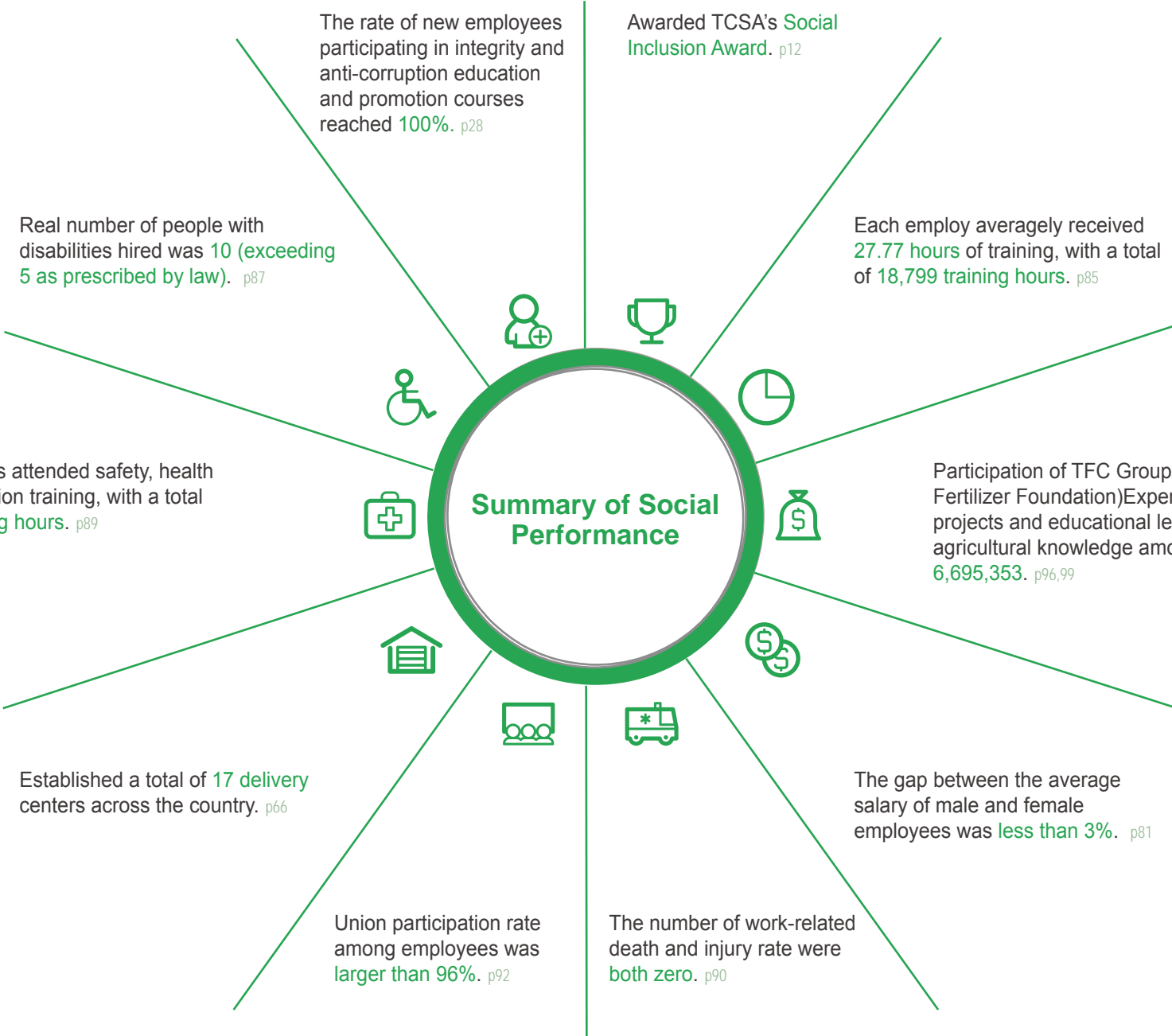


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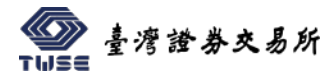
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1-1 Awards and Recognition



Ranked top 20% in the Annual Corporate Governance Evaluation for four consecutive years.

Organizer: Taiwan Stock Exchange

Starting from 2014, TFC was ranked top 20% in the Annual Corporate Governance Evaluation for four consecutive years, showing TFC's great performance in corporate governance, safeguarding shareholders' rights and interests, strengthening the structure and operation of the BOD and enhancement in information transparency.



Awarded TCSA's Taiwan Top 50 Corporate Sustainability Reports-Gold Award in the Traditional Manufacturing Industry Category

Organizer: Taiwan Institute for Sustainable Energy (TAISE)

TFC was awarded 2017 TCSA's Taiwan Top 50 Corporate Sustainability Repots-Gold Award in the Traditional Manufacturing Industry Category, which fully shows the transparency and completeness of the disclosure of our corporate information.



Social Inclusion Award

Organizer: Taiwan Institute for Sustainable Energy (TAISE)

TFC has independently invested its corporate resources in agricultural villages and towns to organize workshops on rationalization of fertilization and fertilizer demonstration fields for the education of sustainable agriculture, which has profound social contributions. In 2017, TFC was awarded TCSA's Social Inclusion Award.



Bronze Tower Prize of the 30th National United Circle Competition

Organizer: TCorporate Synergy Development Center

This competition is held to evaluate the internal organization quality or innovative practices and effectiveness among enterprises. TFC set the theme of "Establishment and Integration of the Product Recording and Tracking" and won the Bronze Tower Prize of the 30th National United Circle Competition in 2017.



Selected the Top Benchmark 30 Companies in CSR

Organizer: CSRone

CSRone ranked 286 enterprises that compiled CSR reports for three consecutive years (2015-2017), among which 43 enterprises are in the financial industry, 96 in the technology industry, 115 in the traditional industry and 32 in the service industry. TFC was ranked the TOP 30 benchmark enterprises.



Obtained certification for organic produce

Organizer: MOA International

TFC established an organic demonstration farm in Miaoli in 2014. In 2017, the demonstration farm obtained the organic certification in April and established a database of organic agricultural cultivation techniques, becoming a representative organic farm in Taiwan.



Selected Top 500 Excellent Taiwan Exporters & Importers

Organizer: Bureau of Foreign Trade, MOEA

TFC was awarded Top 500 Excellent Taiwan Exporters & Importers in 2016.

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1-2 CSR Development Visions and Organization Structure

GRI 102-32,102-33

CSR Development Vision

TFC established the CSR Committee in 2015 to integrate existing internal resources and to learn from the examples of domestic and foreign leading companies to develop sustainable strategies based on the issues that are of the interest to the stakeholders, aiming at gradually fulfilling the vision of sustainable development.



☆ Our vision

• TFC's vision of sustainable development is based on "Taking into account the sustainable business model for the economy, environment and society, reaching the world from Taiwan and becoming a global brand of excellence."

✎ Our action plans

- Implementing a sustainable business management structure to enhance the transparency, accuracy and immediacy of disclosed information, provide smooth communication channels for the stakeholders, enhance the corporate culture of integrity and ultimately implement the integrity management policy shared by all personnel from top to bottom for the practice of ethical integrity.
- Promoting suppliers' CSR management to urge the suppliers to implement environmental protection, improve safety and health, attach importance to human rights, establish a complete and diverse customer service mechanism to maintain customer relationships, provide smooth customer service channels and optimize production quality through feedback from customers to reinforce market competitiveness and enhance customer satisfaction.
- Developing R&D of organic agricultural technology in response to the development trend, actively developing organic fertilizer products and promoting organic farming. In terms of products, we make efforts to develop eco-friendly fertilizers that take into account fertility effects, land protection and environmental protection to enable the development of sustainable agriculture in Taiwan.



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Operation Method of the Corporate Social Responsibility Committee

This CSR Committee, headed by the Chairman of the Board as the steering committee member, with the president serving as the Committee chairman, vice president as the committee vice chairman, and the committee members include the assistant vice presidents, division chiefs, and plant managers. The operation direction and the supervision results of the Group and the functional committees are reviewed through regular meetings and relevant mechanisms. The implementation results are reported to the BOD on a regular basis.

- | | |
|---------------------------------|---|
| Representative | Steering committee member: Chairman |
| Approval of CSR policies | Board of Directors |
| Mode of implementation | <ul style="list-style-type: none">• CSR Committee: Determination of CSR policy directions and development of CSR policy• Each Sub-committee: Setting key performance indicators (KPI), action plans and budgeting for each unit to promote and implement based on its responsibility, and evaluation of the performance will also be reviewed• CSR Secretariat under the Board office: It is responsible for handling CSR education and training on a regular basis and assisting the Committee in the development and implementation of CSR policies |
| Approval of the Report | <ul style="list-style-type: none">• After CSR Secretariat under the Board office collects the information of each department for the compilation of the Report, the information is submitted to the Committee for revision and amendment• The Report is finalized and published after being read and approved by the chairman• It will also be submitted to the board for future reference |

CSR Organization Chart



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1-3 Interaction with and Management of Stakeholders

TFC has established transparent and diverse communication channels to engage in communication with our stakeholders. We focus so much on the stakeholders' interests that we even include their interests in the business development strategy to serve as a reference for the company's operation decisions, and take specific actions to respond to their needs.

GRI 102-18,102-19,102-20,102-21,102-31,102-33,102-40,102-42,102-43,102-44,102-46,102-47

Dialogue with Stakeholders

Through the internal discussions and by referring to the five major principles set forth in AA1000 SES Stakeholder Engagement Standards, TFC's CSR Committee implemented the identification process and materiality rating and identified eight major categories of stakeholders closely related to the operation. TFC takes multiple opinions and suggestions through multiple communication channels.

Issues of Concern and Communication Channels

| 1. Employees | | | | Our employees are our most important assets. We listen to the voice of the staff. We make immediate response to their issues of concern and fulfill the responsibility to take care of them | |
|---|--------------|---|---|---|--|
| Communication Channel | Frequency | Issues of Concern | Responses of TFC | | |
| Labor conference | Quarterly | Occupational safety and health | The OHSAS 18001 and CNS 15506 Occupational Safety and Health Management System Certification were introduced to implement employees' physical and mental education and training and health check programs to continuously improve safety and health performance | | |
| Trade Union / Employee Welfare Association | Quarterly | | | | |
| Internal website | At all times | Communication between employers and employees | Labor conferences were regularly held to ensure smooth communication channels. The Company's business philosophy and goals are conveyed to the employees through Taifer Quarterly | | |
| Employee grievance mailbox/ grievance hotline | At all times | | | | |
| Internal improvement proposal system | At all times | Talent retention and career development | TFC has provided competitive salary systems, developed career-related training courses and implemented performance management | | |
| Taifer Quarterly | Quarterly | | | | |



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Issues of Concern and Communication Channels

2. Government/ Competent authority

Council of Agriculture, Executive Yuan is the largest shareholder of TFC, which directly affects the execution and implementation of policies of TFC's agriculture and the sustainable environment

| Communication Channel | Frequency | Issues of Concern | Responses of TFC |
|---|------------|------------------------------------|---|
| State-owned shareholder meeting | Occasional | Sustainable food | <ul style="list-style-type: none">To cooperate with the government to promote the policy of developing organic fertilizer products, TFC have developed 8 organic fertilizer products. Internal and external organic demonstration farms have been set up and organic cultivation techniques and quality control procedures have been established. In 2017, TFC carried out the policy to comprehensively make conventional fertilizers into organic ones, making Taiwan the first country in the world that uses organic fertilizers commonly |
| Competent authority meeting | Occasional | | |
| Government audits | Occasional | | |
| Occasional meetings related to the business (Symposiums / Seminars/ Public Hearings / Forums) | Occasional | Circular economy | <ul style="list-style-type: none">We make continuous use of agricultural waste resources such as rice straws and biogas residues as raw materials for the production of organic fertilizers; TFC set up the "Green Circular Park for Electronic GradeChemicals" at Miaoli Factory, and the "Environmental Protection and Energy Saving Deep Water Park" at Hualien Factory to fully develop the circular economyThe chemical production base of TFC, Taichung Factory, introduced ISO 50001 to continuously improve energy performance and introduced ISO 14064-1GHG inventory system for energy declaration and voluntary GHG inventoryIn response to the compliance with regulations regarding environmental safety, labor,Company Act and Securities and Exchange Act , internal systems and regulations are established to avoid violations of government regulations |
| Exchange of official documents | | Energy saving and carbon reduction | |
| | | Compliance | |

3. Shareholders

Shareholders are the owners of TFC, whose interests and the company's operating performance are closely related. Therefore, the shareholders have high expectations in TFC's performance in terms of economic, environmental and social aspects

| Communication Channel | Frequency | Issues of Concern | Responses of TFC |
|---|--------------|----------------------|---|
| Shareholders' meeting | Annual | Economic performance | <ul style="list-style-type: none">TFC not only aims to reduce costs and increase market competitiveness, but also comprehensively upgrades its products and technical services. In 2017, the fertilizer and chemical industry hit a peak in nearly 10 years. In addition, TFC is carrying out an expansion plan for fertilizer production capacity, which not only meets the fertilizer demand for domestic farmers, but also actively works on the layout of the international market, enabling the Company to gradually grow in stable operations |
| Investor conference | Occasional | | |
| Shareholder mailbox / Dedicated personnel for shareholder services | At all times | | |
| Major information on Market Observation Post System andTFC official website | At all times | Corporate governance | <ul style="list-style-type: none">TFC has established a complete corporate governance system that discloses open and transparent corporate governance related information instantly for communication |
| Financial report | Quarterly | | |

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Issues of Concern and Communication Channels

4. Fertilizer customers

Fertilizer business is our foundation. We make continuous progress and promote growth momentum by understanding customers' needs and ideas

| Communication Channel | Frequency | Issues of Concern | Responses of TFC |
|------------------------------|--------------|-----------------------------------|--|
| Customer satisfaction survey | Annual | Customer service and satisfaction | <ul style="list-style-type: none">We have improved overall customer satisfaction through strategies such as the innovation of technology and services,strict control of production and marketing processes and strengthening customer service mechanismOur products are fully compliant with the Trademark Law and Fertilizer Management Act. We provide full information of the products and the instructions on the labeling. We also cooperate with government agencies to conduct regular or irregular inspections. There were no violations of marketing regulations in 2017 |
| Customer audit | Occasional | | |
| TFC official website | At all times | Marketing labeling | |
| Customer Service Hotline | At all times | | |
| Taifer Quarterly | Quarterly | | |

5. Farmers

Farmers are end-users of the Company's products. We make continuous progress and obtain growth momentum by understanding their ideas and needs

| Communication Channel | Frequency | Issues of Concern | Responses of TFC |
|--|--------------|------------------------------|---|
| TFC official website | At all times | Customer's health and safety | <ul style="list-style-type: none">All the products accept strict raw material and labeling inspections in accordance with the relevant domestic product regulations before they can be distributed to each channel |
| Customer Service Hotline | At all times | | |
| Taifer Quarterly | Quarterly | Sustainable food | <ul style="list-style-type: none">With the concept of taking into account the environment and agricultural productivity, TFC is fully committed to the development of eco-friendly product research and organic cultivation techniques. In addition, we organize sustainable agricultural education in agricultural towns to protect the agricultural environment and improve the efficiency of agricultural production |
| Rationalization of Fertilization Workshops | Occasional | | |
| Product briefing | Occasional | | |

6. Suppliers

The quality of the products and services provided by the suppliers directly affects the performance of the operation and production of TFC. We establish good communication channels with suppliers to make efforts for the common interests of both sides and to achieve the goal of sustainable growth.

| Communication Channel | Frequency | Issues of Concern | Responses of TFC |
|--------------------------------------|--------------|---------------------|---|
| TFC official website | At all times | Supplier management | <ul style="list-style-type: none">We have developed "Supplier Management Rules" and "Guidelines on New Bulk Raw Material Suppliers Review"to regulate the development, selection and assessment of suppliers to ensure stable quality of materials and material sources.For three years in a row, the results of supplier assessment scored better than the passing score in every aspect |
| Supplier evaluation questionnaire | Annual | | |
| Annual Supplier Conference | Annual | | |
| Visits to suppliers or mutual visits | Occasional | Anti-corruption | <ul style="list-style-type: none">We arrange integrity and anti-corruption advocacy courses in orientation training on a regular basis every year, and the training ratio of new staff reaches 100%. The report system and related treatment methods are established |

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Issues of Concern and Communication Channels

| 7. Chemical customers | | | | Chemical business is our foundation. We make continuous progress and obtain growth momentum by understanding our customers' ideas and needs. |
|--------------------------------------|--------------|---|---|--|
| Communication Channel | Frequency | Issues of Concern | Responses of TFC | |
| Customer satisfaction survey | Annual | Environmental management and pollution prevention | <ul style="list-style-type: none">TFC has established a complete Environmental Safety and Health Organization and internal regulations and completed the establishment and verification of the ISO 14001 Environmental Management system at the Taichung Factory and Miaoli Factory. Each year, through the PDCA(Plan-Do-Check-Act) management model, we invest environmental protection budgets in various environmental improvement measures to achieve the goal of improving environmental performanceWe conduct the internal self-review for improvement of past violations and require the units and personnel in charge to strictly abide by the laws and regulations to avoid similar situations from happening again |  |
| Customer audit | Occasional | | | |
| TFC official website | At all times | | | |
| Customer Service Hotline | At all times | Environmental compliance | | |
| Taifer Quarterly | Quarterly | | | |
| Visits to suppliers or mutual visits | Occasional | | | |

| 8. Real estate customers | | | | Real estate is one of the major businesses of TFC. We listen to the real estate customers' feedback and opinions to know our customers' demands and make continuous progress |
| Communication Channel | Frequency | Issues of Concern | Responses of TFC | |
| TFC official website | At all times | Economic performance and legal compliance | - The operation of TFC is stable. We are seeking an interactive model with the community in the commercial and residential use of land. While developing, TFC complies with all the laws and regulations and fully communicates with its stakeholders. Furthermore, business activities after development can also boost the local economic development and create local job opportunities. In addition, in the process of land asset activation, we can share the benefits brought by development with local residents, creating a win-win situation | |
| Customer Service Hotline | At all times | | | |
| Review meeting | Occasional | Customer privacy | - We set up the "Personal Data Protection Management Committee" to develop the policy and system for personal data protection and they are strictly enforced in accordance with the Implementation Points of Confidentiality and Personal Data Protection Act | |
| Customer satisfaction survey | Annual | | | |

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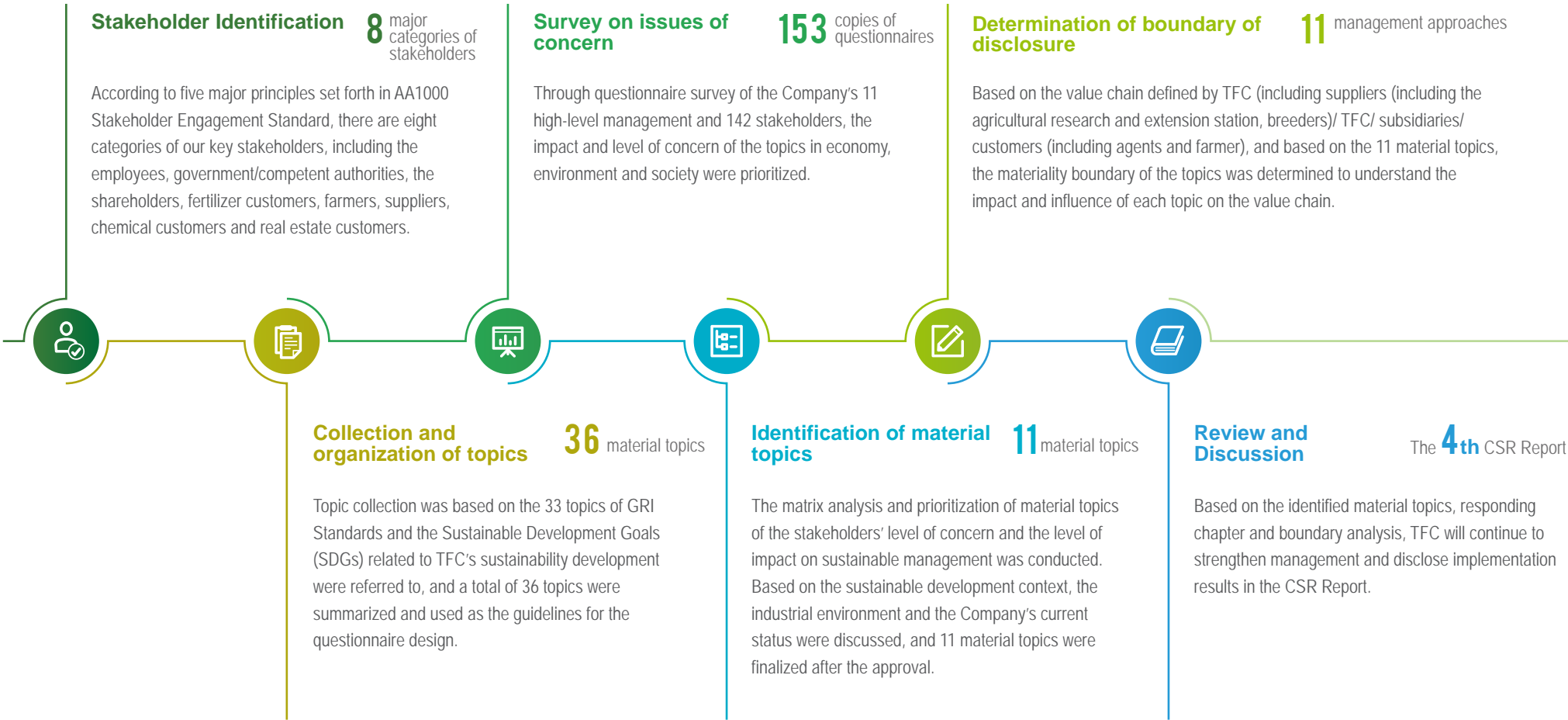
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Appendix

Identification of Material Topics and Boundary

TFC complies with the GRI Standards issued by Global Reporting Initiative (GRI) for the identification process of material topics of sustainable development as the basis for the disclosure of the CSR Report to respond to the stakeholders by providing information they desire to obtain.

Identification process of material topics and boundary



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Materiality Matrix



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Chapters and sections disclosing material topics and description of the boundary and consideration

| |  Economic Aspect |  Environmental Aspect | | | | |
|------------------------------------|---|---|--|--|--|---|
| Material topics | Economic Performance | Effluents and Waste | Emissions | Circular Economy | Environmental Compliance | Energy |
| The corresponding index | <ul style="list-style-type: none">• GRI 201-1• GRI 201-3 | <ul style="list-style-type: none">• GRI 306-1• GRI 306-2 | <ul style="list-style-type: none">• GRI 305-1• GRI 305-2• GRI 305-5• GRI 305-7 | <ul style="list-style-type: none">• GRI 301-2• SDGs Goal 12: Ensure sustainable consumption and production patterns• 12.4 Sound management of chemicals and all wastes• 12.5 Waste reduction, recycling and reuse | <ul style="list-style-type: none">• GRI 307-1 | <ul style="list-style-type: none">• GRI 302-1• GRI 302-3• GRI 302-4 |
| The Boundary | Within the organization: TFC/ subsidiaries | Within the organization: Taichung Factory, Miaoli Factory Outside the organization: Raw material suppliers, waste treatment service providers | Within the organization: Taichung Factory, Miaoli Factory Outside the organization: Waste treatment service providers | Within the organization: Miaoli Factory, Hualien Factory Outside the organization: Taichung istrict Agricultural Research and Extension Station, Council of Agriculture, Executive Yuan, breeders, raw material suppliers | Within the organization: TFC, Taiwan Yes' subsidiaries Outside the organization: Raw material suppliers, agents, and contractors | Within the organization: Taichung Factory, Miaoli Factory |
| Chapter and Section in this Report | <ul style="list-style-type: none">• 2-1 Business Management• 7-2 Salary and Benefit System | <ul style="list-style-type: none">• Chapter 5 Energy Conservation, Environmental Protection and Environmental Management• 5-5 Waste Management | <ul style="list-style-type: none">• Chapter 5 Energy Conservation, Environmental Protection and Environmental Management• 5-4 Greenhouse Gas Management | <ul style="list-style-type: none">• Chapter 4 Resource Recycling and Green Economy• 4-1 Green Circular Park in Miaoli• 4-2 Environmental Protection and Energy Saving Deep Water Park in Hualien• 4-3 Diverse Usage of Renewable Raw Materials for the Creation of New Value of Waste Resources• 5-3 Raw Material Management | <ul style="list-style-type: none">• 2-4 Legal Compliance | <ul style="list-style-type: none">• Chapter 5 Energy Conservation, Environmental Protection and Environmental Management• 5-2 Energy Resource Management |
| |  Social Aspect | | | | | |
| Material topics | Sustainable Food | Marketing and Labeling | Customer Health and Safety | Socioeconomic Compliance | Local Communities | |
| The corresponding index | <ul style="list-style-type: none">• SDGs Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture• 2-3 Provide a safe and fair production environment and increase rural income• 2-4 Ensure sustainable food production systems | <ul style="list-style-type: none">• GRI 417-1• GRI 417-2• GRI 417-3 | <ul style="list-style-type: none">• GRI 416-1• GRI 416-2 | <ul style="list-style-type: none">• GRI 419-1 | <ul style="list-style-type: none">• GRI 413-1• GRI 413-2 | |
| The Boundary | Within the organization: TFC Head Office, Taichung Factory, Miaoli Factory Outside the organization: Cooperative pilot farms, farmers | Within the organization: TFC, Taiwan Yes' subsidiaries Outside the organization: Suppliers ,agents | Within the organization: TFC, Taiwan Yes' subsidiaries Outside the organization: Suppliers ,agents, consumers | Within the organization: TFC | Within the organization: Taiwan Fertilizer Foundation, Head Office, Taichung Factory, Miaoli Factory, Hualien Factory, old Keelung Factory, old Hsinchu Factory, old Nankang Factory, old Kaohsiung Factory (old factories refer to the land development projects). Outside the organization: Agents, farmers | |
| Chapter and Section in this Report | <ul style="list-style-type: none">• Chapter 3 Eco-friendly Agriculture and Sustainable Food• 3-1 Green Innovation Technology, Eco-friendly Land and All the People• 3-2 Value-added and Innovative Hay Won, Highest Prevalence rate of Eco-friendly Agriculture• 3-3 Establishment of an Organic Demonstration Farm, Making Efforts to Build an Organic Island of Taiwan• 8-1 Promotion of Education of Sustainable Agriculture | <ul style="list-style-type: none">• 2-4 Legal Compliance• 6-3 Product Liability | <ul style="list-style-type: none">• Chapter 6 Service Innovation and Supply Chain Management• 6-2 Sound Customer Service System• 6-3 Product Liability | <ul style="list-style-type: none">• 2-4 Legal Compliance | <ul style="list-style-type: none">• Chapter 8 Value Creation and Social Care• 8-4 Appropriate Land Use, Creation of a Harmonious Coexistence between the Environment and the Community | |

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1-4 External Organization Participation and Support for and Compliance with International Initiatives

GRI 102-12,102-13,206-1,406-1,407-1,408-1,409-1,411-1

External Organization Participation

TFC actively participates in industry associations, societies and activities, and obtains the latest information through exchanges and cooperation among groups to maintain close links with the industry. In 2017, TFC participated in a total of 24 domestic and international industry associations and societies.

The United Nations Global Compact

The Company supports and is committed to the compliance with the UN Global Compact under the 9 principles in three areas of Human Rights, Labor and Environment and we are committed to compliance with the principles and the protection of the rights of the employees, contractors and suppliers in terms of human rights, protection of labor rights and freedom of association, anti-forced labor, child labor avoidance, anti-discrimination, anti-corruption, antitrust and environmental protection, and will absolutely abide by domestic laws and comply with international statutes. In 2017, TFC and its suppliers did not have any violation of human rights issues, including discrimination, violation of freedom of association, the use of child labor and forced labor.



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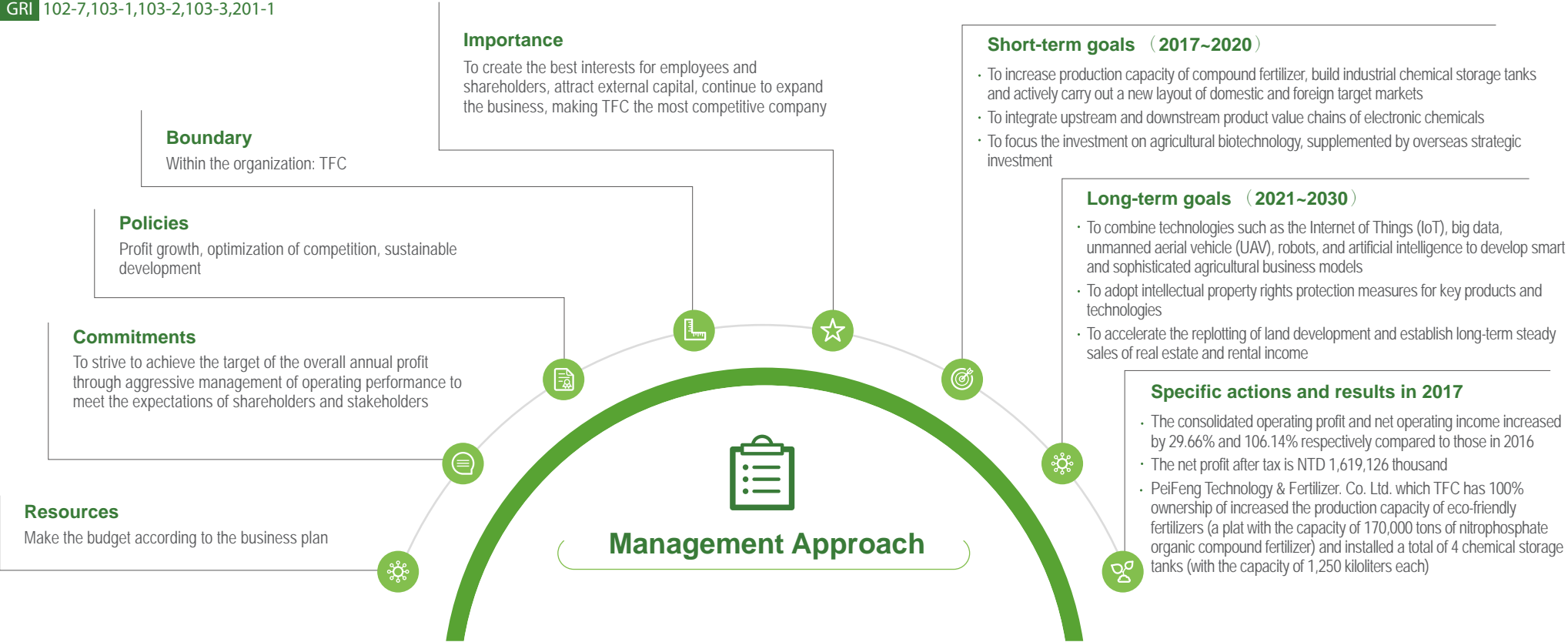
TFC's Board members are multi-disciplinary, professional and complementary, providing rational communication for the company's sustainable interests and making the business decisions more macroscopic. We uphold the principle of integrity from top to bottom, develop a comprehensive risk management system and abide by the rules and regulations in business activities for TFC to operate steadily and continue to grow.

2-1 Business Management

Material topic

Economic performance

GRI 102-7,103-1,103-2,103-3,201-1



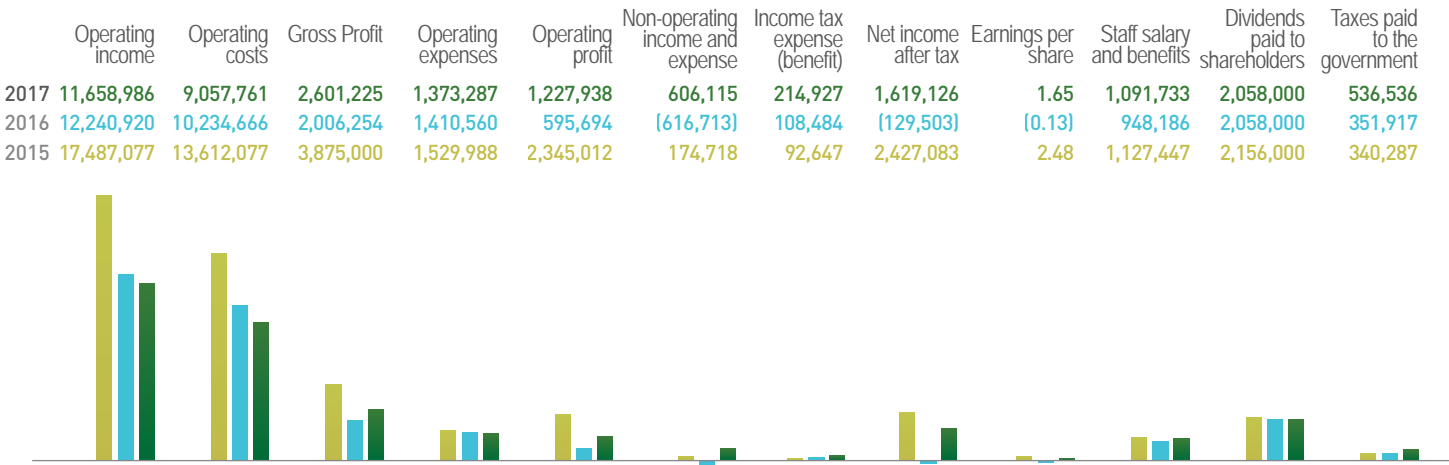
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Financial Performance

With the steady recovery of the global economy in 2017, the management at TFC strived to reduce the operating cost and improve profitability. The operating revenue of TFC decreased by 4.75% compared to 2016, but the consolidated operating profit and net operating income were higher than those of 2016 by 29.66% and 106.14% respectively, which was attributed to the maximum efficiency of Taichung Factory's production integration and the smooth launch of our niche products. In addition, as the prices of international raw materials increased, the reinvestment income from Al-Jubail Fertilizer Company increased, the company's consolidated non-operating net income increased. The final consolidated net income amounted NTD 1,619,126 thousand.

Financial Performance

(In Thousands of New Taiwan Dollars)



Investment Plan of West Wharf Area, West 10 of Taichung Harbor

In order to respond to changes in domestic demand for fertilizers and expand the overseas markets in line with the government's Southbound Policy, we promoted the "Investment Plan of West Wharf Area, West 10 of Taichung Harbor" (hereinafter referred to as the "West 10") in 2016 to comprehensively increase the output capacity of the new series of "HeyWon" nitrophosphate organic compound fertilizer. We set up a 100% owned subsidiary, PeiFeng Technology & Fertilizer. Co. Ltd. to expand the plant for the production of the "HeyWon" nitrophosphate organic compound fertilizer with eco-friendly fertilizer efficiency and favorable land use. It is expected to be launched in 2020. Afterwards, it will comprehensively increase the Company's production capacity of green fertilizers which is expected to fully meet the fertilizer demands in Taiwan, and it will also at the same time promote the sale of green fertilizer products to ASEAN countries.

This investment project will also be integrated with the energy resources integration in Taichung factory and new industrial chemical storage tanks will be built. With the advantages of the trade logistics of Taichung Harbor, the Company will launch a new chemical industry layout and engage in transshipment, warehousing and trade services to assist our customers with diversified procurement of raw materials, expanding the TFC's diversified operation.

The Summary of Investment Plan of West Wharf Area, West 10 of Taichung Harbor

Fertilizer business

- Content**
Construction of a nitrophosphate organic compound fertilizer plant with a capacity of 170,000 tons
- Efficiency**
It is expected to generate the revenue of NTD 1.96 billion each year after completion in 2020

Chemical business

- Content**
Construction of 4 chemical storage tanks with a capacity of 1,250 kiloliters
- Efficiency**
It is expected to generate the revenue of NTD 350 million for the first year after completion in 2019

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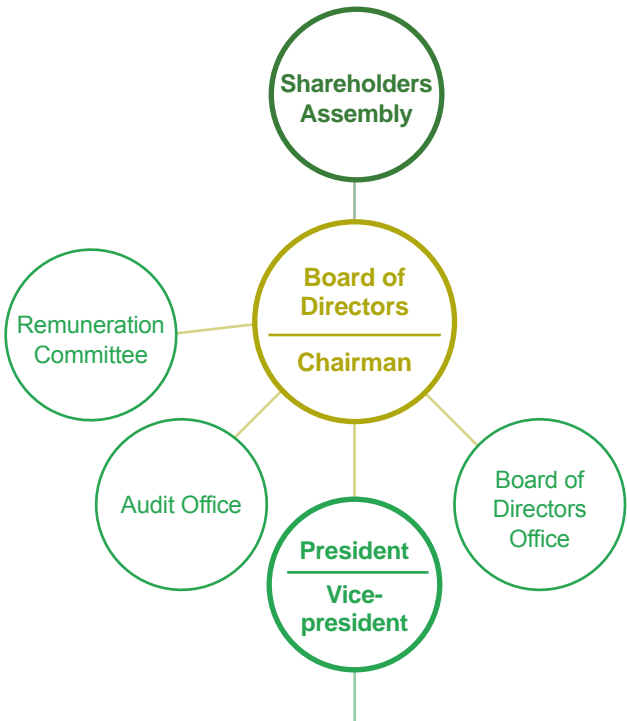
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2-2 Corporate Governance

GRI 102-16,102-17,102-18,102-19,102-22,102-23,102-24,102-25,102-26,102-27, 102-33,102-35,102-36,205-2,405-1

Corporate Governance Structure



- Hualien Factory
- Taichung Factory
- Miaoli Factory
- Hsinchu Factory
- Keelung Factory



- Sales Department
- Financial Department
- Research and Development Department
- Business Development Department

- Safety and Health center
- Production Development
- Information Department
- Real Estate Development Department

- Trading Department
- Planning Department
- Administration Department
- Property Management Department



Board of Directors

The training of TFC directors and supervisors



The board of directors of TFC is composed of nine directors and three supervisors. The term of office is three years, including two independent directors (one female) and one labor director. Mr. Hsin-Hong Kang serves as the chairman of the board.

In order to strengthen corporate governance, the nomination system is implemented for the Director and Supervisor Election. Members of the Board of Directors have held senior positions in well-known enterprises or government agencies, each with extensive experience in business and management, accounting, law, agriculture, biotechnology and risk management.

TFC holds training programs for directors or makes arrangement for directors' external education programs each year. The curriculum includes corporate governance and ethical corporate management best principles, the directors and supervisor's responsibilities and obligations, corporate financial crisis warning and type analysis, fraud prevention and compliance with regulations. In 2017, the total number of training hours for the directors of the company was 93 hours, with an average of 7.75 training hours.

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BOD members and expertise

| Chairman | | | | | |
|-----------|-------------------------------|--------|------|-----|---|
| Name | Hsin-Hong Kang | Gender | Male | Age | B |
| Expertise | Business Management,Education | | | | |

| Independent Director | | | | | |
|----------------------|---|--------|--------|-----|---|
| Name | Ming-Tsai Hsu | Gender | Male | Age | B |
| Expertise | Business Management,Public Administration | | | | |
| Name | Hui-Ya Shen | Gender | Female | Age | A |
| Expertise | Legal Counseling,Business Management | | | | |

| Director | | | | | |
|-----------|--|--------|------|-----|---|
| Name | Chi-Chung Chen | Gender | Male | Age | A |
| Expertise | Business Management,Agricultural Economics | | | | |
| Name | Hsu-Hung Huang | Gender | Male | Age | A |
| Expertise | BusinessManagement,Biotechnology, Digital Technology | | | | |
| Name | Chao-Feng Li | Gender | Male | Age | A |
| Expertise | Architectural Design,Urban Planning | | | | |
| Name | Sheng- Ming Hsu | Gender | Male | Age | B |
| Expertise | Agriculture,Industrial Safety and Health | | | | |
| Name | Chang- Hai Tsai | Gender | Male | Age | B |
| Expertise | Business Management,Medicine | | | | |
| Name | Chin-Lien Hsu | Gender | Male | Age | B |
| Expertise | Law | | | | |

Note:
1.A: 50-59 years old, B: 60-69 years old
2.The 33rd session of Board of Directors was selected on June 24, 2015 for a term of 3 years.

Remuneration of Directors

Our remuneration policy of the directors and supervisors is set out in TFC's Corporate Charter, which stipulates that the remuneration of the chairman shall be calculated on the basis of the income received by the president and shall be paid at 1.25 times of that amount. The remuneration of the other directors and supervisors shall not exceed the highest salary level in the salary table. The surplus distribution of the directors and supervisors shall not be more than 1.6% of the profit of the Company for the year. The independent directors are not involved in distributions from the earnings of the Company. (see page 15 、 17 of TFC 2017 Annual Report for details) .

The Operation of BOD

In principle the BOD holds a regular session once a month to hear the Company's major business strategy, operational reports and audit reports to review and monitor business and financial policies and track policy implementation. The chairman of TFC does not concurrently serve as the manager of the Company. Yao Hsing Huang was appointed by the Board as the president to uphold the operating principles and decisions of the Board for the overall management of all company operations.

| BOD | | Remuneration Committee | |
|-----------------------------|--------|-----------------------------|------|
| Number of meetings | 12 | Number of meetings | 5 |
| Average attendance rate (%) | 88.69% | Average attendance rate (%) | 100% |

Functional Committees

Remuneration Committee

In order to improve the Company's salary and remuneration system for directors, supervisors and managers, TFC set up and introduced the remuneration committee system at the end of December 2011. Independent directors acted as the conveners for the Remuneration Committee to assist the board of directors in regularly developing and reviewing the policy, system, standard and structure of the performance evaluation and remuneration of directors and managers, and regular assessment and setting of remuneration for managers are also made.

Members and Functions of Remuneration Committee

| | |
|---------------------|---|
| Convener | Ming-Tsai Hsu |
| Member | Ming-Ting Wang, Ri-Chun Wang |
| Performance in 2017 | <div>· Reviewed the 2016 year-end bonuses and operating performance bonuses of the vice president and above</div> <div>· Revised year-end bonus payment method</div> <div>· Staff salary adjustment</div> |

Audit Committee

The "Audit Committee" is planned to be set up in 2018 with the election of the 34th session of directors and supervisors. Therefore, the Company's Articles of Incorporation were amended in February, 2017. The relevant provisions regarding the supervisors were deleted, which took effect from the date of the establishment of the Audit Committee, and the seat of independent directors was changed to 3.

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Directors' and Supervisors' Liability Insurance

The relevant provisions for liability insurance for directors and supervisors are clearly stipulated in the "TFC's Code of Practice for Corporate Governance ". TFC has been responsible for the directors' and supervisors' liability insurance since 2007 and has reported to the board of directors.

Equal Treatment of Shareholders

In order to actively implement shareholder activism, the Company has been promoting the electronic voting system since 2014. Adhering to the open, transparent and instant principles of disclosure of information, TFC uploads the English and Chinese versions of the Company's Shareholders' Meeting Agenda Handbook, meeting notices, and annual reports before the shareholders' meeting. Annual reports on corporate social responsibility in both English and Chinese are provided annually. Monthly English operating information is immediately released on the Company's English official website to ensure that shareholders can obtain the most immediate and correct information of TFC.

Integrity Management and Anti-corruption

In order to equip the employees with the concept to comply with laws and strengthen the integrity and ethics, the Company invited the director of China Trust Commercial Bank in December 2017, Professor Yen-pao Chen, who teaches at Soochow University, to hold a lecture on "Focusing on Integrity Management and Creating a Happy Workplace" to enable the employees to understand the importance of integrity and corruption prevention measures through case studies.

This lecture attracted a total of 96 participants, which accounted for 14.18% of the total number of employees. During the lecture, they interacted with the lecturer frequently and overcame the site restrictions as video connections were also made with the Taichung, Miaoli and Hualien Factories so that our employees in the factories could attend the lecture without space restriction. At present, there are no relevant communication courses regarding anti-corruption policies and procedures for suppliers yet.



Organizational rules

In order to ensure the integrity of all members of the Company, TFC has formulated Ethical Corporate Management Best Practice Principles, Code of Conduct and Ethics for Directors, Supervisors and First-level Managers, Work Rules for Employees in TFC, Regulations for Employee Performance Evaluation in TFC and TFC Internal and External Personnel Reporting and Handling Measures



Staff training

- We arrange integrity and anti-corruption advocacy courses in orientation training, and the training ratio of new staff reaches 100%
- The training is regularly scheduled to advocate our philosophy of integrity management



Report system and handling measures

- In 2016, the TFC Internal and External Personnel Reporting and Handling Measures was established and released at the official website of TFC
- Legal officers of the board of directors: advising on ethical or illegal activities
- TFC's Audit Office is responsible for receiving reports: Report Box: No. 88, Sec. 2, Nanjing E. Rd., Taipei, 10457 Taiwan (R.O.C.), addressee: Supervisor of Audit Office

Mechanism for Insider Trading Prevention

TFC has developed the "Internal Major Information Processing Procedures" for the directors, supervisors, managers and all employees of the Company, which stipulates that those who know the major information shall not disclose to others or inquire or collect the significant information that the Company did not disclose and is not related to personal duties in order to implement the prevention of insider trading management operations.

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2-3 Risk Management

GRI 102-11,102-15,102-29,102-30,102-31,201-2

Internal Audit and Operation

TFC’s Audit Office is an independent unit directly responding to the BOD. The Audit Office is composed of the Auditor General responsible for supervising internal audit and three full-time auditors in charge of internal audit operations, including funds and loans, insider trading and regulatory compliance on a monthly basis, and submit the results to the Board of Directors.

The audit unit shall supervise and review the internal units and subsidiaries and shall conduct internal evaluation at least once a year to identify and improve internal control deficiencies and irregularities as the reference for the Board of Directors and the president to evaluate the effectiveness of the overall internal control system and as the main basis for the issuance of the Statement on internal control. (see page 44 of TFC 2017 Annual Report for details)

Risk Management System

The risk management control operations are conducted in accordance with the “Regulations Governing the Establishment of Internal Control Systems”. With a clear division of labor for risk identification and evaluation at all levels, and through the establishment of oversight responsibility, assignment of rights and responsibilities and the reward-punishment system, the control environment is built for the effective establishment of TFC’s risk management protection network. The Company has set up an Audit Office to promote and revise the internal control system, targeting at effective risk control.

The Audit Office will set up the annual audit plans based on which the auditing is conducted. When risk events or internal control weakness are discovered during the process, the accountable units should rapidly develop an improvement plan jointly and regularly follow up the results for the PDCA cycle to strengthen risk management practices so as to assist the company in correcting and implementing necessary control operations immediately for effective risk management and control.



Organizational Structure of Risk Management



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Risk Management and Opportunity Benefits

Operational risk

Potential risks

Strategic risk · Financial risk

Countermeasures

Enhance the green R&D innovation ability, develop product differentiation and improve market competitiveness

Continuous improvement in production management efficiency to reduce operating costs

Promote the "Investment Plan of West Wharf Area, West 10 of Taichung Harbor" to expand green fertilizer production and expand the chemical trading and logistics business

Strengthen the upstream and downstream vertical and horizontal integration and improve the marginal efficiency of production

Develop real estate business, promote the development of real estate in the appropriate development order to increase the added value of real estate

Opportunity benefits

We will properly manage operational risks so that business can grow steadily and supply agricultural fertilizers to protect stakeholders such as shareholder investments, employees' jobs, and farmers' use of fertilizers

Market risk

Potential risks

Reduction of yearly chemical fertilizer amount in response to the promotion of organic agriculture by the government

Countermeasures

Promote the development of organic fertilizer products, and achieve the goal of obtaining the organic fertilizer certification from Council of Agriculture (COA) and being selected by COA as the recommended brand with new products

Establish organic cultivation techniques and quality control process and gradually set up organic demonstration farms to develop organic agriculture

Support the government's eco-friendly agriculture policy and respond to the needs of farmers to fully develop organic compound fertilizers and protect the land

Opportunity benefits

We will increase the green competitiveness of eco-friendly fertilizer products in TFC and increase the added value to create market differentiation

Information risk

Potential risks

Information system abnormality

Countermeasures

Plan the safety, scope and control measures of information security, standardize the monitoring process and strengthen information security protection

Improve the availability of information infrastructure to ensure that operational systems are fully backed up

Carry out information security education and training and reporting exercises

Opportunity benefits

Maintain the confidentiality, integrity and availability of corporate information to ensure the stable operation of corporate organizations

Production risk

Potential risks

Fluctuations in market demand

Countermeasures

Based on the estimated sales volume of the Business Department, plan and arrange production plans for each product line, and adjusts the annual plant checkup according to the production schedule

If the demands for fertilizers increase in the short term due to natural disasters, other qualified factories will be arranged for manufacturing fertilizer products or fertilizers imported from abroad will be supplied

Opportunity benefits

Stabilize the supply of fertilizer in the market, enhance customer trust and satisfaction, and maintain market leadership

Climate change risk

Potential risks

Carbon emissions Management

Countermeasures

The GHG inventory system of ISO 14064-1 was introduced in 2016 and verified by an independent third party for voluntary GHG inventory and energy declaration

Introduced ISO 50001 Energy Management System into Taichung Factory and continued to implement a number of energy integration and energy conservation programs. It regularly tracked and reviewed the energy use and continued to improve energy performance

Opportunity benefits

Take energy management measures to reduce energy consumption per unit of product and increase economic efficiency

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Risk Management and Opportunity Benefits

Supply chain risk

① Potential risks

Centralized purchasing

✎ Countermeasures

- Adopt diversified material purchase programs and seek alternatives of important imported raw materials
- Actively look for new suppliers to gradually strengthen the backup supplier list

① Potential risks

Raw material storage

✎ Countermeasures

Regularly review the inventory of raw materials in an internal meeting, determine the optimal transportation plan, deploy vessels as appropriate, and purchase special insurance depending on the route of the vessels

① Potential risks

Raw material safety

✎ Countermeasures

- Confirm the quality of the supply through the new supplier evaluation mechanism
- Establish a "Product Traceability System"

☆ Opportunity benefits

Ensure the safety and quality of raw materials supply, and better know the supply stability of suppliers



Environmental , Health and Safety risk

① Potential risks

Occupational safety and health management

✎ Countermeasures

- Taichung and Miaoli Factories have both obtained OHSAS 18001 and CNS 15506 Occupational Safety and Health Management System Certification
- Strengthen safety and health education and training and publish the Industrial Safety Newsletter on a monthly basis to enhance personnel safety awareness and implement risk assessments to reduce hazards

① Potential risks

Environmental management and protection

✎ Countermeasures

- Taichung and Miaoli Factories have obtained ISO 14001 Environmental Management System Certification and actively invest in company resources according to ISO 14001 Environmental Management System for good pollution control, waste management, water resource management and industrial safety management
- Implement Water Shortage Response Plan and install additional water recycling equipment

① Potential risks

Occurrence of emergency and disaster

✎ Countermeasures

Each factory has established an emergency response mechanism for disasters, and regular industrial safety exercises are carried regularly, including equipment maintenance and replacement, and establishment of disaster prevention concepts for the personnel



☆ Opportunity benefits

Effectively reduce the potential hazards in the workplace, and avoid occupational disasters, protect the health and safety of employees and contractors, and ensure the sustainable operation of the enterprise

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2-4 Legal Compliance

Material topic

Environmental Compliance, Social Compliance, Marketing and Labeling

GRI 103-1,103-2,103-3, 306-3,307-1,416-2,417-2,417-3,419-1

Importance

All the employees at TFC engage in all operational activities with the highest standards of integrity and ethical standards, which not only stabilizes the company's operations but also helps build a good company image beneficial for the pursuit of the goal of sustainable development of the Company

Boundary

- Within the organization: TFC, Taiwan Yes Deep Ocean Water Co., Ltd.
- Outside the organization: Raw material suppliers, agents, and contractors

Policies

Improve corporate governance, establish corporate culture of integrity management and practice sustainable business management

Commitments

Engage in operational activities with the highest integrity and ethical standards and pursue the best business performance and sustainable development of the Company

Responsibility

All staff from top to bottom at TFC work together for implementation

Resources

Improve the Company system and fully implement the policy into practice

Management Approach



Goals

- To establish a complete and better corporate governance system
- To enrich corporate culture of integrity management
- Risk identification and management system of operational efficiency
- To pursue zero violation and zero penalty

Specific actions and results in 2017

- To amend the Articles of Incorporation and set up the Audit Committee in 2018
- To regularly purchase the directors (independent directors) and supervisors liability insurance
- To regularly conduct integrity management courses, advocate the ideas and implement them in daily operations
- To actively improve the items in corporate governance assessments that fail to meet the criteria and strengthen corporate governance
- No marketing activities (including advertising, promotion and sponsorship) in 2017 violated relevant laws and regulations

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Socioeconomic Compliance

In 2017, there were 5 cases of violations of socio-economic compliance in TFC. One of them violated the Labor Standards Act concerning working hours. The internal procedures were reviewed to ensure that the competent authority shall be notified in 24 hours. As for the other four cases of violations, TFC has carried out internal self-review and improvement, and required the responsible unit and personnel to strictly abide by the regulations to avoid similar situations from happening again.

Violations of socioeconomic compliance

| | | |
|--|---|---|
| <div>Labor Standards Act</div> <div>Amount : NTD 120,000 Of case : 1</div> <div><div>• Extension of working hours without the consent of the trade union</div><div>• Suspended employees' holidays and did not notify the competent authority for verification within 24 hours after the event</div></div> <div>Treatment and preventive measures</div> <div><div>• The trade union has issued a letter and agreed to retroactively extend working hours of its members from December 16, 2017 to December 31, 2018</div><div>• Require all units to notify the personnel unit of the reasons if they suspend employees' holidays due to natural disasters, incidents or emergencies. They shall report it to the competent authority for verification within 24 hours after the event</div></div> | | |
| <div>Safety and Health Act</div> <div>Amount : NTD 60,000 Of case : 1</div> <div>Failure to monitor carbon dioxide concentrations regularly as required</div> <div>Treatment and preventive measures</div> <div>We have completed the improvement in accordance with the regulations, drawn up regular monitoring plans and carried out these plans to avoid recurrence</div> | <div>Amount : NTD 60,000 Of case : 1</div> <div>Dangerous equipment in use has not completed the periodic inspection before the expiration date of the certificate</div> <div>Treatment and preventive measures</div> <div>We have completed the improvement in accordance with the regulations, prepared a certificate inspection plan and carried out such plan to avoid recurrence</div> | <div>Amount : NTD 30,000 Of case : 1</div> <div>The safety and health management unit was not a designated first-level management unit as prescribed</div> <div>Treatment and preventive measures</div> <div>We have set up a designated first-level management unit "Safety and Health Center"</div> |

In accordance with government regulations, the inspection of product compositions in the factory is required before the fertilizer products are being distributed to various channels. However, as the inspection methods of the government differ from those of TFC's, sometimes the results of the product compositions are not consistent with those of the inspection unit. The Company will intensify the inspection of incoming raw materials and timely adjust the fertilizer formula composition based on the raw material inspection value to prevent similar situations from happening again. There were a total of six cases of violation of Fertilizer Management Act in 2017.

Violations of product compliance

| |
|---|
| <div>Fertilizer Management Act</div> <div>Amount : NTD 100,000 Of case : 2</div> <div>The compositions of the #4 Nitrophosphate organic compound fertilizer did not comply with the regulation in the retest</div> <div>Amount : NTD 50,000 Of case : 1</div> <div>The compositions of #105 Biotec organic compound fertilizer did not comply with the regulation in the retest</div> <div>Amount : NTD 50,000 Of case : 1</div> <div>The compositions of #43 "Hey Won" Nitrophosphate Organic Compound Fertilizer did not comply with the regulation in the retest</div> <div>Amount : NTD 50,000 Of case : 1</div> <div>The compositions of #43 Biotec organic compound fertilizer did not comply with the regulation in the retest</div> <div>Amount : NTD 50,000 Of case : 1</div> <div>The compositions of #5 Biotec organic compound fertilizer did not comply with the regulation in the retest</div> <div>Treatment and preventive measures</div> <div><div>• Recalled the batch of fertilizers and proposed the remanufacturing plan</div><div>• Strengthened inspection of incoming raw materials</div><div>• Timely adjusted the fertilizer formula composition based on the raw material test value</div><div>• Added process equipment to maintain consistent shipment quality</div></div> |
|---|

| | |
|--------------|---|
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Environmental Compliance

There were 3 environmental penalties with a total fine of NT\$232,000 in 2017. We continue to actively review each case and proposed improvement plans to achieve the ultimate goal of zero violations and zero fines as soon as possible.

Violations of environmental compliance

| Air Pollution Control Act | Toxic Chemical Substances Control Act | Waste Disposal Act |
|--|---|---|
| <p>Amount : NTD 100,000 Of case : 1</p> <p>The perimeter fence of the new construction site in D7-A commercial office building did not include the entire work area and part of the work area had no overflow protection base. Roads were unclean. The actual area of exposed ground surface of control facilities was less than 80% and the material piled (earth) had no control facilities. The entrance and exit at site B were not equipped with high-pressure flushing equipment and tire sludge of off-road vehicles were not effectively cleaned, causing contamination of nearby roads</p> <p>Treatment and preventive measures</p> <ul style="list-style-type: none">• The area around the working site was temporarily closed by type B fences and sandbags were used to replace the overflow protection base• High-pressure flushing equipment was installed at the entrance and exit of the vehicle, and the staff are sent to clean the contaminated tires and ground immediately• Prepared a dust screen to immediately cover the exposed surface and avoid dust• Personnel in charge of safety and health conducts daily visits of the work area as well as the surrounding areas and immediately makes improvement in case of irregularities• The monthly meeting is organized to review the defects of pollution control | <p>Amount : NTD 120,000 Of case : 1</p> <p>The purchase of toxic chemicals was not reported within the prescribed time limit. The containers were not marked as required</p> <p>Treatment and preventive measures</p> <p>It was improved immediately. The future purchase of toxic chemicals will be filled out in the record form on the same day to facilitate follow-up network reporting operations. In addition, check monthly whether the container markings and safety data sheets meet the requirements</p> | <p>Amount : NTD 12,000 Of case : 1</p> <p>The waste storage tank was slightly leaking</p> <p>Treatment and preventive measures</p> <p>Replaced it with a new storage tank and strengthened the inspection of the waste storage tank to avoid recurrence</p> |

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Fertilizers are indispensable materials in the process of agricultural production. They not only supply needed nutrients for soil and crops but also assist farmers to produce high-yield crops. Furthermore, they are also an important key for the promotion of soil health and sustainable farming.

Material topic

Sustainable Food

GRI 103-1,103-2,103-3

Policies

From three major perspectives of "sustainable agriculture", "environmental protection" and "resource conservation", we will continue to develop eco-friendly products, fulfilling our commitment to sustainable agriculture.

Commitments

Taiwan Fertilizer Corporation has been striving to implement Goal 2 of SDGs, "End hunger, achieve food security and improved nutrition and promote sustainable agriculture", and fully invest in sustainable agriculture

Responsibility

TFC's Sales Department and R&D Department are responsible for the development and promotion of eco-friendly and organic fertilizer products

Resources

Listed the annual budget of NTD 60,000 thousand in 2017 for the implementation of the green research and development program

Importance

Set sustainable agriculture as the corporate goal and strive for the development of eco-friendly products and cultivation techniques to facilitate the sustainable development of Taiwan's agriculture and agricultural resources.

Boundary

- Within the organization:TFC Head Office,Taichung Factory,Miaoli Factory
- Outside the organization:Cooperative pilot farms and farmers

Short-term goals (2017~2020)

- To implement the R&D personnel's green R&D capabilities with at least 20 hours of training per year
- To add 2 or more new industry-academia cooperation projects within 3 years, aiming to jointly develop eco-friendly products

Long-term goals (2021~2030)

- To add 2 or more new industry-academia cooperation projects within 6 years
- To improve laboratory equipment,integrate R&D resources and achieve synergies

Specific actions and results o in 2017

- Promoted the project to change compound fertilizers into organic ones, making Taiwan the country with the highest prevalence rate of organic compound fertilizer in the world
- Continued to introduce 3 new types of organic fertilizer products to increase the organic content of the farmland. One of the three was awarded the Organic Farming Materials Certification and selected as the recommended brand by COA; 2 fertilizer products were awarded the recommended brand of rice straw-degrading bacteria included organic fertilizer for COA's project of counselling of rice industry
- TFC's eco-friendly fertilizer products and supporting techniques for organic agricultural cultivation increased farmers' income while taking into account environmental protection
- Established internal and external demonstration farms, leading more farmers to joint organic cultivation

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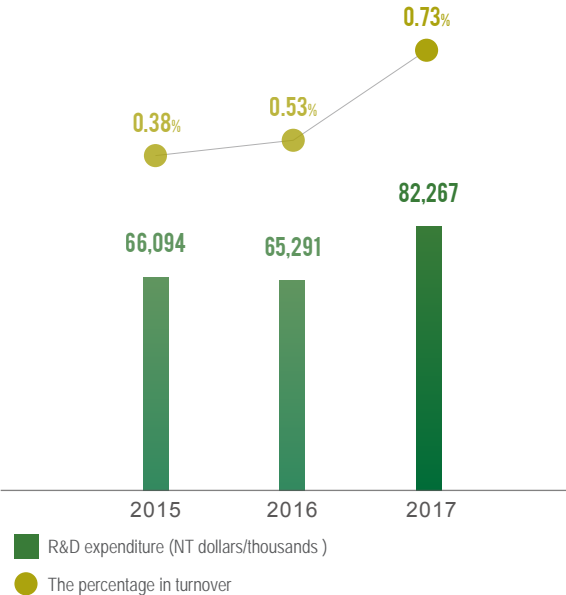
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3-1 Green Innovation Technology, Being Eco-friendly to the Land and All the People

In 2003, TFC established the Agricultural Biotechnology R&D Center in Miaoli Factory, laboratories and biotechnology pilot factory were also set up to positively develop high-quality microbial fertilizers, organic fertilizers and new type of eco-friendly fertilizer products. Agricultural education seminars are also organized to lead more farmers to implement eco-friendly cultivation and organic farming to protect the health of farmers, consumers and the land.

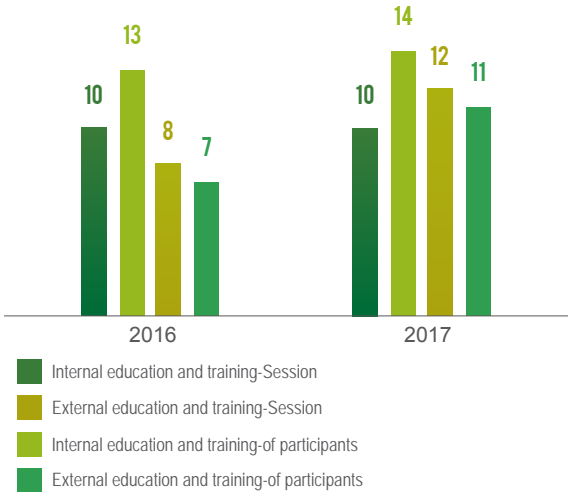
TFC's Green R&D Expenditure



Education and training of the R&D team

TFC encourages its R&D staff to participate in seminars and courses on various technology trends. The internal training includes the sustainable development issues and industrial trends such as the development and application of deep ocean water. In addition, various external education and training is also provided to enhance their professional R&D capabilities.

R&D team's education and training sessions and number of participants



External education and training courses of the R&D team

2016

- Certification of new product development manager
- Efficient execution and time management
- Practice of Food Safety Control System (Elementary)
- Practice of Food Safety Control System (Advanced)
- Aquatic animal disease and health and epidemic prevention

2017

- Auditor training for organic and traceability agricultural product verification
- Technology marketing, strategy marketing, service marketing
- Innovation strategy
- Financial management, cross-border M&A, strategy planning for international operations
- Aquaculture Laboratory's introduction to seawater shellfish culture and breeding

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TFC regularly participate in the largest international scientific and technological exhibitions or the largest one in Taiwan to grasp the development trends of major industries in the world. A series of keynote speeches and results presentation in these exhibitions enable us to observe and have exchanges with the industries.

Record of exhibition participation in 2017



Green R&D Results

Green R&D Result



Fig. 1 TFC's organic materials and supporting fertilization mode are applied in planting Kabocha Squash in Caotun Town, Nantou County. The yield is comparable to that of conventional farming as in Fig. 2, and yet the quality is better.

After applying Taifer Biopower phosphate, the rape plant (Fig. 3) and the plant of the small Chinese cabbage (Fig. 4) in the experimental group of the field experiment are bigger, the stems and leaves are thicker, and the yield increases by approximately 15%-17% (Left: control group; Right: experimental group)

- ☆ Specific practices
- ☆ Green innovation benefits

R&D of organic farming techniques and materials

- ☆ Established organic cultivation techniques of 21 major crops
- ☆ Developed 8 organic fertilizer products, in which 6 have passed the review as being applicable for organic agriculture
- ☆ Guided nearly 1,000 young farmers to learn organic cultivation techniques every year
- ☆ Increase the organic matters in soil by 1.4%
- ☆ Organic strawberries can charge 2-3 times the price of those grown with conventional farming techniques

New green fertilizer

- ☆ Launched the new series of "Hey Won" nitrophosphate organic compound fertilizer
- ☆ Supplement the soil organic matters, improve soil structure, reduce fertilizer use by 2 to 10% and ease off soil acidification
- ☆ Farmers' average income increased by 4-10%
- ☆ Launched the formula for the compound fertilizer specifically for tea trees
- ☆ Reduce the accumulation of phosphate fertilizers and ease off the problem of water eutrophication in the reservoir

Innovative Application of Microorganism

- ☆ Launched the Taifer Biopower phosphate-solubilizing bacteria biofertilizer
- ☆ Reduced the nitrophosphate fertilizer application by 33-50% (70 thousand hectares), saving the cost of approximately NTD 180 million
- ☆ The field experiments confirmed that it can promote the growth of cucumber, Chinese cabbage and other crops, increasing the yields by 15-17%
- ☆ Completed the bio-pesticide formula and pilot run. It is scheduled to obtain a product license and be commercially available in 2018
- ☆ Reduce the use of chemical pesticides, reducing the impacts on the eco-environment and human health
- ☆ Successfully developed 2 aquaculture effective microorganism products with TFC's core technology of microbial liquid-state fermentation
- ☆ No need to change water at the initial stage of farming, saving approximately 1,000 metric tons of water per 970 m²

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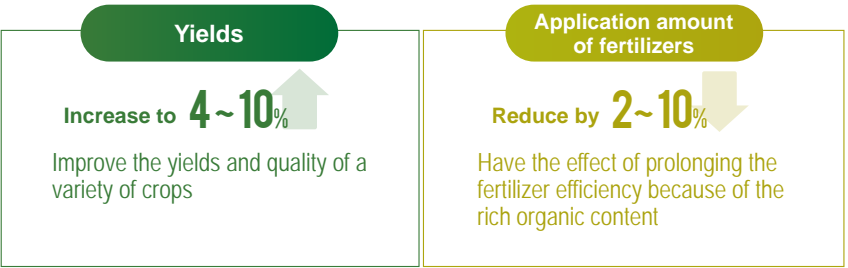
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3-2 Value-added and Innovation of “Hey Won”, Highest Prevalence rate of Eco-friendly Agriculture

The area of farmland in Taiwan is only 790,000 hectares. To increase the efficiency of agricultural cultivation, farmers often use intensive cultivation and apply large amount of chemical fertilizer to obtain fast yields. However, the soil gradually losses its soil fertility. In view of the fact that the agricultural fertilizers are still dominated by conventional chemical compound fertilizers (accounting for approximately 60%), proper amount of peat (humic acid) can be added to chemical compound fertilizers applied to soil, which not only increases the soil organic matter but also achieves water retention, fertilizer retention and the increase of microorganisms in soil while at the same time increases the crop yields.

However, the technical bottleneck encountered was mainly the danger brought by the severe reaction after adding organic matter in the fertilization process. After years of repeated tests in the laboratory, we finally had a breakthrough in 2015 and successfully added the peat (humic acid) rich in organic matter to chemical fertilizers. At the same time, TFC also started to conduct field tests on 14 crops, including Chinese cabbage, cabbage, cucumber, pumpkins, tomatoes, sweet peas and so on, and the results all showed excellent fertilizer efficiency.

The “Hey Won” nitrophosphate organic compound fertilizer series not only improve the yields and quality of a variety of crops with an average yield increase of 4~10%, but also have the effect of prolonging the fertilizer efficiency because of the rich organic content. The application amount of fertilizers to some crops can also be reduced by 2~10%, having the dual effects of cost reduction and environmental protection.



The “Hey Won” nitrophosphate organic compound fertilizer series was awarded TCIA's Product Innovation Award in 2016.



In response to the COA's policy of turning chemical fertilizers into organic ones, TFC comprehensively added peat in the traditional compound fertilizers, providing the peat-added organic compound fertilizer from June, 2017, leading the trend of using organic compound fertilizer in the fertilizer industry. Under the joint promotion of TFC and the government, Taiwan has become the country with the highest prevalence rate of organic compound fertilizer in the world.

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Using “Hey Won” fertilizer series, saving money and labor for farmers

For farms growing hard corn for feed, the farming method is relatively extensive, and farmers have little opportunity to supplement the organic matter on the farmland. Therefore, the effect is remarkable after applying the “Hey Won” nitrophosphate organic compound fertilizer series containing peat (humic acid). The following is an example of the demonstration field of hard corn using “Hey Won” in Yizhu Township, Chiayi County.

NTD 450/
per 970 m²

Reduce one time of artificial hilling up, saving the cost of NTD 450 per 970 m²

25%
increase
in yields

The yield in the demonstration area for #1 “Hey Won” is 1,050kg per 970 m², an increase of 210 kg (25% increase) compared with the 840 kg per 970 m² in the control area using #1 nitrophosphate organic compound fertilizer

NTD 1, 890/
per 970 m²

Based on the purchase price of NTD 9/kg guaranteed by the Farmers’ Association, the “Hey Won” demonstration field in Chiayi brings additional NTD 1,890 per 970 m² to the farmers



1 The hard corn stalk in Hey Won Demonstration Farm in Yizhu is thicker (Fig. 1 – Left: After applying #1 nitrophosphate organic compound fertilizer; Right: After applying #43 Hey Won) and the root system is more prosperous (Fig. 2 –Left: After applying #1 nitrophosphate organic compound fertilizer; Right: After applying #1 Hey Won), the effect of fertilizer absorption is good and the yield increased by 25%.



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3-3 Establishment of an Organic Demonstration Farm, Making Efforts to Build an Organic Island of Taiwan

The organic cultivation area in Taiwan has reached 6,784 hectares in 2016, and the demands for organic fertilizers has also increased. TFC's Miaoli Factory built an organic fertilizer plant with the annual production capacity of 6,000 tons in 2015. The sources of raw materials are carefully selected. TFC's unique microbial strains are combined with the selected raw materials to produce high-quality fertilizer products.

As of 2017, TFC has developed 8 organic fertilizer products, 6 of which have passed COA's review as being applicable for organic agriculture and are listed as commercialized materials for organic agriculture, and selected as the recommended brand of soil fertility improvement materials, while 5 were selected as the recommended domestic brand of organic compound. In addition, #10 Biotech organic fertilizer and #12 Biotech organic fertilizer were selected as the recommended brand of rice straw-degrading bacteria included organic fertilizer for COA's project of counselling of rice industry.

TFC established the organic demonstration farm in Miaoli in 2014, and in 2015 obtained organic agricultural transition verification from MOA international, and later in April, 2017, TFC obtained the certification of organic agricultural produce and completely reproduce farmers' farming practices to establish a complete database of organic farming techniques, making it an indicator organic farm in Taiwan.



In addition, the Taifer Biopower Stimulants together with the Taifer Biotech Organic fertilizer were used on the farm for the organic cultivation tests of seasonal vegetables and fruit (without applying chemical fertilizer and pesticides) and biological control method was used for pests and diseases management to confirm the effectiveness of the products. In 2017, the materials applicable for organic cultivation with supported fertilization techniques for 6 crops, including broccoli, cauliflower, cabbage, strawberry, sweet pepper (including green pepper) and melon were established and verified through the field experiments in 2017. From 2015 to 2017, the verification of a total of 21 crops has been established.



1 : After the 2-year transitional work, TFC finally obtained the Organic Agricultural Product and Organic Agricultural Processed Product Certification.
2,3 : TFC's organic demonstration farm



Establishment of materials applicable for organic cultivation with supported fertilization techniques

Leaf vegetables
9

Scallion, Chinese cabbage, tender Chinese cabbage, Komatsuna, lettuce (leaf, semi-head, iceberg, fresh stem), sweet potato leaves, broccoli, cauliflower, cabbage

Fruits
12

Strawberry, sweet peppers, green pepper, melons, butter gourds, chestnut squashes, loofah, muskmelon, okra, eggplant, tomatoes, cowpea

Note: Materials refer to fertilizers, pesticides, seeds and cultivation soil used in agriculture.

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In 2017, TFC cooperated with the Liu Jing composite farm which is experienced in organic cultivation as the demonstration farm for organic materials and established a complete SOP for cultivation through the test results with the external demonstration farm.

TFC and Lu Jing Organic Farm work together to create new initiatives



1 Signing ceremony with Liu Jing composite farm, TFC's external demonstration farm

List of farms cooperated with TFC for tests in 2017

Town South Organic Farm

- ✿Content
Test in applying #7 Biotec organic fertilizer and Taifer Biopower Phosphate on organic melon (makuwa Makino)
- ☆Results
Results showed that the average weight of a single melon of the experimental group is 22g heavier than that in the control group, and there showed a trend of early flowering and larger fruit in the experimental group. There was no significant difference in sweetness between two groups

Yong Chang Organic Farm

- ✿Content
Test in organic strawberry:
Group A: Applying #7 and #11 Biotec Organic Fertilizer and Taifer Biopower Phosphate
Group B: Applying #5 and #11 Biotec Organic Fertilizer and Taifer Biopower Phosphate
- ☆Results
Sweetness in Group A increased by 3% compared with Group B
Weight in Group B increased by 6.9% compared with Group A

Huixiang Organic Corporation

- ✿Content
Test of applying #5 and #11 Biotec Organic Fertilizer and Taifer Biopower Phosphate on organic paddy rice
- ☆Results
#5 Biotec Organic Fertilizer was applied in the experimental area to compare the results with the conventional cultivation model. Rice quality in TFC's experimental area scored 81 points, reaching the excellent quality of rice, better than the rice cultivated with the conventional model on Huixiang organic farm (which scored 74 points in rice quality)

Liu Jing composite farm

- ✿Content
Test of applying #7 and #11 Biotec Organic Fertilizer and Taifer Biopower Phosphate on organic dragon fruit
- ☆Results
Both the ratio of premium products and sweetness increased compared with previous cultivation model, and the harvest is stable with no occurrence of pests and diseases



1 1 : Field experiment of organic fertilizers on the TFC organic demonstration farm
2 2 : Field experiment of organic melon cooperated between TFC and Town South Organic Farm

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Resource Recycling and Green Economy

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- 4-2 Environmental Protection and Energy Saving Deep Ocean Park in Hualien
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With years of experiences, TFC has accumulated mature industrial technologies and promoted cross-disciplinary and cross-industry cooperation through innovative technology and service models. With the concept of circular economy, TFC promotes the recycling rate of resources, reduces the generation of waste and consumption of resources, striving to echo the Sustainable Development Goal 12, “Ensure sustainable consumption and production patterns”.

Material topic

Circular Economy

GRI 103-1,103-2,103-3

Policies

Through the re-design of raw materials, products, processes and business models to form a cycle of “resources, products and renewable resources”, aiming at eliminating waste

Commitments

TFC has been advocating the Sustainable Development Goal 12 “Ensure sustainable consumption and production patterns”, striving to develop a sustainable business model of circular economy

Responsibility

Production Department and Miaoli Factory are responsible for R&D and production while Sales Department is in charge of promotion and sales

Resources

The combination of external resources of industry, official and academia

Importance

Taiwan is extremely short of natural resources. TFC has turned from the economic growth model that relies on resource consumption to a resource-based circular economy to improve the problem of the lack of resources

Boundary

- Within the organization: Miaoli Factory, Hualien Factory
- Outside the organization: Taichung District Agricultural Research and Extension Station, Council of Agriculture, Executive Yuan, breeders

Short-term goals (2017~2020)

To increase the recycling rate of raw materials and establish a cross-enterprise cooperation model to stabilize the source of raw material recovery and supply

Long-term goals (2021~2030)

To establish a business model of circular economy that has common benefits and common good with the society

Specific actions and results in 2017

- To successfully expand the green new business of technical grade chemical liquid waste recovery
- Healthy and safe aquaculture technology to increase the survival rate of aquatic products with high economic values, such as grouper, hairy crabs and clams while reducing the amount of water and electricity used
- Reused two resources in agricultural and animal husbandry, rice straw and biogas, and successfully recycled and produced 2 organic fertilizer products
- The annual use of scales reaches 1.72 tons, reducing the breeders' problem of waste treatment
- The gravity multistage deep ocean water aquaculture model can save approximately 41,610 kWh of electricity and 348,880 tons of water

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4-1 Green Circular Park in Miaoli

To ensure a production and service model with sustainable circulation, TFC used its core technology as the basis to overcome the difficulty of waste treatment and recover the customized electronic grade chemicals provided to domestic large-scale manufacturers in the fields of panels, optoelectronics, solar energy and semiconductors. In addition, TFC also owns the advantages of the raw materials of “three acid and one alkali” (phosphoric acid, nitric acid, sulfuric acid and ammonia) and at the same time a product traceability system is established, building a trustworthy brand image in the practice of green circular economy.

Green Environmental Protection, the Recycling of Electronic Chemicals Creates New Business Opportunities

TFC’s Miaoli Factory has steadily operated the “Stripper Recycle System” and “Recovery System for the Reproduction of Phosphoric Acid” and has gained great reputation. Currently, about 60% of the waste aluminum etching liquid in Taiwan’s panel industry is processed by TFC, which has the highest market share. In recent years, TFC exclusively provides high quality one-stop shopping services from the supply to the recycling with its sophisticated technology, enabling our customers to worry nothing about the recycling of electronic products after purchase, creating a green circular economy with our customers together.



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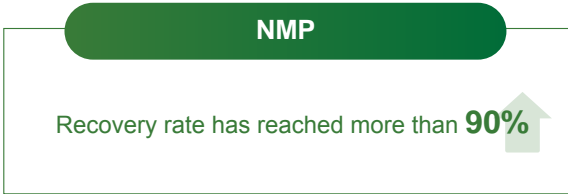
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Stripper Recycle System (SRS)

At present, the Miaoli Factory is equipped with a 5KL and a 20KL distillation columns, providing the purification, recovery, blending, quality control and logistic services of the stripper the panel industry need, working on full development of a one-stop shopping services for the supply and recycling of NMP (1-Methyl-2-pyrrolidinone), and the recovery rate has reached more than 90%, and the product specifications in terms of purity and color both exceed other service providers in the industry.



Recovery System for the Reproduction of Phosphoric Acid

When the waste etching liquid was recovered from the panel industry and from the end of the manufacturing process in the IC Industry, the evaporation and circulation equipment in Miaoli Factory is used to make technical phosphoric acid, and after treated with the purifying and recycling technology, the recovery rate of the waste aluminum etching liquid can reach 90% and more. In 2017, the amount of sale of reproduced phosphoric acid treated by the Recovery System was 5,527 tons, accounting for 53.48% of the overall sales of TFC's electronic chemicals, an increase of 22.18% compared with 2016.



| |
|---|
| 1 |
| 2 |

1:Ammonia plant
2:Reproduced phosphoric acid treated by the Recovery System

Sales of electronic chemicals in 2017 (unit:ton)

| NMP | Reproduced phosphoric acid | Other electronic chemicals | Total |
|----------------|----------------------------|----------------------------|----------------|
| amount of sale | amount of sale | amount of sale | amount of sale |
| 875 | 5,527 | 3,932 | 10,334 |

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4-2 Environmental Protection and Energy Saving Deep Ocean Park in Hualien

GRI 302-5

Multi-stage Utilization of Deep Ocean Water for the Construction of an Environmental Protection and Energy Saving Aquaculture System

STEP1: Use of low-temperature, make use of cold energy needed for air-conditioning by using heat exchange

The front section of the extracted deep ocean water (about 12℃) is used to replace the chilling water and air conditioning system , and the cold energy is applied to the office building in Hualien Factory with the heat exchange technology to reduce the usage of air conditioning.

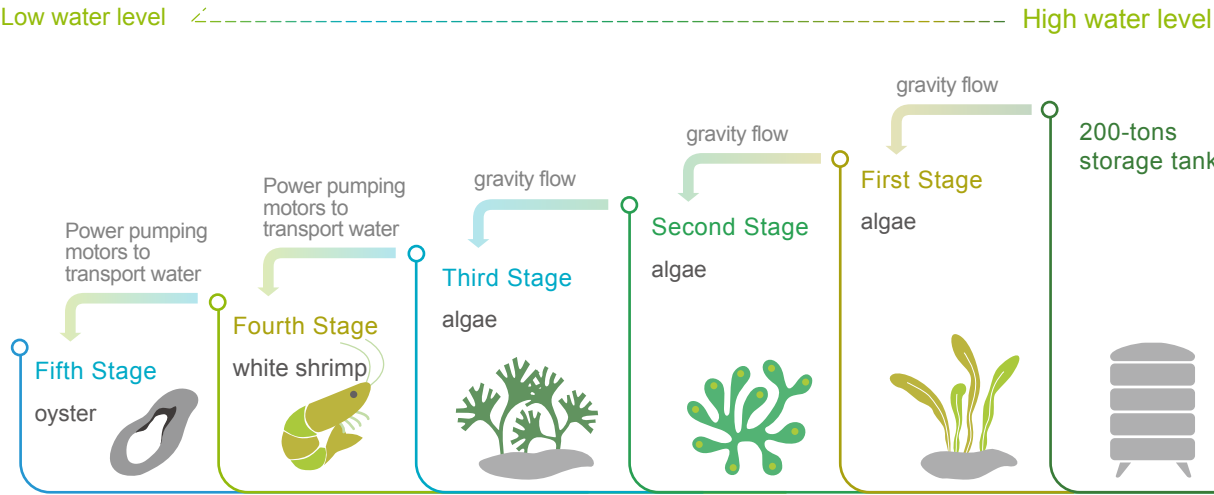
STEP2: Make use of the difference in water temperature in the gravity multistage deep ocean aquaculture model

In 2017, Hualien Factory has started the construction of an approximately 2-hectare of “gravity multistage aquaculture area”, and based on the difference level of terrain, the “gravity flow” is mainly used, supplemented by power pump motors to transport water from each stage to the next.

In the “gravity multistage aquaculture area”, the rear section of the deep ocean water after the cold energy utilization (about 18℃) is applied in the first-stage culture of cold-water macroalgae, and then provided to the second-stage and third-stage culture of algae. In the process of algae cultivation, algae merely use the nutrient salt in the water body. Even after three stages of algae cultivation, the rear-end water is still very clean. The tailwater is then sent to the outdoor shrimp pond for white shrimp rearing. Finally, by growing oysters, the organic detritus in water can be absorbed before being discharged into the ocean to ensure the seawater will not be polluted.

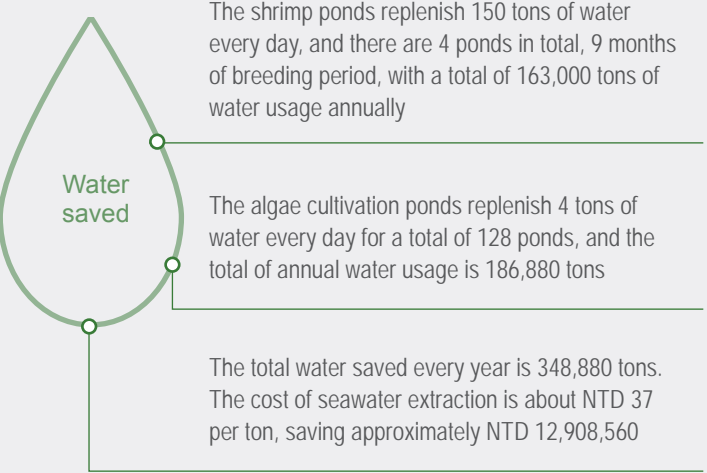
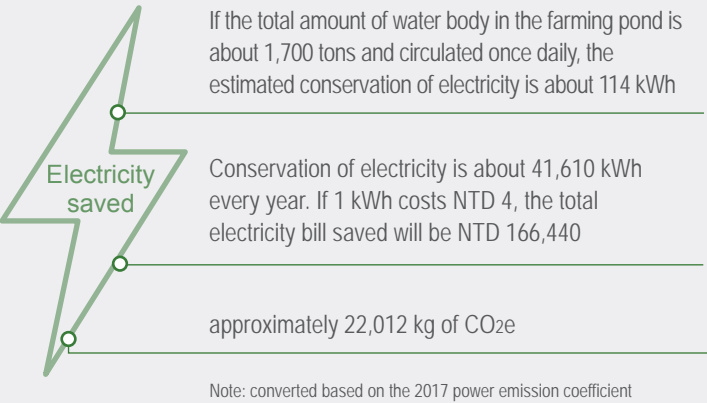


Section of gravity multistage deep seawater aquaculture model




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Assessment of conservation effectiveness



Application of Microbial Nutrition Agents to Create a Healthy and Safe Aquaculture Management Model



The development and application of microbial nutrition agents is an important part of creating a safe culture environment, which can replace chemicals and antibiotic drugs.



To construct a healthy and safe aquaculture management model, the core technology of liquid microbial fermentation originally used in agriculture is applied in aquaculture to develop nutrients used for aquaculture.

#3 Taifer Aquaculture Biopower Stimulants is added into the indoor breeding farms to reduce organic pollutants in water and purify water quality. Adding #1 Taifer Aquaculture Biopower Stimulants into the feed can increase feed absorption rate, reducing the amount of excreta and water exchange. Through the improvement of water quality, the survival rate of aquatic products with high economic values, such as grouper, hairy crabs and clams is increased while reducing the amount of water and electricity used.

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Comparison Table of hairy crab farming techniques

| Stage | |
|--|---|
| TFC's Safe Farming Technology of hairy crab | Traditional farming technology of hairy crab |
| Aquatic plants are the key to farming. At the beginning of the seedling, the stable growth of aquatic plants can be accelerated to provide space for young crabs to hide to increase the survival rate without using drugs for disinfection. | Due to the unstable growth of aquatic plants, water quality is easily contaminated, and disinfectants are needed for disinfection and cleaning. |
| Our "Dolomite" serves as acidic soil conditioner and the "#3 Taifer Aquaculture Biopower Stimulant" can control the outbreak of vibrosis and reduce the morbidity while increasing calcium in water, promoting the growth of crabs. | It is unable to control soil acidification, making hairy crabs susceptible to vibriosis and Aeromonads. |
| The changes of medical treatment are lower and the drug residue is therefore relatively lower. | The morbidity is higher and antibiotics is even needed for treatment, leading to higher chances of drug residue. |
| The price is better, 100g-150g costs about NTD 300-400. | The price is not good, 250g costs about NTD 300. |

🌿

 Early stage of growth

🐟

 Farming process

🏥

 Medical treatment

💰

 Selling price



1 Some members of Miaoli County Hairy Crab Aquaculture Development Association went to China to participate in the competition with the hairy crabs fed by TFC's Safe Farming Technology of hairy crab and won the Golden Crab Award and Best Flavor Award

🔗 Using TFC's biotech materials for the farming of fat hairy crabs



😊 After-sales Services Helps Abundant Harvest of Clams

Mr. Yang Chih-Jen served as an assistant in the Fisheries Research Institute. With the experience and expertise, he understands the importance of microbiological agents in the improvement of water quality. After returning to his hometown to start the clam cultivation, the recent climate anomaly caused contamination of the subsoil, resulted in a large number of death of clams. Yang then chose to use Taifer Aquaculture Biopower Stimulants for the improvement of the water quality and soil quality in the clam pond. TFC assisted Yang in the performing of microscopic examination of algae samples, abnormal algae and other toxic algae were found. TFC immediately assisted Yang to deal with the problem to prevent death of clams due to algae poisoning. In 2017, a total of 5,400,000 kg of clams can be harvested on approximately 1 hectare of aquaculture pond, and the harvest has increased significantly.



🔗 Clam Cultivation, A Contest of Wits against the Sea



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4-3 Diverse Usage of Renewable Raw Materials for the Creation of New Value of Waste Resources

Taiwan lacks raw materials needed for fertilizer manufacturing, and the raw materials are mostly dependent on imports and the price fluctuations are extremely large, significantly affecting the production cost which may also lead to the increase of fertilizer costs for farmers. Meanwhile, in order to realize a production model with energy conservation and sustainable circulation, TFC starts with the selection of raw materials. Through the pre-design, reduction, recycling and reuse, the recycling rate of waste is fully improved.

GRI 301-2

Converting Biogas Residues into Fertilizers to Eliminate Water Pollution

To respond to global warming, TFC takes actions to cooperate with the government's policy of promoting biogas power generation from pig waste. By using the technique of "production and application of fermentation strains of compound livestock manure compost" transferred from Taichung District Agricultural Research and Extension Station, greatly reducing the acid odor of biogas residue (pig manure) generated from the back end of biogas power generation. Then it is converted into the #12 Biotec organic fertilizer by using TFC's own core technology of fertilizer manufacturing, facilitating circular economy in agriculture and reducing the discharge of pig manure and urine into the river to maintain water quality.

Turning Rice Straw into Fertilizer to Prevent Air Pollution



Changhua rice field trial (Left: rice straw-degrading bacteria included organic fertilizer was applied; right: the Control Group)

In order to solve the problem of abandoned rice straw in the field (PM2.5 generated from rice straw burning accounts for 3% of the total domestic PM2.5 volume), TFC applied its core technology and developed "#10 Biotec Organic Fertilizer" by adding the straw decomposing bacteria with the

technology transferred from the Taichung District Agricultural Research and Extension Station so that rice straw can be effectively blacked, softened and rotted to become soil fertilizer so as to increase the organic matter of the farmland, and the air pollution problem caused by burning rice straw in central and southern Taiwan can be solved.

New type of organic fertilizer enables rice straw to nourish the farmland



Rice straw-degrading bacteria included organic fertilizer

The yield increased by 3~5% in the first year.

Saving the base fertilizer fees and wage for fertilization of NTD 3,000~4,000 per hectare



Reuse of Fish Scales for Environmental Protection and Safety

Most fish scales produced during fish processing are discarded or crushed and used as fertilizer. In order to increase the economic value of fish scales and the opportunities for reuse, TFC obtained the exclusive license of "Technology of Collagen Peptide Extraction from Fish Scales" from Fisheries Research Institute, and strictly selected the fish scales after processing from the aquaculture industry as the raw materials to extract fish scale collagen peptide power with a purity of more than 95%, effectively increasing the value of the recycled fish scales.



The Collagen Peptide Extraction from Tilapia Scales obtained the Symbol of National Quality (SNQ).

Collagen peptide extraction from fish scales

The purity of fish scale Collagen Peptide Extraction from fish scales is as high as 95%.

Usage of scales

The annual use of dried fish scales by TFC is 1.72 metric tons.

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- 5-5 Wastewater and Waste Management



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TFC has followed the global trend of environmental protection and made adjustments to cope with it. The “Green Concept” has already gone deep into the operational goals of TFC. The Company has continued to promote a number of energy-saving and waste reduction programs in the production plants to improve overall efficiency of energy and resources and achieve the goals of “zero pollution” and “sustainable development”.

Material topics

Effluents and Waste, Emissions,Energy

GRI 103-1,103-2,103-3

Importance

TFC actively works on the layout in fertilizer industry. Improving energy use efficiency and reducing greenhouse gas emissions and environmental impacts in the expansion of production capacity in order to meet and exceed regulatory requirements are the goals TFC works hard on and also thekeys to steady growth and increase of corporate competitiveness

Policies

Complying with environmental protection regulations, strengthening management and autonomous improvement and continuously promoting energy conservation and waste reduction

Commitments

Implementing green environmental policies and realizing the promise of green homeland

Responsibility

The Safety and Health Center in the head office is the first-level unit for environmental and health management, which is responsible for the planning and management of environmental safety and health. The Environmental Safety Units at Taichung Factory and Miaoli Factory are responsible for matters concerning environmental safety as well as various energy conservation and carbon reduction projects

Resources

A total of NTD 205 million in environmental protection capital expenditures were allocated for 2018 and 2019

Boundary

- Within the organization: TFC's Taichung Factory, Miaoli Factory
- Outside the organization: Raw material suppliers, waste disposal companies

Short-term goals (2017~2020)

- To reduce the unit energy consumption by 1% compared with the previous year
- To reduce water resource consumption by 2% compared with the previous year
- To reduce the amount of greenhouse gas emission intensity by 2% in 2020 compared with the base year.(2015)

Long-term goals (2021~2030)

- To enforce strict regulations and promote improvement programs to minimize environmental impact and continue to reach the goal of zero violation and zero penalty

Specific actions and results in 2017

- The environmental protection expenditure and investment expense in Taichung Factory in 2017 was about NTD 92 million dollars.
- Accomplished internal and external audit tracking and improvement of ISO 50001
- Energy use intensity decreased to 6.86 E-04 (MJ/metric ton), a decrease of approximately 0.64% from 2016
- Steam condensate recovery rate increased to 56.69%
- Greenhouse gas emission intensity dropped to 0.567, a decrease of 2.05% compared with 2016

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5-1 Sustainable Green Management

Environmental Safety and Health Organization

We have set up “TFC’s Industrial Safety and Health Management Measures” and also established the Industrial Safety and Health Department in the head office as the first-level unit for environmental and health management, which is responsible for the planning and management of environmental safety and health. In addition, Environmental Safety Unit is also established at each production factory, in charge of matters concerning environmental safety.

The Company holds an Industrial Safety and Environment Meeting every other month, and a total of six meetings were convened in 2017. The president convenes meetings among relevant directors from the Head Office to regularly review the company’s operations in terms of safety and health, environment, and energy and to follow up on schedules and review improvement.

Projected Environmental Capital Expenditure in 2018 and 2019



Introduction of Environmental Management System

Introduction of Environmental Management System (ISO 14001)

TFC has completed the establishment and verification of ISO14001 environmental management system in Taichung Factory and Miaoli Factory and through the PDCA (Plan-Do-Check-Act) management model, we continue to promote improvement of environmental management and achieve the goals of environmental performance improvement, energy conservation and waste reduction and protection of the natural environment.

Introduction of Energy Management System (ISO 50001)

TFC’s Taichung Factory completed the ISO 50001 Energy Management System and obtained the ISO 50001 certification in 2016. In 2017, the internal and external audit trails and deficiency improvement were successfully completed, enabling the production factory to continue the improvement of energy efficiency in daily operation.

The ISO14064-1 Greenhouse Gas Inventory System (ISO 14064-1)

The ISO14064-1 Greenhouse Gas Inventory System was introduced in 2016 for the 2015 comprehensive GHG inventory at Taichung Factory and Miaoli Factory, and it was verified by the third-party verification. The year 2015 was set as the base year for GHG reduction. The statistics after 2016 would be checked by the Company.



1 2 3 ISO 50001 and ISO 14001 Certificates



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5-2 Energy Resource Management

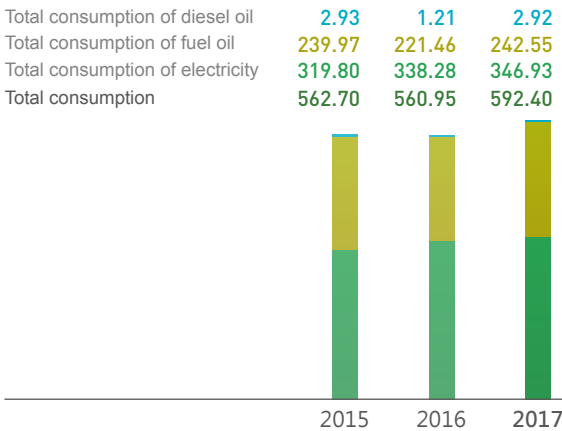
GRI 302-1,302-3,302-4,303-1,303-3

Energy Use

The energy used in TFC includes electricity, steam, fuel oil, diesel oil, etc. The generation of steam relies on the fuel oil and the steam from the exhaust heat collected from the Public Plant. In terms of energy use, TFC's use of electricity in 2017 reached 96 GWh, the use of fuel oil 6,039 kiloliters and diesel use 83 kiloliters. After conversion, the total energy usage equals 592.40 mega-joules.

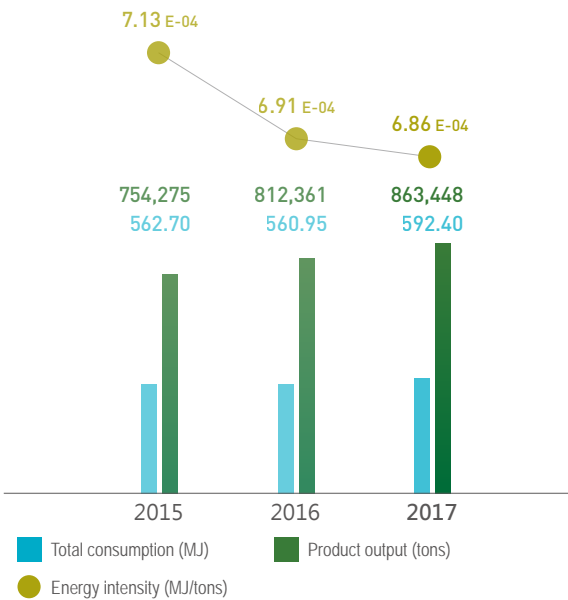
Our energy use is mainly based on electricity, with the total annual electricity consumption of 96 GWh, which accounted for approximately 58.56% of total energy consumption, followed by fuel oil (6,039 kiloliters) which accounted for about 40.94% of total energy consumption. The consumption of diesel oil accounted for less than 1% of total energy consumption.

Energy use¹⁻⁵ (Unit: MJ)



Our product output in 2017 was about 863,448 tons. After calculation, the energy intensity in 2017 was 6.86E-04 MJ/ tons, a 0.64% decrease compared with the 6.91E-04 MJ/ tons in 2016.

Energy intensity⁶



Note:
1. 2015 and 2016 statistics recorded data from Keelung Factory, Miaoli Factory, Taichung Factory and Hualien Factory
2. 2017 statistics recorded data from Miaoli Factory, Taichung Factory and Hualien Factory
3. Calorific value of power, Taiwan = 3.6 E06 MJ/degree

4. Calorific value of fuel oil, Taiwan = 40.2 E06 MJ/liter
5. Calorific value of diesel oil, Taiwan = 35.18 E06 MJ/liter
6. Energy Intensity = Annual use / Annual output



Water Resources Management

TFC is committed to saving water, waste water recycling and proper treatment of wastewater discharged in the course of production. In terms of water resources management policies, our water-saving measures include rainwater recovery systems, process water recycling and steam condensate recovery.

The water source of Keelung Factory, Miaoli Factory and Hualien Factory is tap water, while that of Taichung Factory is from both seawater from Taiwan Strait and tap water.

Total water resources usage in 2017

38,370 kilotons

Water intensity

A decrease of 5.71% compared with 2016

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The quantity of seawater usage in 2017 amounted to 37,641 kilotons, which was only extracted for heat exchange in Taichung Factory, and the extracted seawater was not used in the production and processes. After the heat exchange, it was discharged into the Taiwan Strait via the external discharge outlet of Taichung Harbor.

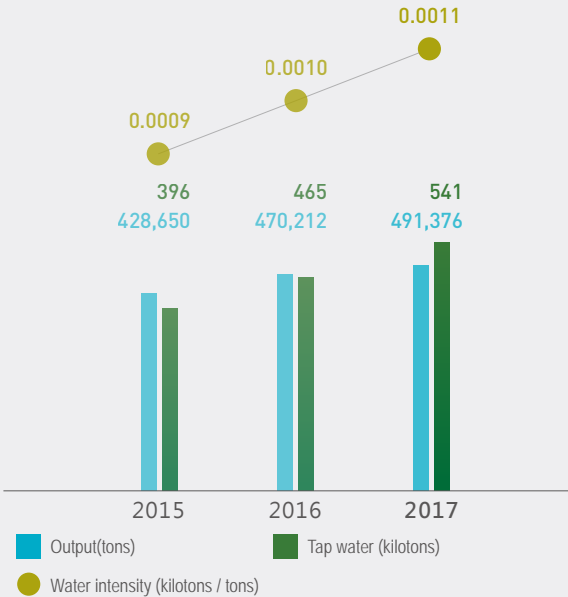
Water resources usage¹ (Unit: kilotons)



Note1: After Hsinchu Factory was decommissioned, there was no use of ground water. Therefore, only the information of tap water has been disclosed since 2015.

Water Recycling

Water intensity at TFC's Taichung Factory²



Note2: Water intensity = total tap water usage at Taichung Factory / output of Taichung Factory

Taichung Factory began to implement water saving measures in 2015. In 2017, the amount of tap water increased by 16.48% compared to 2016 and the output was 4.5% more than in 2016. Water intensity increased by approximately 11.46% mainly due to the increase in the amount of cleaning water used to clean the remaining materials in the fertilizer tanks. In 2017, the water recovery rate of TFC was 0.072%. Although the water recovery rate at Taichung Factory decreased by 1.14% compared with the previous year, the recovery rate of steam condensate increased significantly to 56.69%.

Steam condensate recovery rate

56.69%

Steam condensate recovery rate increased significantly to 56.69%

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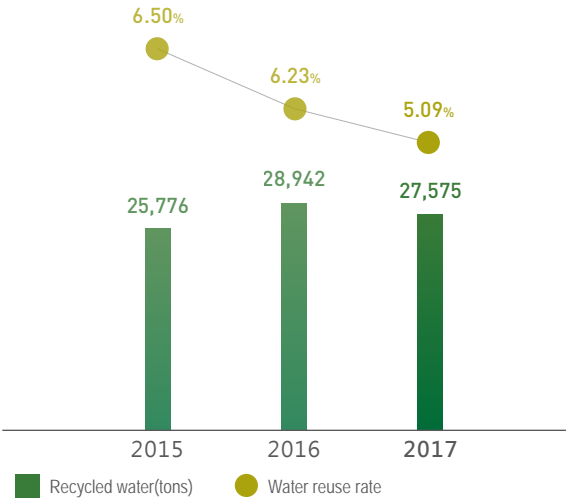
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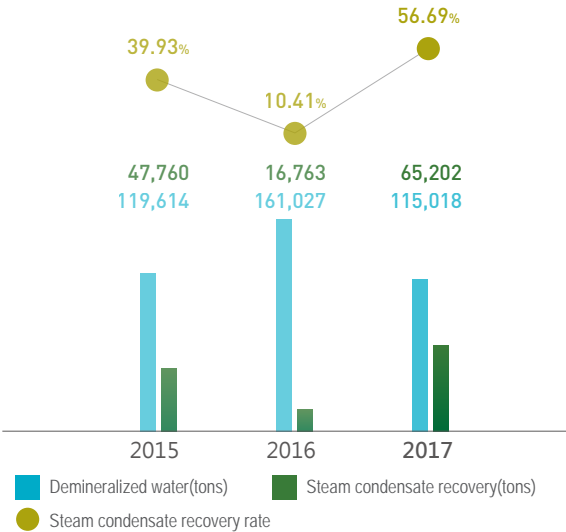
8 Value Co-creation and Social Care

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Water Recovery at Taichung Factory



Steam Condensate Recovery



Note:

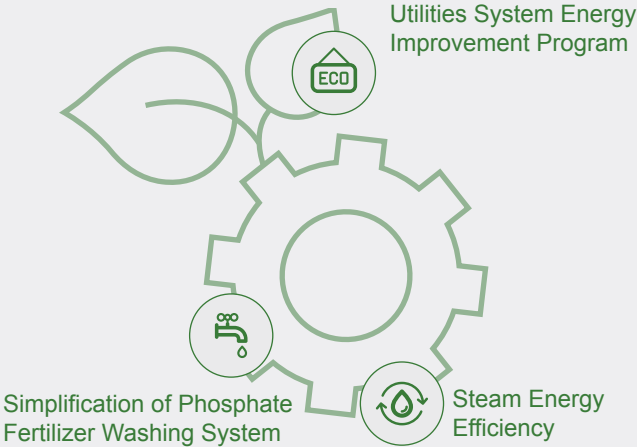
1. Water reuse rate of Taichung Factory = recycled water at Taichung Factory / total tap water used at Taichung Factory

2. Demineralized water standards: (1) total hardness: Trace; (2) electric conductivity: <5μs / cm; (3) pH: 7 ~ 9; (4) SiO2: <50ppb; (5) Cl- <4.0 ppm

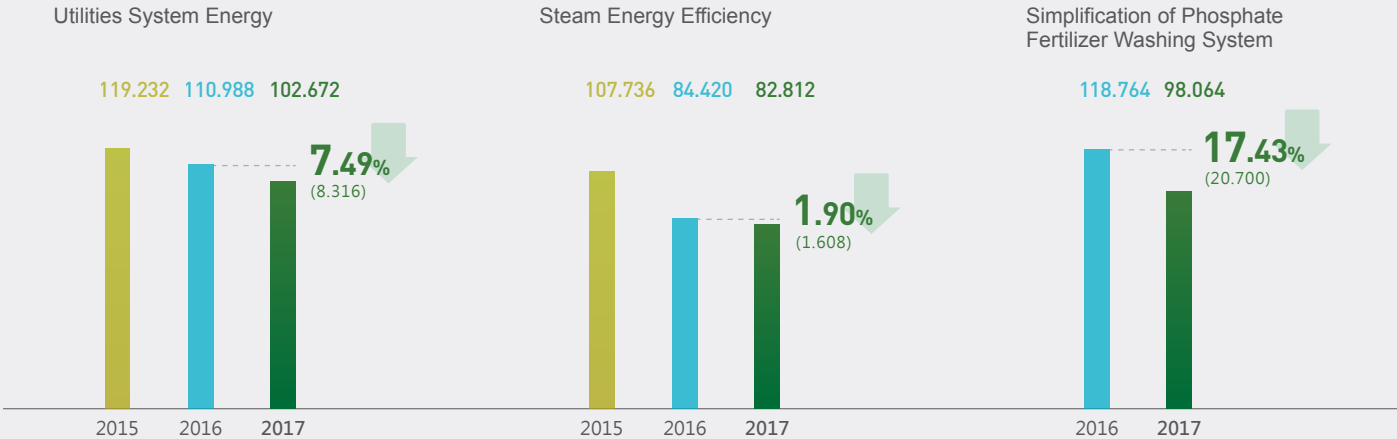
3. Steam condensate recovery rate= steam condensate recovery / demineralized water

Energy Saving and Carbon Reduction Measures and Performance

Taichung Factory has been actively investing manpower and a large number of material resources to promote various energy conservation programs since 2014 and has successively promoted programs such as “Utilities System Energy Improvement Program” “Steam Energy Efficiency” and “Simplification of Phosphate Fertilizer Washing System”. With the successive launch of various programs, the energy efficiency of the Taichung Factory has gradually stabilized.



Efficiency of energy-saving programs in Taichung Factory
Energy use per ton of products (million joules / tons)



4. The energy-saving efficiency presented in this table shows the comparison between the energy needed for the production of every ton of products in different years

5. Energy savings per ton in 2017 = 2017 Energy use per ton of products - 2016 Energy use per ton of products

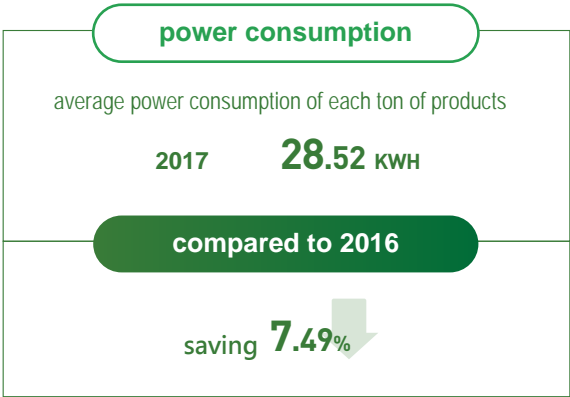
6. The ratio of energy saving per ton of products in 2017 is the one compared with the previous year (2016)

7. Due to the fact that the Phosphate Fertilizer Plant has just started operation since June, 2016, and there is no data to refer to in terms of the program of “Simplification of Phosphate Fertilizer Washing System”

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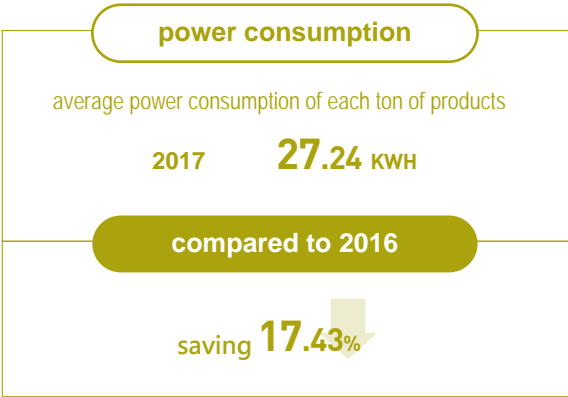
Utilities System Energy Improvement Program

TFC has implemented utilities system energy improvement programs such as Improvement Program for Pressure Loss of the Cooling Water Pipe, Sea Water Pump Energy Saving Program, Instrument Air Support for Plant Air and Improvement in the Water Trap of the Exhaust Feed Heater in the Nitrobenzene Plant, and set the systems at the optimum mechanical operation mode. After the implementation of the above programs, the average power consumption of each ton of products produced in 2016 and 2017 was 30.83 KWH and 28.52 KWH, respectively, indicating that the energy-saving efficiency has gradually stabilized.



Simplification of Phosphate Fertilizer Washing System

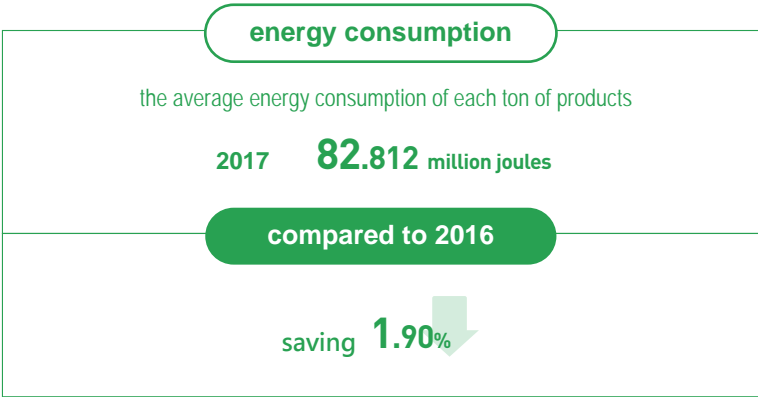
The exhaust gas treatment equipment at Phosphate Fertilizer Plant is pumped by P-302A/B/C/D pump to wash the exhaust gas produced by the process. The P-302A/B pump was often damaged and overhauled, but the P-302C/D pump has not been damaged. Therefore, the tank (V-302C tank) of the exhaust gas treatment equipment was provided with an overflow pipe to V-302B tank and the pipeline was modified. The P-302A/B pump was cancelled and the P-302C/D pump for pumping washing liquid was reserved. The power costs for P-302A/B pump and X-302 cooling tower motor were saved. After improvement, the unit power consumption dropped from 32.99 KWH/ton in 2016 to 27.24 KWH/ton, a saving of 17.43% compared with 2016.



Steam Energy Efficiency

The fertilizer manufacturing process requires a lot of steam. During the planning stage of Taichung Factory, we set up a Nitric Acid Plant that can produce a large amount of steam during the production process, and through the Public Plant, the steam from the exhaust heat can be collected, and in coordination with the production schedules of the Nitric Acid Plant and the schedules of operation period and idle period with other plants, the steam can be deployed for proper use. This scheme can increase the efficiency of the steam from exhaust heat in the Nitric Acid Plant, and boiler usage and fuel oil usage can thus be reduced.

After the implementation of the programs of Utilizing Steam from Exhaust Heat in the Nitric Acid Plant and Improvement in the Water Trap of the Exhaust Feed Heater in the Nitrobenzene Plant, energy consumption for each ton of products produced in 2017 was 82.812 million joules, a saving of 1.90% compared with 2016.



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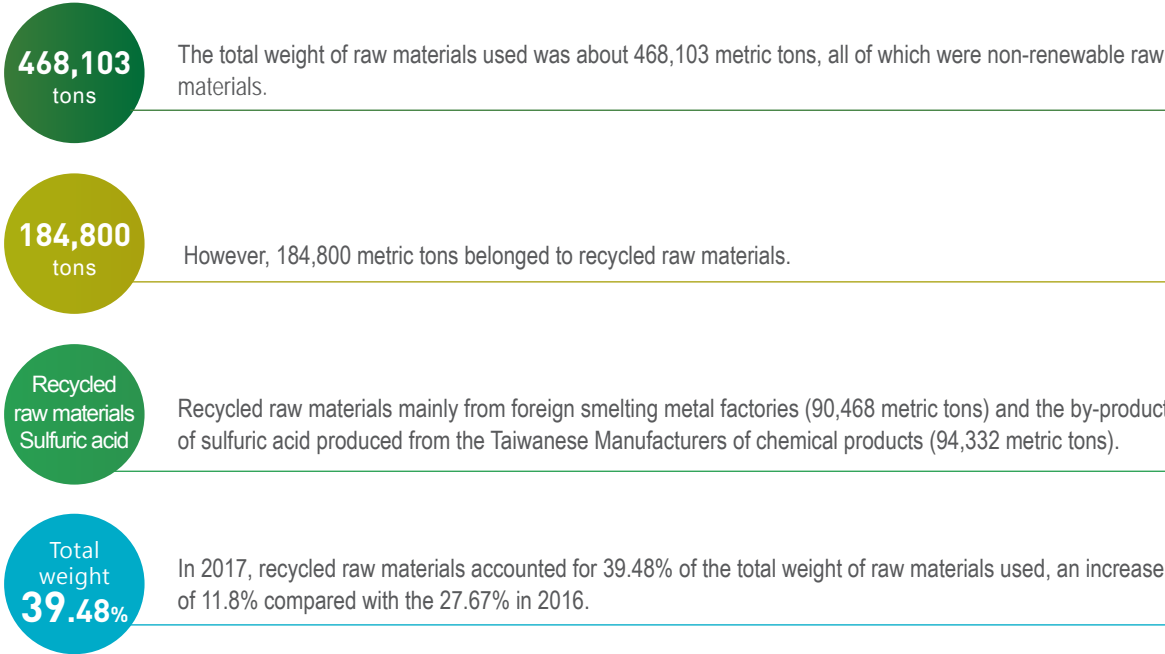
5-3 Raw Material Management

GRI 301-1,301-2

Raw Material Usage

TFC will continue to use recycled and reused materials instead of general raw materials to achieve the goals of environmental protection and energy conservation.

The raw materials used for the production of fertilizer and chemical products are mainly divided into three categories, including raw materials, secondary raw materials, and packing bags.



Raw materials used (Unit:metric tons)

| Non-renewable raw materials | |
|--|---------|
| The main raw materials (liquid ammonia, urea, phosphate,peat) | 443,103 |
| Sub-materials (including fuel oil and molten sulphur) | 22,410 |
| Packing bags (PP plastics) | 2,590 |
| Total | 468,103 |

Note:
The amount of PP plastics used in packing bags is obtained from the weighted conversion of the specification of the bags (mostly 25 kg and 40 kg) TFC uses and the PP consumption. Ton bags and paper bags less than 1% are not included.

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5-4 Greenhouse Gas Management

GRI 305-1,305-2,305-4,305-5,305-7

Greenhouse Gas Inventory

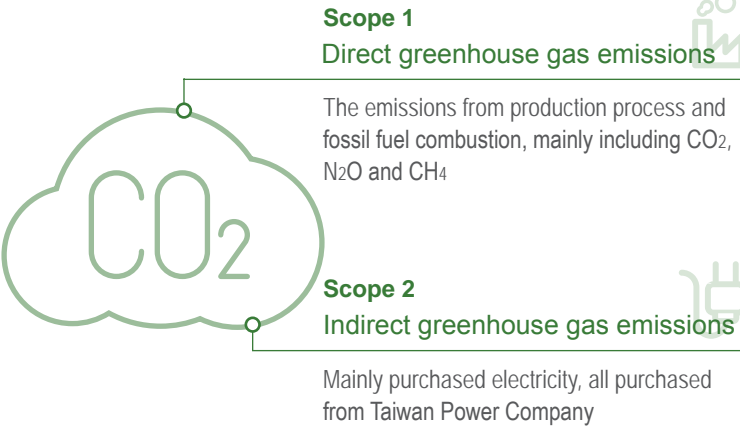
In recent years, TFC has been committed to improving greenhouse gas emissions. Through process improvement, replacement of equipment and purchase of energy-saving equipment, it has regularly tracked and reviewed greenhouse gas emissions and related management policies for each factory. In 2017, due to the increased product line and production capacity of the Taichung Factory, emissions were slightly higher than 2016, an increase of 10,897 tons.

Emission intensity

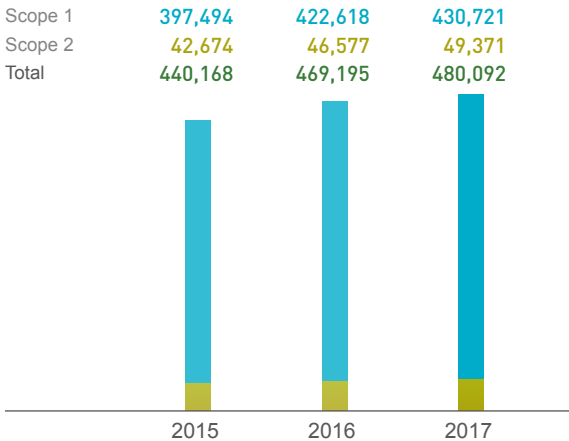
2017 0.556

Compared to 2016

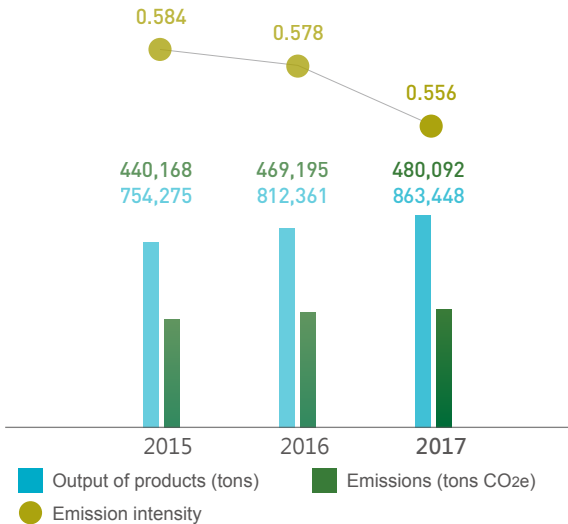
Decrease of 3.81%
Has reduced for two consecutive years



GHG emission equivalent (Unit: tons CO₂e)



GHG Emission Intensity



Note:

1.The greenhouse gas inventory included all production factories of TFC, including Miaoli Factory and Taichung Factory

2.Scope 3 includes sources of greenhouse gas emissions not directly owned or controlled by the organization. Scope 3 is not included in the calculation

3.The results of 2016 and 2017 GHG emissions come from TFC's internal inventory and have not yet verified by a third party

4.The 2015 GHG emission data revealed in this Report have obtained a third-party verification, which is different from the data from internal inventory as revealed in our 2015 CSR Report



5.The GWP Value from Greenhouse Gas Inventory is referenced by IPCC 2007 AR4 Version

6.Greenhouse gas emission sources were identified by means of operational control

7.Emission intensity = greenhouse gas emissions / annual output

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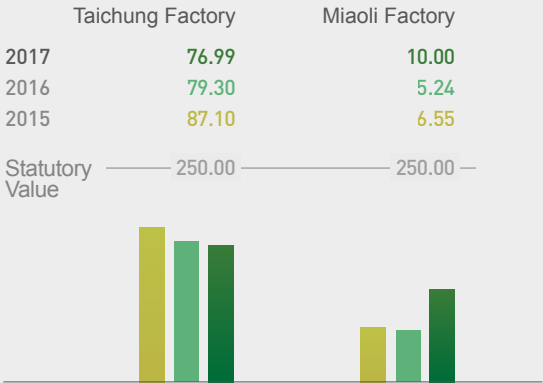
Air Pollutant Emissions

All factories of TFC will operate and maintain the equipment and facilities for the prevention of stationary pollution source in accordance with the content in the Stationary Pollution Source Operating Permit, and regular test and inspections will be conducted as required by regulations. The test results will be analyzed and tracked. The air pollution emissions in 2017 were all far below the statutory values. However, due to the expansion of product items and production line in the Miaoli Factory, the emissions increased slightly compared with 2016, but were still far below the statutory values.

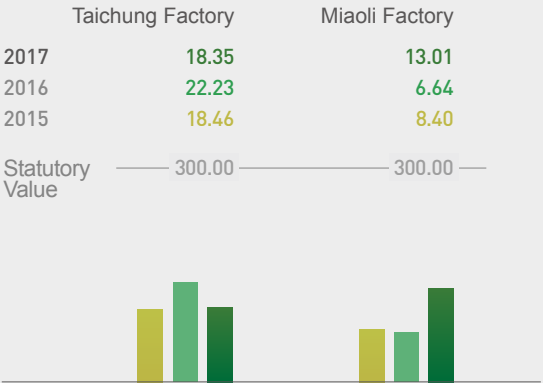


Statistics of total amount of air pollutant emissions (Unit:ppm)

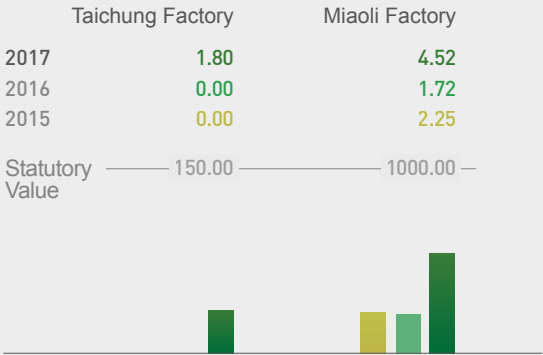
Nitrogen Oxide (NOx)



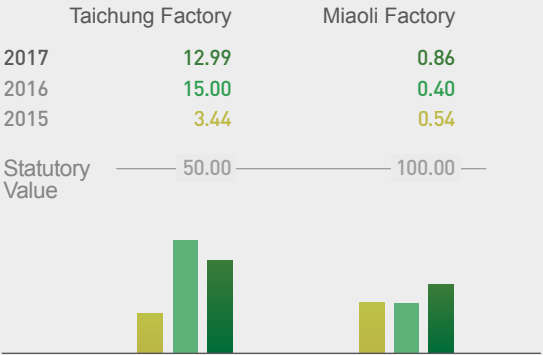
Sulfur Oxides (SOx)



Volatile Organic Compounds (VOC)



Particle Matter (PM)



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5-5 Wastewater and Waste Management

GRI 306-1,306-2,306-4,306-5

Waste Disposal and Cleaning

Taichung Factory and Miaoli Factory are the main production bases of TFC. The general business waste in the two factories mainly include waste liquid, sludge and domestic waste. They are mostly disposed of by incineration or landfill. There is also a small amount of harmful business waste. The factories manage the waste in accordance with the legal requirements, and the waste is cleaned and treated in accordance with the law by legitimate vendors and documents are also submitted after the waste is disposed.

Statistics of total amount of waste in TFC (Unit: tons)

| General business waste | | | |
|------------------------|--------|--------|--------|
| | 2017 | 2016 | 2015 |
| Taichung Factory | 330.55 | 133.56 | 141.08 |
| Miaoli Factory | 339.36 | 35.50 | 350.00 |
| Total | 669.91 | 168.06 | 491.08 |

Note : This table only lists the statistics of Taichung and Miaoli Factories as the rest of the factories produce only a small amount of domestic waste

| Hazardous business waste | | | |
|--------------------------|-------|-------|-------|
| | 2017 | 2016 | 2015 |
| Taichung Factory | 0.020 | 0.055 | 0.098 |
| Miaoli Factory | 1.229 | 0.040 | 0.000 |
| Total | 1.249 | 0.095 | 0.098 |



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Wastewater Treatment

The wastewater has been discharged by each plant after being properly processed by the plant's wastewater treatment facility. The wastewater testing will be conducted on a regular basis to ensure there is no significant impact on the environment. After the completion of wastewater treatment, the wastewater will be discharged into rivers or waters nearby in accordance with the provisions. Miaoli Factory would discharge the wastewater to Houlong River while Taichung Factory would discharge it to the adjacent waters of Taichung Harbor. The rest of the factories produce only a small amount of domestic sewage.

In 2017, the concentration of pollutants in Taichung Factory and Miaoli Factory was far below the effluent emission standards.

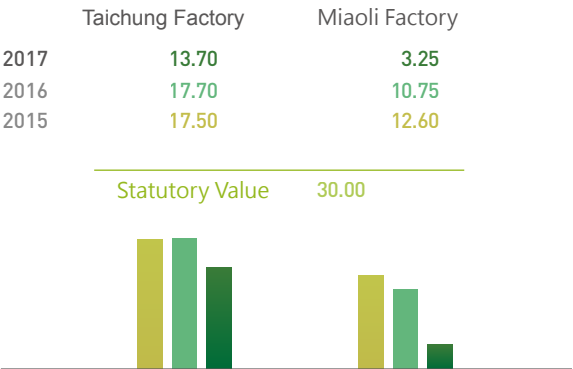
Wastewater Discharge (unit: m³)

| 💧 Wastewater Discharge | | | | |
|------------------------|---------|---------|---------|--|
| | 2017 | 2016 | 2015 | |
| Taichung Factory | 52,991 | 27,375 | 22,888 | |
| Statutory | 228,027 | 200,641 | 200,641 | |
| Miaoli Factory | 111,916 | 118,541 | 117,763 | |
| Statutory | 364,818 | 513,300 | 506,340 | |
| Total | 164,907 | 145,916 | 140,651 | |
| | 592,845 | 713,941 | 706,981 | |

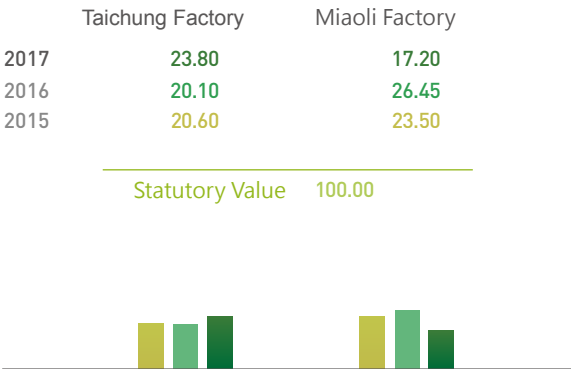
Note: This table only uses statistics from Taichung and Miaoli Factories

Average concentration value of pollutants (unit: mg/L)

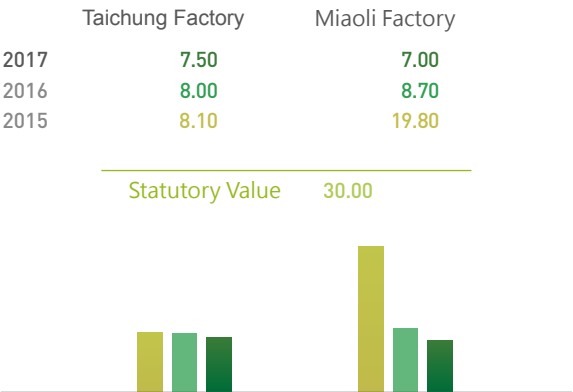
Suspended Solid (SS)



Chemical Oxygen Demand (COD)



Biochemical Oxygen Demand (BOD)



Environmental Related Grievance Handling

Environmental related grievance hotline is available at all TFC's Taichung and Miaoli Factories. When residents or organizations around them have doubts about the environmental impact during the production process, they can make use of the hotline numbers. Once the grievance is received, investigation will immediately be conducted for improvement.

Taichung Factory

04-2521-8588

Miaoli Factory

037-260-601

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6-2 Improved Customer Service System

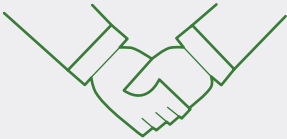
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Upholding customer-oriented philosophy for continuous innovation, TFC provides products and services that meet customer needs and expectations, becoming a trustworthy company for customers. For suppliers, TFC not only requires delivery, quality and yield, but also actively develops a supply chain system that attaches importance to environmental protection, labor and human rights as well as stable and sound development through screening, management and guidance of suppliers, aiming at working together towards sustainability.

Material topics

Customer Health and Safety

GRI 103-1,103-2,103-3

Policies

TFC has been committed to the construction of a complete quality management and supplier management system and upholding the philosophy of “customer first” to continuously innovate services to meet customer needs

Importance

TFC pays attention to the health and safety of customers. Earning customers’ trust is an important part of TFC’s sustainable operations. Through the improvement of the quality management and supplier management system, TFC not only meets customer needs but also strengthens its market competitiveness

Boundary

- Within the organization: TFC, the subsidiary of Taiwan Yes Deep Ocean Water Co., Ltd.
- Outside the organization: suppliers, distributors, consumers

Commitments

- To carry out strategies such as continuous innovative technologies and services, strict control over production and marketing process, and even reinforcement of customer services
- To provide customers with high quality, safe and healthy products. We ensure compliance with legal requirements in terms of product labeling, marketing and quality

Short-term goals (2017~2020)

- To pursue zero violations against regulations concerning product safety, labeling, marketing and personal information protection

Long-term goals (2021~2030)

- To establish customer service evaluation mechanism and system to improve customer service performance through PDCA Cycle so as to win customers’ trust.
- To propose technical and service innovation programs to strengthen our market competitiveness

Specific actions and results in 2017

- Create a complete “Traceability System for fertilizer products”.
- To introduce the “ISO 22000 Food Safety Management System”, conduct two internal audits and one external audit every year, and register them on the Ftracebook of the Ministry of Health and Welfare.
- TFC introduced ISO 9001 International Quality Management System into Taichung Factory and Miaoli Factory. Currently, the ISO 9001 verification has been obtained in both factories.
- To introduce the external supplier management system to complete the supplier CSR evaluation.

Responsibility

TFC’s Taichung Factory, Miaoli Factory and Production Department are responsible for the stringent checks on the production processes while the Sales Department and Trading Department are responsible for customer service

Resources

To set up laboratories and food factories, establish a complete product inspection system and budget for relevant equipment and tests.

Management Approach

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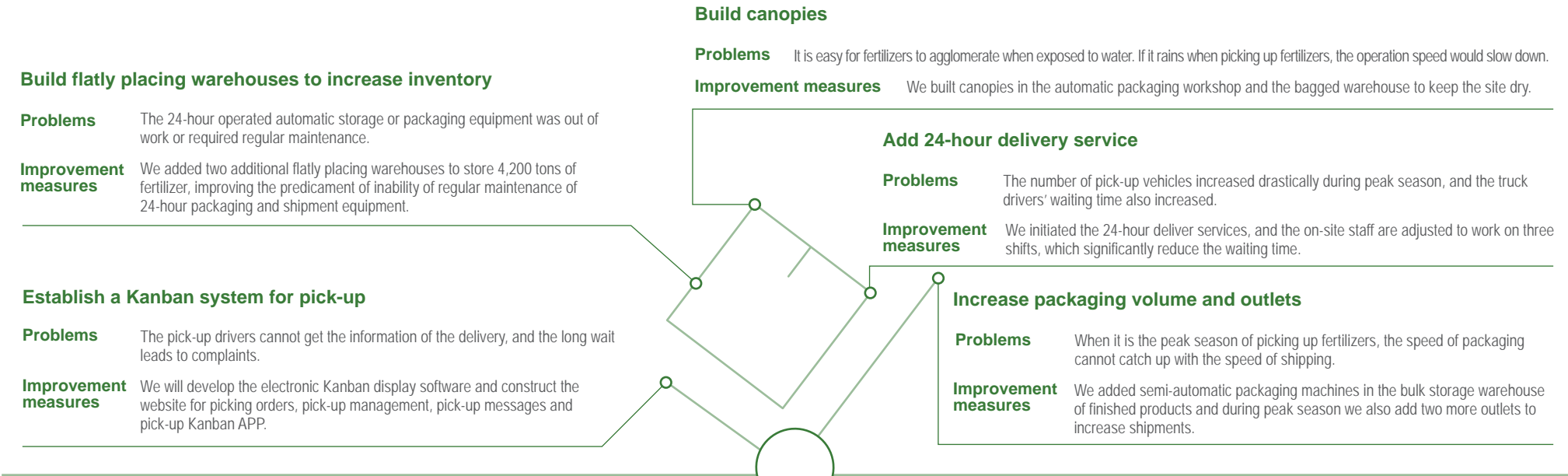
6-1 Innovation Services – the Convenience Store in the Fertilizer Industry

Provide 24-hour supply service to meet farmers’ demand for fertilizer

In order to fully meet the fertilizer demand during the busy farming season, TFC provides the very first 24-hour supply service available in the fertilizer industry. Taichung Factory uses the SAP information system to integrate information such as demand for orders, inventory of raw materials and quantity of shipments to accurately control the amount of raw materials, production and shipments. Hardware facilities such as warehouses and shipping outlets are increased to increase efficiency and shipment and quickly fill up the fertilizer needs of farmers in various regions. In 2017, the total volume of shipments increased to 744,000 tons, which was a 12% increase from that in 2015. In addition, the satisfaction of delivery increased from 74.6% to 83.16%, with the overall service quality significantly improved.



Taichung Factory Delivery Improvement Plan



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Establishment of nationwide distribution centers to take care of farmers all over the country

In the past, due to inconvenient transportation in eastern Taiwan and other remote areas, the prices of fertilizers were affected by the long transport distance and therefore were higher than those in the western area. TFC supported and cooperated with the government to implement the policy of “Uniform Price of Fertilizers for All Farmers Nationwide” and recommended that sales channels should only supply farmers fertilizers at the price no higher than the national recommended one. (for domestic major fertilizers)



Establishment of supply centers

Since 2017, 17 supply centers have been established in Hualien, Chiayi and Yunlin areas. In the future, at least one or more supply centers will be established to the south of Taichung, north of Pingtung and in Yilan and Hualien and Taitung Area.



To set a recommended price nationwide

We have set the national recommended price for domestic major fertilizers. All sales channels can only supply fertilizers to farmers at or below the national recommended price so that there will be no price difference to all farmers in Taiwan.

Remote area shipping subsidies

Farmers in remote areas can reduce the costs of fertilizers through the subsidy so that uniform fertilizer price across the country can be achieved.



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6-2 Improved Customer Service System





TFC has been upholding a customer-oriented philosophy and has built a complete service network. We have established service centers for each area, provided customer service hotlines and built a multiple customer service channel through the Internet and social media. Meanwhile, we also provide a sound and immediate handling mechanism for customer grievance to respond to and deal with comments from our customers. The feedback and suggestions from face-to-face contact or direct communication with farmers will become an important basis for innovative product content and services.

GRI 418-1

A full-service platform to lead farmers to work together


Multi-channel Map

TFC Customer Service Hotline

-  Customer service hotline for fertilizer products : 0800-883-300 (Sales Department)
-  Customer service hotline for chemical products : (02)2542-2231 (Trading Department)
-  Customer service hotline for electronic chemical products : (037)269-345 (Marketing Department of Electronic Chemical Products, Sales Department)
-  Customer service hotline for residential development projects : 0800-258-600 (Real Estate Development Department)

The innovative TFC Quarterly serves as an exclusive medium for farmers and fishermen

TFC Quarterly, being issued in Taiwan for 57 years, is an important publication full of agricultural knowledge that is highly valued by farmers' associations, farmers and consumers. Starting from 2014, a two-way interactive mode was introduced through the field interviews with farmers and fishermen. It has become an important medium for farmers and fishermen to exchange knowledge and techniques. The columns such as the "Fertilization Classroom" and "Organic Cultivation Classroom" have been added to bring agriculture to each family's daily lives. Many readers have called to ask for TFC Quarterly since the revision of it.

 TFC Quarterly on the official website



Service units and personnel throughout the country

Our service system is composed of the three business service units, including the business centers in Northern, Central and Southern Taiwan. We assign experienced and professional sales people to the first line of customer services, taking care of fertilizer sales problems, product coordination, product use and complaints.

-  Northern District Sales Office : (037)269-345
-  Central District Sales Office : (05)591-6992
-  Southern District Sales Office : (07)222-5717



 business bases on the TFC official website

Compiling the "Manual of Fertilization of TFC Fertilizer Products for Major Crops" which includes seventy years of knowledge and experience

We also compiled our R&D results of agricultural knowledge for more than 70 years in the "Manual of Fertilization of TFC Fertilizer Products for Major Crops", in which there are recommended methods for rationalization of fertilization of 83 kinds of crops for farmers free of charge. This manual is also available at TFC's official website for the users to download.



 the Manual of Fertilization of TFC Fertilizer Products for Major Crops on the official website

Instant interaction on the social media

Various information on the use of fertilizers is provided in the "Fertilizer Classroom" on the official website of the Company. The "TFC Agriculture Promotion Center" fanpage is created on Facebook to introduce related information of various characteristics of fertilizer products, instructions for use, rationalization of fertilization, product description and demonstration plots. At the same time, it also regularly shares new knowledge of agriculture at home and abroad, making it easier for farmers in Taiwan to align with international trends.



 TFC Fanpage on the Facebook



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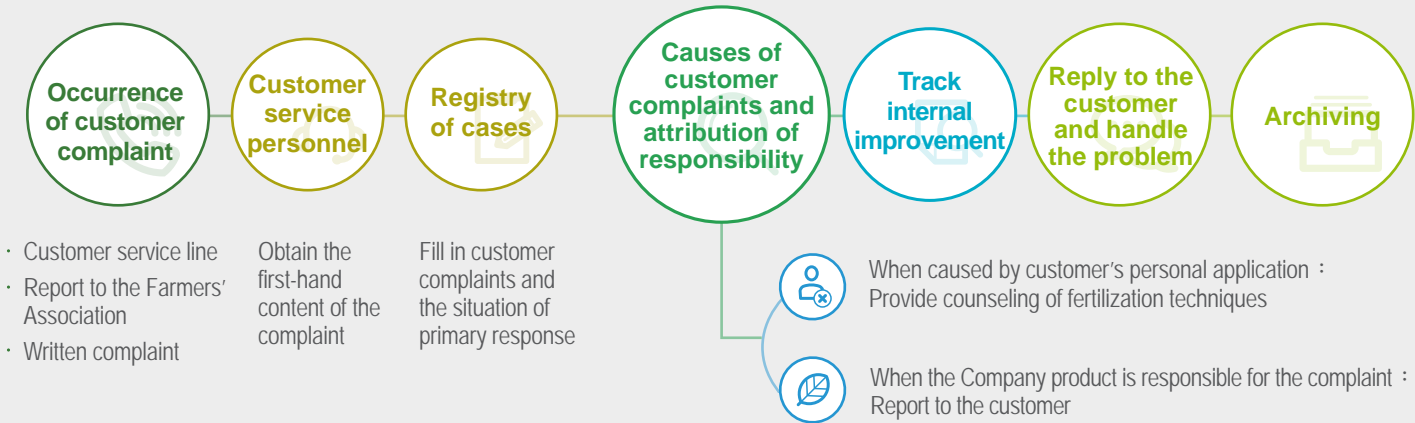
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Handling Customer Complaints

"Customer Relationship Management Rules" and "Business Management Guidelines" as the basis for customer complaint handling procedures, striving to improve the quality of the production unit within a time limit to prevent similar cases from happening again.

Customer complaint handling procedure



In our effort to conduct and strengthen customer relationship management, cases of customer grievance decrease year by year. In 2017, only six cases of customer grievance were reported (the number in 2015 was 40, and that in 2016 was 4), mostly due to the abnormalities in the chroma of electronic grade chemicals. We have strengthened the control of waste liquid classification and asked the R&D unit to study the method of solving the problem of abnormality in chroma. TFC will continue to provide customers with quality products and services.

Description of Customer Grievance Cases

Abnormality in chroma of reproduced phosphoric acid

Handling and preventive measures

- Strengthen the control of waste liquid classification and store abnormal raw materials together to prevent the raw materials of normal waste phosphoric acid from being polluted, and communicate with customers through the Sales Department to sell recycled phosphoric acid products by differentiating the quality according to the copper ion concentration contained therein.
- Ask the R&D unit to study the method to solve the abnormality in chroma so as to solve the problem that most of the waste phosphoric acid will contain high concentrations of copper ions after the changes in the electronic industry process.

Abnormality in chroma of NMP

Handling and preventive measures

- Sampling and inspection is conducted every hour by QC, confirming that the content of amine causing color change meets the specifications. It can be classified into the finished product for packaging after passing the test.
- Instructed by the MCL/ITRI. No color change has occurred in the past 6 months and the product can reach semiconductor level.

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Customer Privacy Management

To strengthen protection of customer privacy and related business information, we have set up the "Personal Data Protection Management Committee" to draw up the policy and system for personal data protection. In addition, we have strictly enforced "Execution Points of Confidentiality" and "Personal Data Protection Act".

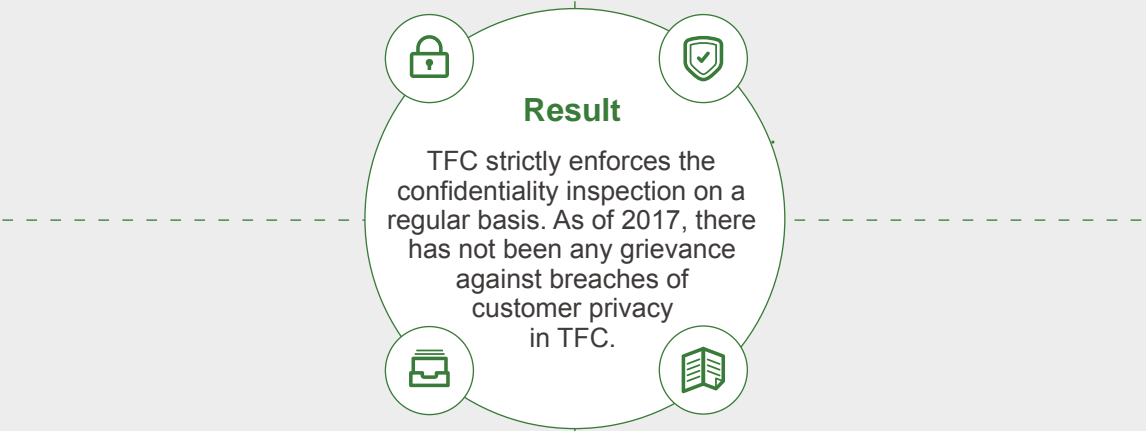
TFC's Management of Personal Data

Management of physical personal data

- Physical personal information is properly stored in the file cabinet which is properly locked. The personal data manager is responsible for the safekeeping of it
- In the event of staff redeployment, the custodian shall register the information by item, and shall keep the confidentiality requirements

Management of electronic data

- Personal information stored in the information system and electronic files should be encrypted for management
- When the storage device is discarded or not used, personal data should be deleted by the information staff



Unified management

- The collected personal data are only used by the staff in charge of that specific business, and the staff in particular also serve as the contact window. Non-directly related personnel do not have the access to the personal data

Education and training

- New staff all receive the training for the concept of personal data protection
- Implementation of education and training to ensure the employees are equipped with the required legal literacy and concepts of proper use of personal data files

Information Security and Protection

We attach great importance to information security protection, and we organize personal information protection education and training to ensure that the practitioners are fully aware of the scope of confidentiality for business implementation and related penalty for any breach of it. New staff also receive training to avoid any leak of personal data and confidential documents that may affect the company's operations and customers' interests.

TFC's Information Security Management Methods

- Deploy network firewalls, intrusion detection systems, and active blocking of known threats to block known attacks, malicious programs, malicious URLs and C & C activities. To prevent Advanced Persistent Threat (APT), we also analyze internet files to identify new types of threats for the execution of immediate defense.
- Regular disk backup of data and regular geo-replication drills are conducted. TFC conducted 2 geo-replication drills in 2017 and the system backup and data validation were successfully completed.
- Installment of anti-virus software to provide a safe computer operating environment.
- TFC organized several lectures on information security threats and protections in 2017 to enhance the information security awareness of employees and strengthen the overall information security of the Company.

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6-3 Product Liability

GRI 103-3,416-1,417-1,417-2,417-3



Fertilizer Production Process

Raw material

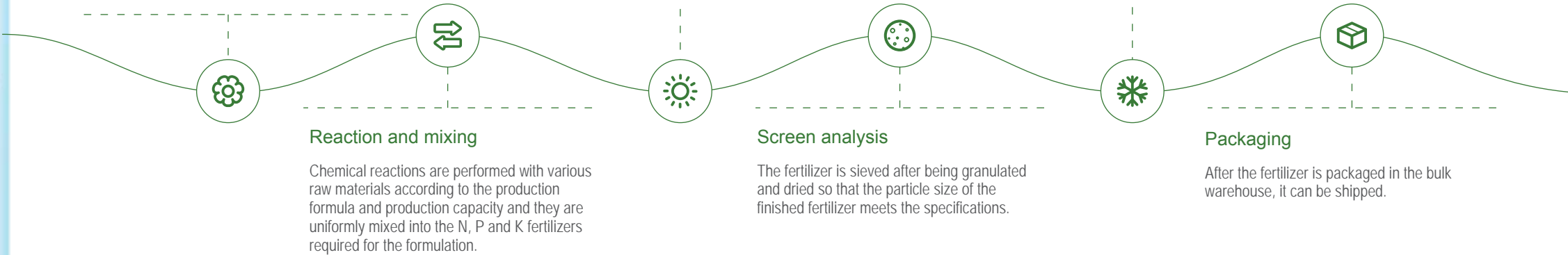
- Raw materials are imported from Saudi Arabia, Jordan, China and other countries, and are unloaded at Taichung Factory Wharf and stored in raw material warehouses via pipelines.
- Liquid raw materials such as liquid ammonia, phosphoric acid and solid materials like urea and potassium chloride are sent to the factory for production.

Granulation and drying

The fertilizer is granulated and dried with hot air.

Finished product cooling

Finished fertilizers are sent to bulk warehouse after cooling.

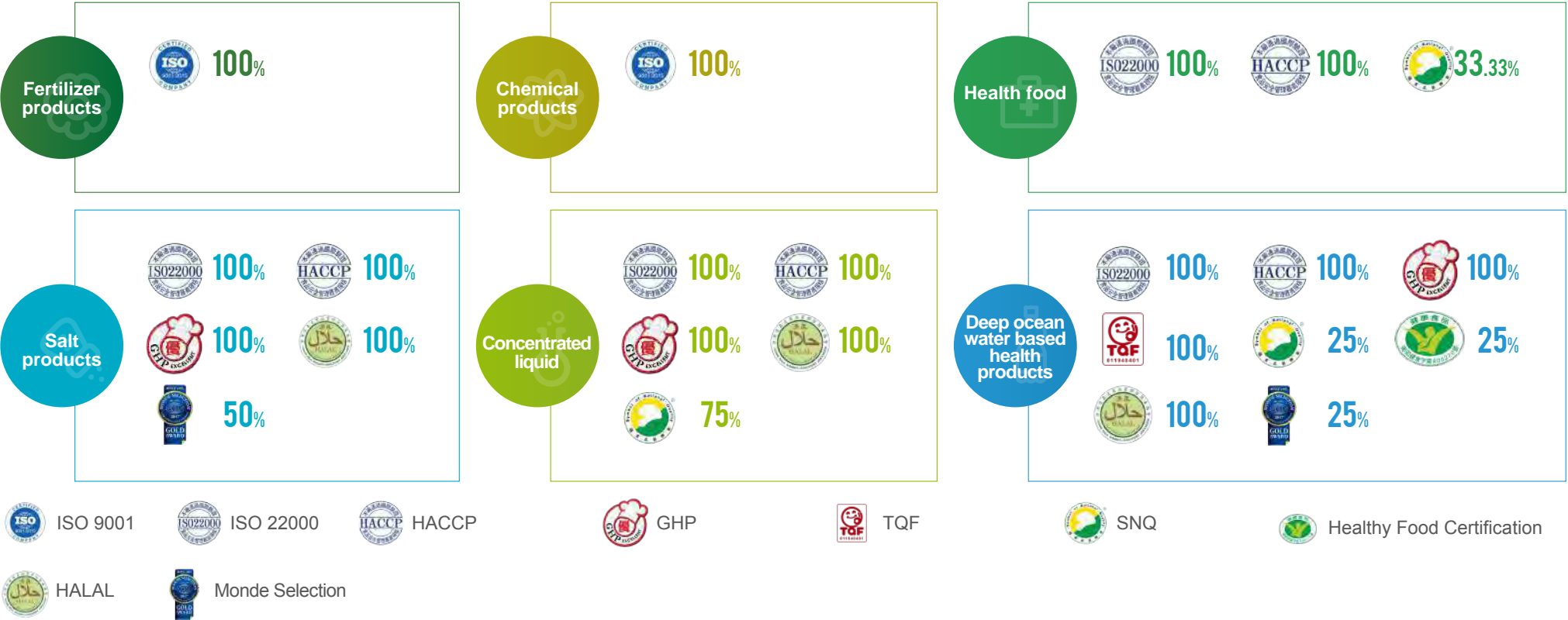


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Product Quality Management

We introduced ISO 9001 International Quality Management System into Taichung Factory and Miaoli Factory. Currently, the ISO 9001 verification has been obtained in both factories. The quality objectives are achieved by the formulation of quality policy guidelines, implementation of quality planning, assurance and improvement of the PDCA Cycle. In addition, the meeting on quality should be regularly convened at production plants to ensure that the operation of the management system is continuous, effective and appropriate.

The proportion of product categories that have passed food safety certification or obtained food safety certification



Note:

1.The percentages in the above table represent the proportion of the products of TFC Group that have passed safety certification or obtained food safety labels

2.Water products (Hasbo 1400) won the Bronze Award, Monde Selection in 2015; salt products won the Gold Medal, Monde Selection in 2017 (Taiwan Yes natural sea salt)

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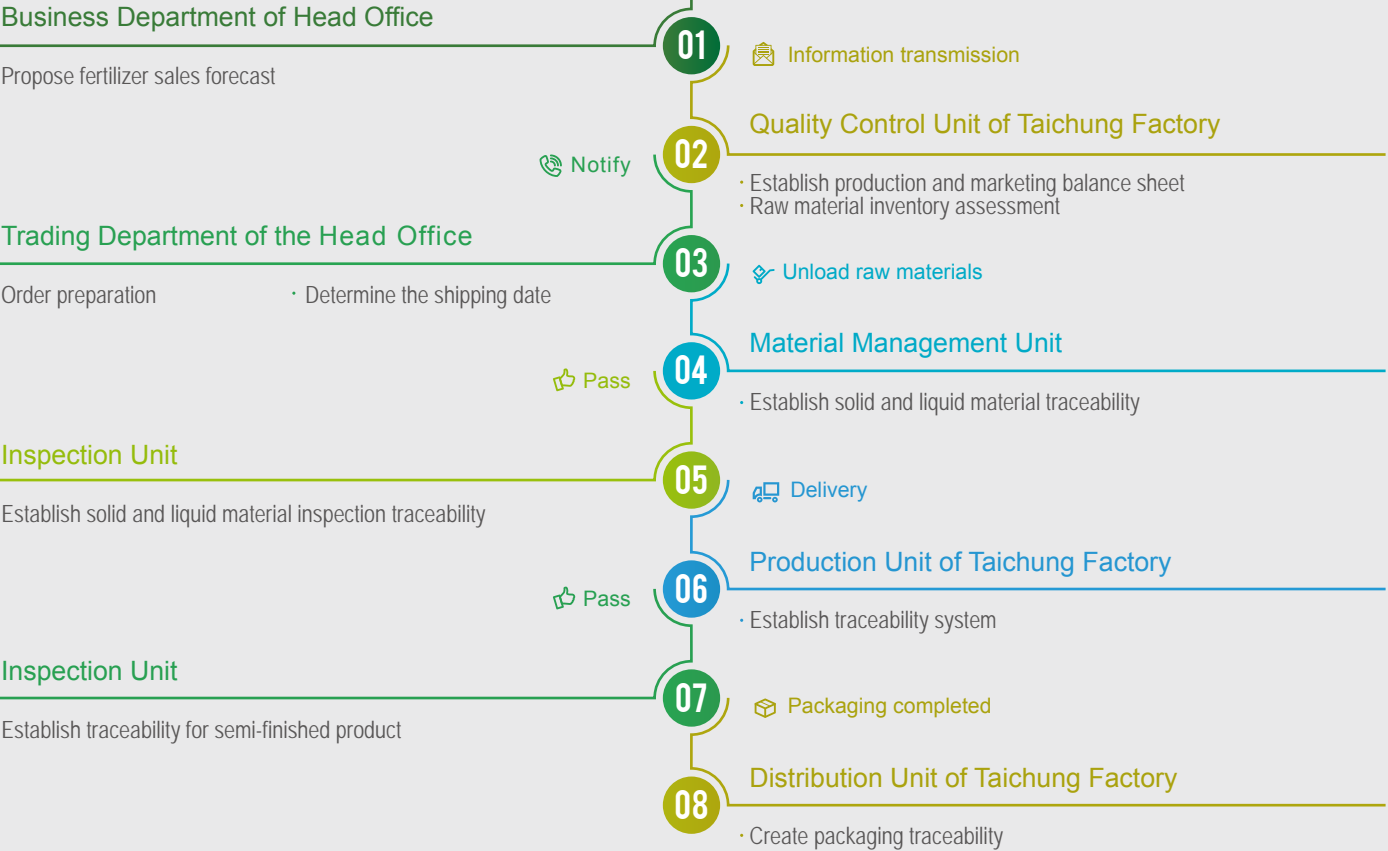
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The very first "Traceability System for fertilizer products" provides guarantee to Farmers

In order to provide instant access to information on fertilizer sources, since the beginning of 2016, we have promoted the establishment of a "Product Production Traceability System" and established complete information on raw materials, production, packaging and inspections, which can avoid the penetration of heavy metals and other substances into the soil. It is also the key to protecting soil health and sustainable agriculture. Internal personnel can quickly check the information of inspection results of each batch of raw materials, storage locations in the warehouse, production process conditions, bulk storage locations and packaging lot numbers through the information platform to overcome the difficulties in the traceability of large-scale bulk products and significantly improve customer service. At the same time, quick feedback on customer issues can be given to the production plant immediately and production conditions and parameters adjusted to ensure product quality.

The Flow Chart of Production Traceability System



Product Labeling and Product Marketing

In order to enable farmers and consumers to use the products correctly and safely, our products are fully compliant with the Trademark Law and Fertilizer Management Act. We provide full information of the names of the materials, the ingredient contents, instructions and amount of application on the labeling as prescribed. In addition, we cooperate with COA and other local authorities in county or city governments and conduct regular or occasional inspections to check whether the product labeling is in line with legal regulations.

Instructions for the use of fertilizer and other information can also be available on our official website. There was no violation of product marketing in 2017.

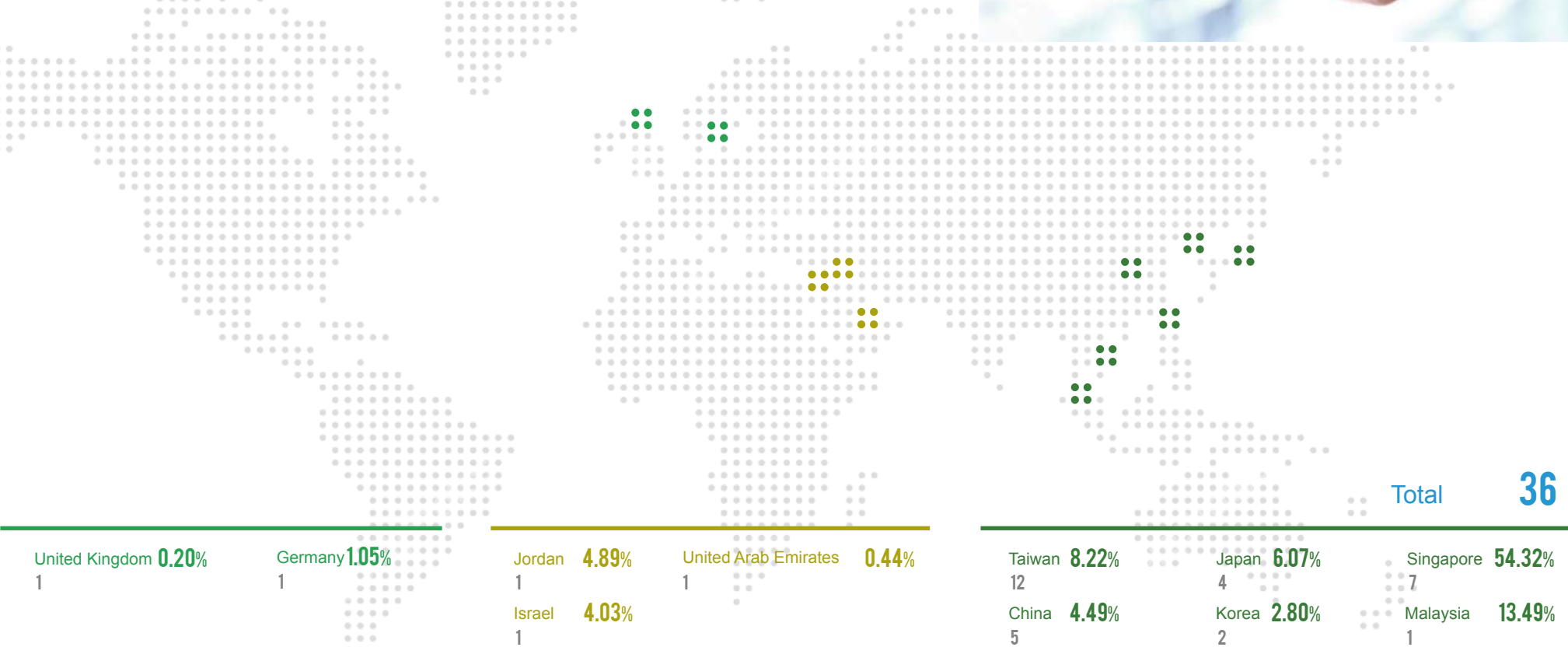
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6-4 Supplier Management and Procurement

TFC's business layout includes fertilizers, chemical products, electronic grade chemical products, real estate development and the supply and marketing of health care products. The supply chain is divided into the external supply chain and internal supply chain. The external supply chain mainly focuses on fertilizers, chemical products and electronic chemical products while the internal supply chain focuses on real estate development and the supply and marketing of health care products.

GRI 102-9,204-1

Global distribution of external raw material suppliers and purchase percentage in 2017



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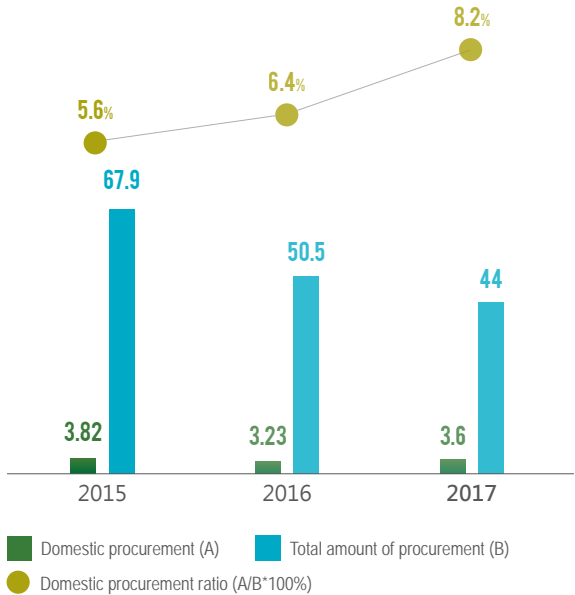
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Local Procurement

Raw materials for fertilizer production are mostly natural minerals and natural gas derivatives that Taiwan lacks. Therefore, these types of raw materials have to be purchased overseas. TFC totally purchased approximately NTD 4.4 billion of raw materials for Fertilizer Chemical Business in 2017, of which NTD 210 million was used to purchase raw materials produced in Taiwan or local manufacturers and NTD 150 million was used to purchase fertilizer packaging bags manufactured in Taiwan. The suppliers of the fertilizer bags are mostly manufacturers in Yulin, Changhua and other central and southern counties and cities. In all procurement operations, products made in Taiwan are purchased with priority to support the development of SMEs in Taiwan. TFC also works hand in hand with local enterprises and assists with the creation of local jobs opportunities.

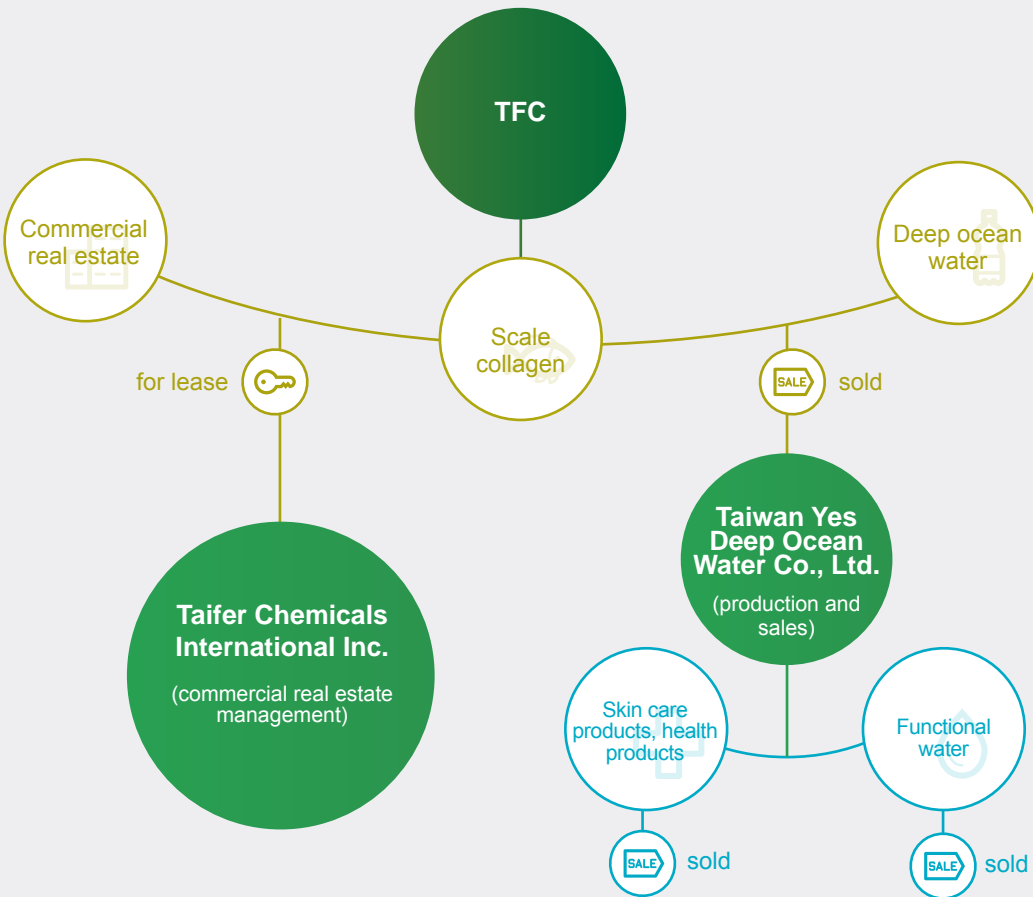
TFC’s ratio of local procurement in 2017



Note:
As domestic and foreign purchases were redefined in 2017, the domestic procurement data of 2015 and 2016 were revised simultaneously.

Management of Internal Supply Chain

TFC has branched out to different business units with its wholly-owned subsidiary companies to develop an internal supply chain of Health Care, Real Estate Development and so on. TFC serves as the provider of upstream raw materials and products to its subsidiaries for sale or management, and substantial control is generated through the Group system.



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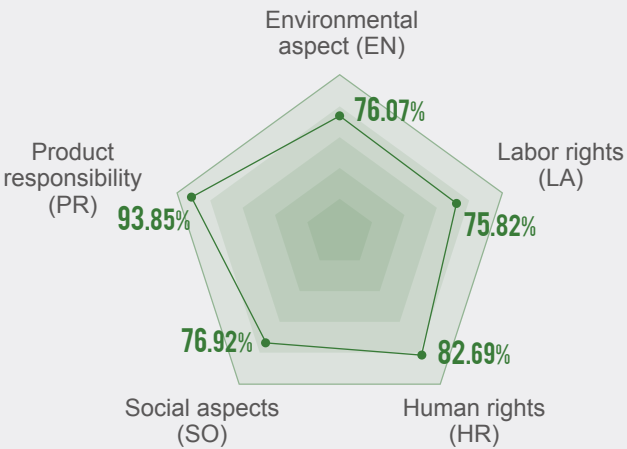
Management of External Suppliers

In order to completely implement the external supplier management system, we have developed "Supplier Management Rules" and "Guidelines on New Bulk Raw Material Suppliers Review" to regulate the development, selection and assessment of suppliers to ensure stable quality of materials and material sources. Our "Corporate Social Responsibility Code of Practice" especially requires CSR assessment and screening of suppliers. When considering new suppliers in the future, we will add CSR assessment as the reference for supplier selection and evaluation.

In 2017, TFC divided the suppliers into three levels: excellent, qualified and to be improved based on the results of their self-assessment, with a total of 13 suppliers introducing this self-assessment, accounting for approximately 69.3% of the total purchase amount. A total of 6 suppliers scoring more than 85 points while 7 suppliers scoring more than 60 points, with a 100% passing rate.

TFC has conducted the self-assessment questionnaire of supplier CSR status for three consecutive years. The results of supplier assessment scored better than the passing score in every aspect, including the environmental aspect, labor rights, human rights, social aspects and product liability aspect.

The Results of the Self-assessment of Suppliers in 2017



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Supplier CSR Assessment and Management Planning and Implementation

Goals

- Short-term goals (2017~2020)
 - To implement the survey on the suppliers' implementation in terms of human rights and environmental aspects. Suppliers must fill out "The Self-assessment Questionnaire of Supplier CSR Status".
- Mid-term to long-term goals (2021~2030)
 - The contract will include CSR clauses, requiring suppliers to focus on the protection of human rights and labor rights.
 - To set up supplier management and incentive mechanism.
 - To revise Supplier Management Guidelines to incorporate supplier CSR assessment.

Implementation

- Informed the suppliers of the promotion of CSR management system.
- Added CSR clauses in the contract and ask the suppliers to sign the terms.

OEM Management

To ensure the quality and safety of our products, we handle quality management operations in accordance with "Operation Directions for Outsourcing Manufacturers' Audit and Quality Management". The Health Management Division of the Production Department" is responsible for the inspection operations. TFC has 2 OEMs in total, and they mainly assist with the production of some fertilizer items. In 2017, we conducted an audit in the 2 OEMs, and both OEMs passed the audit.

TFC's OEM Management

- The selection of OEMs
 - Choose excellent manufacturers with a good reputation. There are currently 2 OEMs
- The control of raw materials
 - Require manufacturers to provide complete product formula, the whole composition of raw materials specifications (including supplier information), raw material efficacy and related certification, which clearly detail the quality requirements and the control method of raw materials and provide inspection reports or affidavit to avoid violations of the relevant laws and regulations or any fact that causes a consumer hazard
- Process audit
 - When the first batch of products are manufactured, the product development staff will check the manufacturing process in the outsourcing manufacturers. For the official mass production, the process conditions and control specifications need to be ensured
- Product specifications
 - Develop clear product "specifications" (standards or instructions), establish quality requirements, control points, control and inspection methods and acceptance criteria. Samples of each batch should be sent to Quality Assurance and Health Department for inspection to ensure the quality of each batch
- Audit team
 - The Production Department sends employees to receive ISO-related internal audit or the lead auditor training, and establish human resources database of auditors in order to conduct audits exactly
 - The audits are categorized into first, regular and occasional ones. The frequency of audit should be at least once a year



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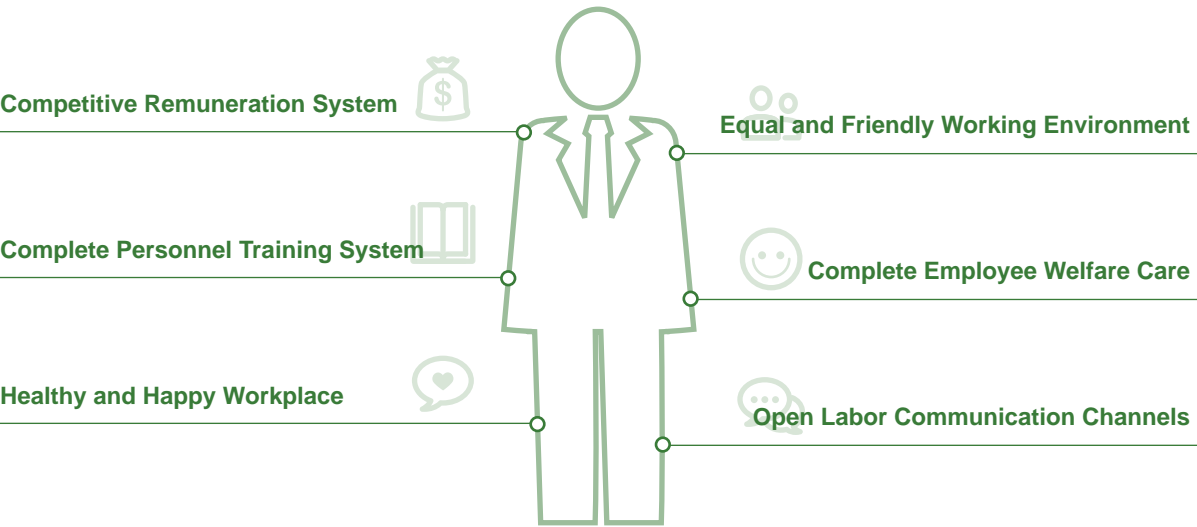
7-1 The Hire of Employee

GRI 102-8,202-2,401-1,405-1

Human Resource Policies

TFC promotes the six major human resource policies for recruiting talents,creates a work environment full of enthusiasm and vitality for employees and provides a good salary and welfare system and a safe working environment to encourage and retain talents.

Six major HR policies



Labor Structure

By the end of 2017, the total number of employees at TFC reached 677, including 662 formal employees and 15 contract employees. Compared with 681 employees in 2016, the number slightly decreased by 4; compared with the 42 contract employees in 2016, the number reduced by 27 mainly because the contract employees hired in the construction project of Taichung Factory and Miaoli Factory were promoted to formal employees. In addition, we also hire 54 dispatched employees who are mainly engaged in logistics, driving, farming, planting and cleaning related work.

As TFC is in chemical industry, we mostly recruit the professionals or technicians with university or college degree in science and technology. Most people who get the degree in science and technology are male. Therefore, the proportion of men and women in the Company is quite different. Males account for 80.1% of the total number of employees, while women 19.9%. However, in terms of labor force, we have complied with the international principles of human rights protection and domestic laws and regulations. There is no differential treatment or discrimination against gender difference.

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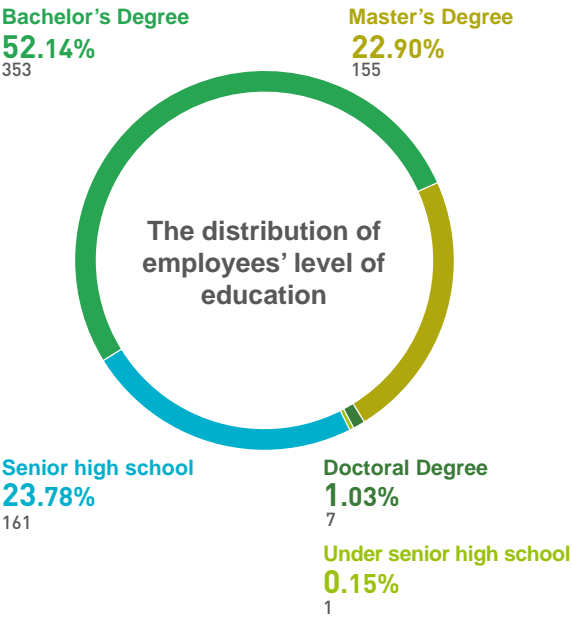
Appendix

2017 analysis of category, age and gender of employees in TFC

| | | Formal employees | | Contract employees | | Total | |
|--------|------------------------|------------------|------------|--------------------|------------|-------|------------|
| | | No. | Percentage | No. | Percentage | No. | Percentage |
| Female | Under 24 years old | 1 | 0.2% | 0 | 0.0% | 1 | 0.2% |
| | 25~29years old | 9 | 1.3% | 2 | 0.3% | 11 | 1.6% |
| | 30~39 years old | 54 | 8.0% | 4 | 0.6% | 58 | 8.6% |
| | 40~49 years old | 28 | 4.1% | 0 | 0.0% | 28 | 4.1% |
| | 50~59 years old | 20 | 3.0% | 0 | 0.0% | 20 | 3.0% |
| | 60 years old and above | 17 | 2.5% | 0 | 0.0% | 17 | 2.5% |
| | FemaleTotal | 129 | 19.1% | 6 | 0.9% | 135 | 19.9% |
| Male | Under 24 years old | 6 | 0.9% | 2 | 0.3% | 8 | 1.2% |
| | 25~29years old | 48 | 7.1% | 3 | 0.4% | 51 | 7.5% |
| | 30~39 years old | 202 | 29.8% | 4 | 0.6% | 206 | 30.4% |
| | 40~49 years old | 118 | 17.4% | 0 | 0.0% | 118 | 17.4% |
| | 50~59 years old | 90 | 13.3% | 0 | 0.0% | 90 | 13.3% |
| | 60 years old and above | 69 | 10.2% | 0 | 0.0% | 69 | 10.2% |
| | MaleTotal | 533 | 78.7% | 9 | 1.3% | 542 | 80.1% |
| Total | | 662 | 97.8% | 15 | 2.2% | 677 | 100.0% |

Note:Contract employees refer to the employees who sign a regular contract of less than 12 months with TFC.

The average age of employees at TFC was 42.60 years old, while the average length of service was 13.37 years. The distribution of education background focused on bachelor's degree, accounting for 52.14% of the total number of employees, followed by those with senior high school and lower (inclusive) and with a master's degree, accounting for 23.78% and 22.90% respectively.



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Stable Personnel Flow

The entry of new recruits is the basis for the Company's vitality and innovation. We recruit talents each year. In 2017, TFC expanded its joint recruitment operation and recruited 8 categories of employees at the Head Office and each factory. We actually hired 22 employees, and in mid-July, these new employees completed reporting for duty. There were 39 newly recruited employees at TFC in 2017, accounting for 5.76% of the total number of employees (i.e. employment rate).

The number of retired/resigned employees at TFC in 2017 reached 38 people, including 12 retired employees, 4 laid-off employees and 22 resigned employees. The turnover rate was 5.61%.

The number and percentage of new employees ¹

| | | 2017 | |
|--------|---------------------------------|------|-----------------------|
| | | No. | Employment Percentage |
| Female | Under 30 years old | 5 | 41.67% |
| | Above 30 and under 50 years old | 3 | 3.49% |
| | 50 years old and above | 0 | 0.00% |
| | Female Total | 8 | 5.93% |
| Male | Under 30 years old | 16 | 27.12% |
| | Above 30 and under 50 years old | 15 | 4.63% |
| | 50 years old and above | 0 | 0.00% |
| | Male Total | 31 | 5.72% |
| Total | | 39 | 5.76% |

Employment rate 5.76%

Note:
1. Employment rate = Number of newly hired female (male) in this age group for the entire year / Number of female (male) in-service employees in the age group at the end of the year.

The number and percentage of retired/resigned employees ²

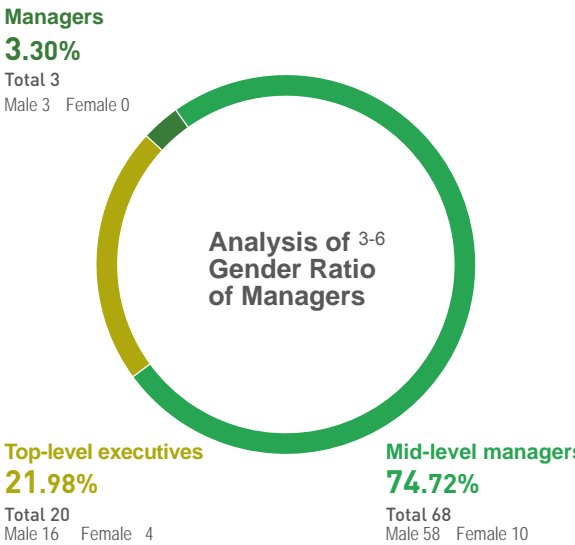
| | | 2017 | | | | Turnover rate |
|--------|---------------------------------|------------|---------|-------------|-------|---------------|
| | | Retirement | Lay-off | Resignation | Total | |
| Female | Under 30 years old | 0 | 0 | 0 | 0 | 0.00% |
| | Above 30 and under 50 years old | 0 | 1 | 5 | 6 | 6.98% |
| | 50 years old and above | 2 | 0 | 0 | 2 | 5.41% |
| | Female Total | 2 | 1 | 5 | 8 | 5.93% |
| Male | Under 30 years old | 0 | 0 | 2 | 2 | 3.39% |
| | Above 30 and under 50 years old | 0 | 3 | 14 | 17 | 5.25% |
| | 50 years old and above | 10 | 0 | 1 | 11 | 6.92% |
| | Male Total | 10 | 3 | 17 | 30 | 5.54% |
| Total | | 12 | 4 | 22 | 38 | 5.61% |

Turnover rate 5.61%

Note:
2. Turnover rate = Number of female (male) retired/resigned employees in this age group for the entire year / Number of female (male) in-service employees in the age group at the end of the year.

Gender Ratio of Managers

The managers in the Company totaled 91, accounting for 13.44% of the total number of employees. There are 77 male managers, accounting for 84.62% and 14 female managers, accounting for 15.38% of all employees.



Note:
3. Managers include the President and Vice President
4. Top-level executives include mid-level executives and above
5. Mid-level managers include supervisors at different levels, such as chiefs, directors, factory managers, section chiefs and managers.
6. 100% of management are local residents.

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7-2 The Remuneration System and Benefits

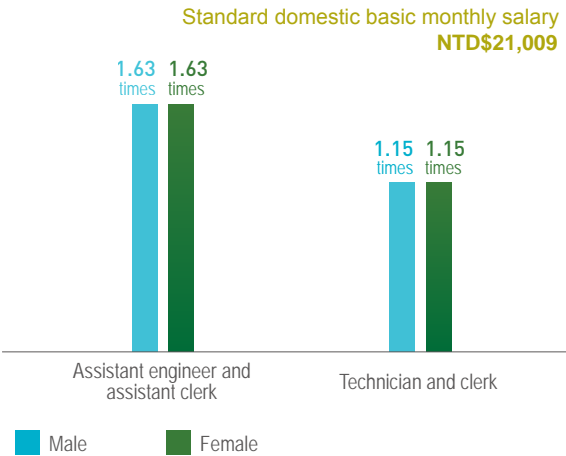
GRI 201-3,202-1,401-2,405-2,406-1

Fair and Competitive Salary

The salary of TFC includes base salary, additional pay for managers/directors and meal allowances. The salary will be given according to the approved positions and personal experience, professional skills, seniority, ability, workload and work performance and be adjusted with the changes of jobs regardless of gender differences.

In order to retain the best talents, we provide a competitive remuneration system at TFC to take care of grassroots employees and new recruits. In terms of salary, we provide salary and benefits that are better than domestic starting salaries.

The starting salaries of the basic-level employees of TFC in 2017 are higher than the standard domestic basic monthly salary ¹⁻²



Note:

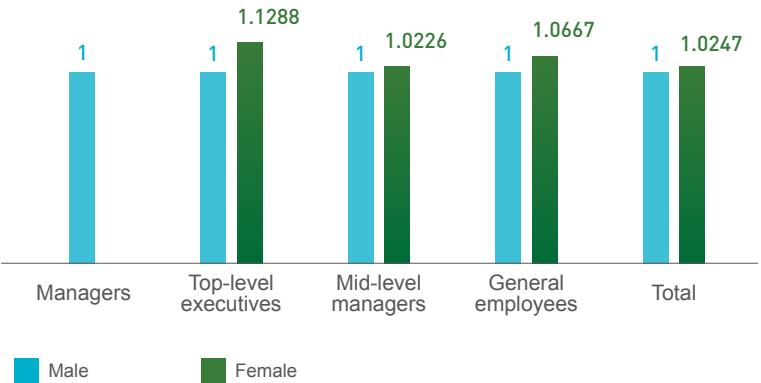
1.The standard domestic basic monthly salary for 2017 was NT\$21,009.

2.The formula for the comparison with domestic basic monthly salary uses the starting salary/basic salary for the rank in TFC.

Our standard starting salary for men and women is the same. The ratio of the overall average salary gap between men and women is less than 3%. Compared with about 14% of the national average wage gap between women and men announced by Ministry of Labor in 2016, the Company shows no wage gap between women and men.



The ratio of the overall average salary gap between men and women ³⁻⁵



Note:

3.The managers are all male.

4.The salary of TFC includes base salary, meal allowances, additional pay for managers/directors, festival bonuses, year-end bonuses and employee remuneration.

5.The source of the national average wage gap between women and men in 2016 was "The Survey of Employee Salary" by the Directorate General of Budget, Accounting and Statistics, Executive Yuan.

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The Benefits of Employees

We provide employees with the most complete and intimate welfare system such as vacation, birthday gifts, abundant club activities, employee travel, special store discounts and uniforms based on the concept of "One Big TFC Family". In addition, we provide various subsidies for all employees through the establishment of Employee Welfare Association.

In addition, in case of childbirth, advanced studies, major injuries or other conditions, employees may apply for parental leave or leave without pay when they need prolonged vacations. After the expiry of the period, they can apply for reinstatement so that they can take care of both their work and the family.

The benefits of employees

Birthday and wedding gift money

Provide employees birthday and wedding gift money through Employee Welfare Association



Employees' travel

Employee Welfare Committee will organize various travels to help employees restore their energy and to to relieve work stress.

Nursing rooms

In response to the government policy to encourage fertility, the Company has set up nursing rooms, providing parenting female employees with comfortable breast-feeding places.

Recognition events

Hold the recognition events for outstanding employees of the year and arrange incentive trips to celebrate Labor Day



Benefits

Provide scholarships to encourage employees and their children for further education and learning and provide childbirth allowance of NTD 20,000 per child in response to the government policy to encourage fertility.



Club activities

There are more than 10 different clubs in TFC, including sports (badminton, swimming and billiards), health (Tai Chi) and educational activities (board games), providing employees with the opportunity to cultivate interest and physical fitness.

Uniforms

Issue staff uniforms every 2 years according to the nature of the work

Bonuses on Labor Day

Issue bonuses or gift certificate annually

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A system better than the legal requirements

TFC's requirements

- A worker shall be entitled to seven days of family care leave and if exceeding seven days, he shall be entitled to normal leave without pay.
- A worker shall be entitled to fourteen days of sick leave.
- Where accounted ordinary sick leave does not exceed thirty days in one year, fifty percent of salary shall be paid.
- Where accounted ordinary sick leave exceeds thirty days in one year, no salary shall be paid.
- On the death of parent and spouse, a worker shall be entitled to fourteen days of funeral leave with pay.
- On the death of son or daughter and parent of spouse, a worker shall be entitled to ten days of funeral leave with pay.
- Female employees may request one day menstrual leave each month. If the cumulative menstrual leaves do not exceed three days in a year, said leaves shall not be counted toward days off for sick leave. All additional menstrual leaves shall be counted toward days off for sick leave.
- Wages for menstrual leaves, where said leaves are non-sick leaves as prescribed in the preceding Paragraph, shall be paid.
- Wages for menstrual leaves, where said leaves are sick leaves as prescribed in the preceding Paragraph, shall be paid according to the regulation.

Legal requirement

- In the event of matters which a worker must personally deal with, he shall be entitled to normal leave without pay.
- Where accounted ordinary sick leave does not exceed thirty days in one year, fifty percent of salary shall be paid.
- On the death of parent and spouse, a worker shall be entitled to eight days of funeral leave with pay.
- On the death of son or daughter and parent of spouse, a worker shall be entitled to six days of funeral leave with pay.
- Female employees may request one day menstrual leave each month. If the cumulative menstrual leaves do not exceed three days in a year, said leaves shall not be counted toward days off for sick leave.
- Wages for menstrual leaves, whether said leaves are sick leaves or non-sick leaves as prescribed in the preceding Paragraph, shall be half the regular wage.

The Protection of Retired Employees

TFC has formulated Regulations of Employees Retirement, Compensation and Severance, providing stable contribution and payment of pensions.

The contribution of pension and the pension fund management

Applying for the New System

Since the enforcement of the Labor Pension Act in 1 July 2005, the Company has provided 6% of monthly salary to individual pension accounts for employees applicable to the Act. By the end of 2017, the amount recognized was NTD 30,282 thousand dollars.



Applying for the Old System

TFC contributes the pension fund for the old system in accordance with the Labor Standard Act, and 9% of the total monthly salary of the employees is contributed to the laborers' pension fund accounts in Bank of Taiwan. The Labor Pension Fund Supervisory Committee has been set up in accordance with Regulations of Employees Retirement, Compensation and Severance, which holds a quarterly meeting and conducts supervision and management of the old-system pension funds. Besides, it also requires professional accounting advisers to calculate and prepare enough reserves every year. By the end of 2017, the fair value of the planned assets was NTD 430,757 thousand dollars, and the amount recognized was NTD 17,641 thousand dollars. The amount of insufficient contribution was set out in the accrued pension liabilities. The net defined benefit liability was NTD 112,063 thousand dollars.

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7-3 Comprehensive Personnel Cultivation and Training System

GRI 404-1,404-2,404-3

Education and Training

Talent cultivation is one of the major strategies for the human resources of TFC. On the enhancement of employee functions, training programs are planned on a yearly basis based on the “TFC Training Map”, including general training, core functional training, professional functional training and management functional training. The Company also plans a two-day, 14-hour training program for new recruits so that newcomers can quickly join the work and become part of the TFC family.

In addition to enhancing the work functions of its employees, the Company also focuses on the physical and mental health of the employees and career development. The Company holds health promotion activities, subsidizes labor unions to organize labor education and training and promotes the physical and mental health of employees and their career development through flexible training activities each year.

2017 Function Enhancement Plan

General training

Chairman Kang has set up the “Managerial Economics Lecture” since April 2017, volunteering to lecture the course for nearly 200 employees, using webcam synchronization at each factory as well. This course follows the teaching materials and classroom requirements of EMBA of National Cheng Kung University and also invited the advanced in the industry to communicate with employees and hoped that the employees could apply the theories of Managerial Economics to daily operations and management decisions.

Core functional training

The core functional course of TFC is Total Quality Management (TQM). The Company trains its own employees to become an internal lecturer. The Quality Control Circle (QCC) course is held with the quality control competition every year. The winners can participate in the national Quality Control Circle competition on behalf of the Company and integrate the quality management spirit into the work.

Professional functional training

For the employees in the field of fertilizers, land development, and innovation, external training or external instructors will help them strengthen professional functions and absorb external experience. In addition, it can be applied to work by the sharing of employees’ experiences and action plans.

Management functional training

In accordance with the needs of the organization and the TFC Training Map, the HR Department must strengthen the management functions and organize the management training every year. With the rejuvenation of the Company’s manpower structure in recent years, the cultivation of subordinates has become an important topic for managers. In 2017, two training courses for supervisory management functions were conducted.

- Mid-level Executive Training in July 2017 (Topic - the cultivation of subordinates)
- Primary Supervisor Training in December 2017 (Topic- Working Ability Instruction)

Reserve talent training

In recent years, senior executives have retired and new executives have increased year by year. The Company also focuses on the training of reserve talents. In December 2017, the reserve personnel training was merged with the primary supervisor training. The topic was “Working Ability Instruction”. It not only strengthened the ability supervisors should be equipped with, but also fostered the ability to train new recruits.

Other training

Academic circles or experts from the industry were invited to exchange and share their experience. In 2017, Prof. Luo, Zheng-Fang from National Cheng Kung University, Vice President, Yu-Hsiang Chiu from K. K. Orchard and President, Susan Wang, from AFTA TECHNOLOGY CO., LTD. were invited to share the topics of smart agricultural development and industrial management.



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TFC provides complete and abundant courses and a good learning environment



The average number of training hours of education and training of employees at TFC in 2017

| Male | | | Female | | | Total | | |
|-----------------------------------|---|--|--------|---|--|-------|---|--|
| No. | The total number of training hours (hr) | The average training hours per person (hr) | No. | The total number of training hours (hr) | The average training hours per person (hr) | No. | The total number of training hours (hr) | The average training hours per person (hr) |
| Managers ¹ | | | | | | | | |
| 3 | 118 | 39.00 | 0 | 0 | 0.00 | 3 | 118 | 39.00 |
| Top-level executives ² | | | | | | | | |
| 16 | 509 | 32.00 | 4 | 231 | 58.00 | 20 | 740 | 37.00 |
| Mid-level managers ³ | | | | | | | | |
| 58 | 3,176 | 55.00 | 10 | 667 | 67.00 | 68 | 3,843 | 57.00 |
| General employees | | | | | | | | |
| 465 | 11,255 | 24.00 | 121 | 2,843 | 23.00 | 586 | 14,098 | 24.00 |
| Total number of employees | | | | | | | | |
| 524 | 15,058 | 27.78 | 135 | 3,741 | 27.71 | 677 | 18,799 | 27.77 |

Average training cost for employees in 2017 (Unit: thousand dollars)

| Male | | Female | |
|---------------------|-----------------------|---------------------|-----------------------|
| Total training cost | Average training cost | Total training cost | Average training cost |
| 3,393 | 6.3 | 637 | 4.7 |

Note:

1. Managers include the president and vice president

2.Top-level executives include mid-level executives and above

3. Mid-level managers include supervisors at different levels, such as chiefs, directors, factory managers, section chiefs and managers

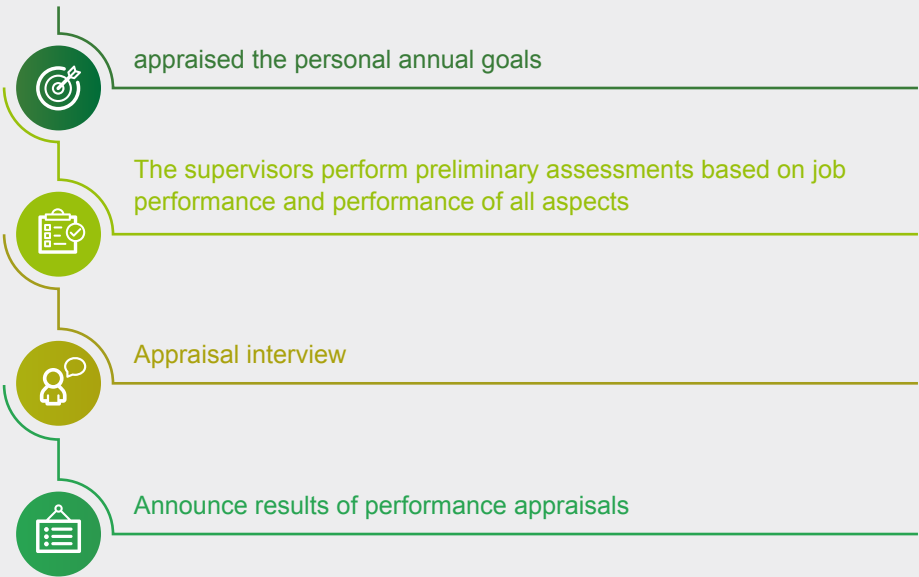
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Performance Appraisal

TFC carries out the appraisal system for the employees in all units at TFC, and the performance appraisal results will be the basis for bonuses. The units will issue performance bonuses every six month based on the results and report to the board of directors every year for the issuance of year-end bonuses based on the Company's operating performance. The individual performance bonus and year-end bonus are issued based on the appraisal results of individual job responsibility and contribution. The individual assessment results serve as a reference for training and career development and are the basis for salary adjustment, promotion and bonuses.

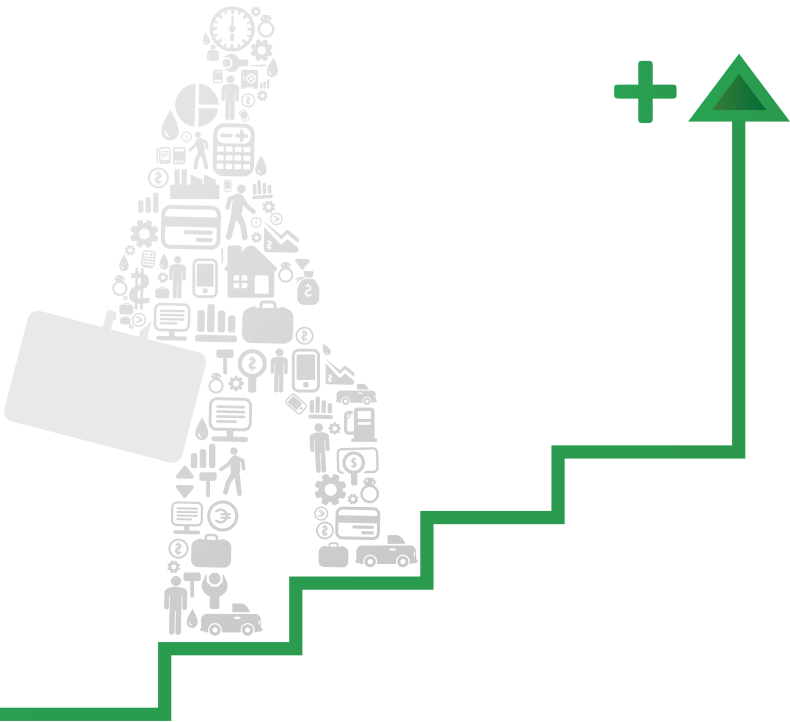
Annual Performance Appraisal System



By the end of 2017, a total of 677 employees participated in the performance appraisals, accounting for 100% of the total number of employees to be assessed, indicating that the Company's employees (including contract employees) are subject to regular performance appraisals.

The category of employees participating in performance appraisals and gender analysis in 2017

| | Formal employees | | Contract employees | | Total | |
|--------|------------------|------------|--------------------|------------|-------|------------|
| | No. | Percentage | No. | Percentage | No. | Percentage |
| Female | 129 | 19.1% | 6 | 0.9% | 135 | 20.0% |
| Male | 533 | 78.7% | 9 | 1.3% | 542 | 80.0% |
| Total | 662 | 97.8% | 15 | 2.2% | 677 | 100.0% |



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7-4 Equal and Friendly Workplace of Happiness

GRI 401-3

Parental Leave System

In 2017, a total of 73 employees in TFC were eligible to apply for parental leave without pay and the number of employees who actually applied for parental leave without pay was 3. The number of employees who were actually reinstated in 2017 was 3, and the reinstatement rate was 100%. The number of employees who were actually reinstated in 2016 and had been reinstated for 12 months by 2017 was 6. The retention rate was 100%.

TFC's statistics of parental leave without pay

| | Male | Female | Total |
|--|------|--------|-------|
| 2017 | | | |
| The number of employees eligible to apply for parental leave without pay | 59 | 14 | 73 |
| The number of employees who actually applied for parental leave without pay | 1 | 2 | 3 |
| The number of employees who were expected to be reinstated after parental leave without pay | 1 | 2 | 3 |
| The number of employees who were actually reinstated | 1 | 2 | 3 |
| 2016 | | | |
| The number of employees who were actually reinstated | 1 | 5 | 6 |
| The number of employees who were actually reinstated in 2016 and had been reinstated for 12 months by 2017 | 1 | 5 | 6 |

Sexual Harassment Prevention

TFC provides employees and job applicants with a working environment free from sexual harassment. It takes appropriate measures to prevent and punish sexual harassment. The Guidelines for Sexual Harassment Prevention and Control in TFC has been formulated according to the Article 13 of the Act of Gender Equality in Employment and Regulations for Establishing Measures of Prevention, Correction, Complaint and Punishment of Sexual Harassment at Workplace. When employees encounter sexual harassment at the workplace, they may appeal to the head of the Administration Department or the personnel director of each factory.

If the sexual harassment is confirmed to be true after the investigation, the appropriate punishment will be given to the perpetrator according to the seriousness of the circumstances, including suspension of power, dismissal, termination of membership. If necessary, it will be submitted to the temporary meeting for punishment and sent to the business unit. The follow-up tracking, assessment and supervision will be necessary to avoid recurrent sexual harassment or retaliation. There were no cases of sexual harassment or discrimination in 2017.



Protection of Job Opportunities for People with Disabilities

In accordance with "Physically and Mentally Disabled Citizens Protection Act", TFC should employ five persons with disabilities. TFC is willing to provide more job opportunities for persons with disabilities. By the end of 2017, the number of actual employment is 10 persons with disabilities, far above the regulatory requirement.

Employment of Persons with Disabilities in 2017

| Unit | No. of employees | No. of persons with disabilities that should be hired | No. of actual employment of persons with disabilities |
|------------------|------------------|---|---|
| Head Office | 222 | 2 | 3 |
| Taichung Factory | 338 | 3 | 5 |
| Miaoli Factory | 97 | 0 | 1 |
| Hualien Factory | 17 | 0 | 1 |
| Keelung Factory | 2 | 0 | 0 |
| Hsinchu Factory | 1 | 0 | 0 |
| Total | 677 | 5 | 10 |

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7-5 A Healthy and Safe Working Environment

GRI 403-1,403-2,403-3

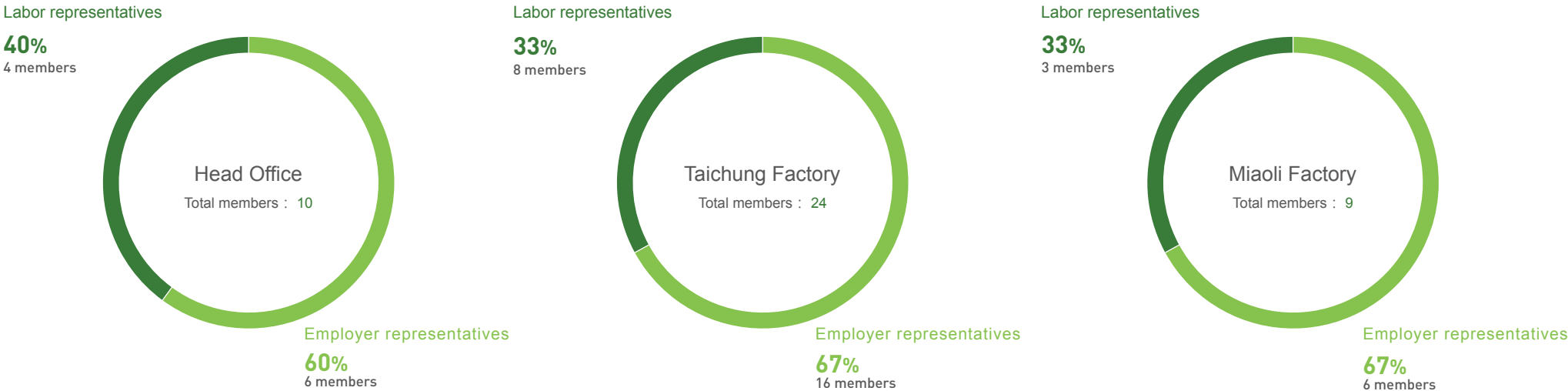
Occupational Safety and Health Committee

We have set up "Occupational Safety and Health Committee" composed of the employer and employees. The labor representatives account for more than one-third of the Committee. The president or the factory director is appointed as the chairperson. The meeting is held every three months, and the main responsibilities are to give advice regarding safety and health policies developed by the Company and to review, coordinate and advise safety and health related matters.

To manage and track the progress of the industrial safety and health tasks, Industrial Safety and Health Department will convene regular meetings of "Industrial Safety and Environmental Protection Briefing" every two months, which is chaired by the president. The members include the directors of the factories, the supervisors of industrial safety units and maintenance units. Industrial safety and maintenance related work will be reported, the information of decrees and other related cases of occupational injury will be advocated and advice related to safety, health and environmental protection will be given and reviewed in the meeting.



The Percentage of Members of the Occupational Safety and Health Committee in 2017



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Safety and Health Management System Certifications

To ensure the safety and health of employees at the workplace is the responsibility and commitment of TFC, Taichung and Miaoli Factories have both obtained OHSAS 18001 and CNS 15506 Occupational Safety and Health Management System Certification, hoping to provide employees with a safe and healthy working environment to avoid accidents through the establishment of risk identification, risk assessment and risk control and external verification.



1 2 3 4 Taichung and Miaoli Factories have both obtained OHSAS 18001 and CNS 15506 Occupational Safety and Health Management System Certification

Safety and Health Management at Factories

We strengthen the implementation of self-inspection in the production plants to ensure the safe use of equipment. We regularly monitor the operating environment and prepare all the necessary protective equipment. In addition, we require employees to wear the necessary protective equipment in accordance with regulations to avoid injury or harm at work.

In addition, regular safety and health education and training and disaster prevention & rescue exercises are organized to improve employees' safety and health knowledge and help them get familiar with emergency response skills. In 2017, 564 participants attended the internal training and external training. 6S/ TPM assessment activities are carried out in each factory every two months. By the external inspections, the potential hazards can be discovered, prevented and improved to avoid harm.

2017 statistics of safety and health education and training / exercises



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Publication of Industrial Safety Newsletter

TFC has issued Industrial Safety Newsletter every month since 2016. The issues concerning industrial safety will be discussed in detail in each issue of the newsletter. With the texts and case description, the employees are taught to understand the correct concept of industrial safety and important industrial safety policies or measures are also conveyed to our employees. Prevention is always better than cure. Safety education is the most important item to shape the Company's safety culture. We internalize safety awareness into the core value of the Company's operations by issuing Industrial Safety Newsletter.

Industrial Safety Newsletter No.13



Safety and Health Management Performance

In order to implement safety and health management, the Industrial Safety and Health Department selects several important EHS indicators each year, including injury rate (IR), lost day rate (LDR), occupational diseases rate (ODR), number of emergency response exercises and EHS inspection records. The five categories are used as performance indicators and the annual target is set as the performance management standard. In 2017, the injury rate and the number of work-related deaths were zero, which was attributed to the continuous strengthening of safety and health management to reduce hazard incidents.

2017 Statistics of Safety and Health Management Performance

| | Male | Female |
|-----------------------------------|-------|--------|
| Disabling injuries | 0 | 0 |
| Injury rate (IR) | 0 | 0 |
| Lost day rate (LDR) | 0 | 0 |
| Occupational diseases rate (ODR) | 0 | 0 |
| Absence rate (AR) | 0.37% | 0.45% |
| The number of work-related deaths | 0 | 0 |

Note:

1. Injury rate (IR) = (total disabling injuries / total working hours) x 200,000

2. Lost day rate (LDR) = (total lost days / total working hours) x 200,000

3. Occupational diseases rate = (total occupational diseases / total working hours) x 200,000

4. Absence rate includes hours of sick leave, occupational sickness leave and personal leave.

5. Traffic accidents are not included in the statistics.

Health and Safety Management for Contractors

The contractors are important partners in the operation of TFC and we also attach great importance to the safety management of contractors. We have developed "Guidelines for Management of Safety and Health for a Variety of Engineering and Operations Contractors" and required the guidelines to be incorporated into the "Tender Notice" and "Service Agreement" of the project. Regarding the safety regulations of the contractor's construction, "Health and Safety Code for contractors' construction" has been developed in the above-mentioned guidelines. In addition to general safety regulations, contractors shall apply for permission of construction regarding the operations with the higher risk, such as fire, high-elevated operations, confined space and the overhaul of pipelines before they start. There should be safety labels within the area of construction to prevent misconduct from causing industrial safety events.

As for various contractors, we hold regular consultative organizational meetings to negotiate and advocate the issues related to health and safety management. After the contractors win the bid and before they formally start construction, they should accept health & safety education and hazard notice training in our Industrial Safety Department and sign Work Safety Commitment for Contractors. A total of 300 trainees from contractors participated in hazard notice training in 2017. The injury rate and the number of work-related deaths were all zero.

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Employee Health Management

In order to care for the physical and mental health of our employees, we actively establish and understand the employees' basic health information and have developed "Guidelines for Employee Health Management" as a reference to the arrangement of work and improvement of the working environment. All employees accept the annual health check at our expense, while dependents of employees can also enjoy the same preferential prices and accept the health check at their own expense. Based on the employee care policy, we have included employee health check and health management as an important part of our work.

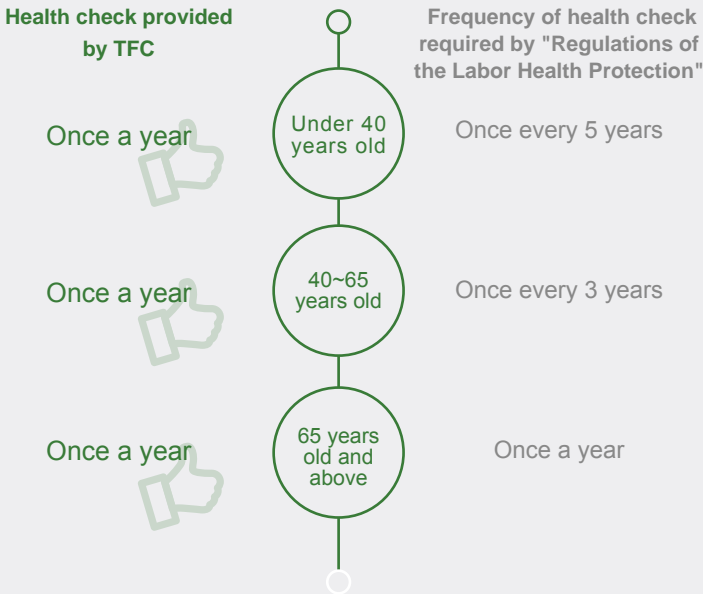
In 2017, the Zhongshan District Health Center, Taipei City was invited to jointly organize free Pap smear tests and influenza vaccination and other employees in the TFC Building were encouraged to participate in the campaigns. Under the strict safety and health management protection, our employees did not have occupational diseases in 2017.

The special health check will be conducted annually for employees who work in the workplace with special health hazards.



1 Free Pap smear tests and
2 influenza vaccination

The comparison between the employee health check benefits provided by TFC and that prescribed by the regulations



Number of employees receiving special health checks in 2017



Health Promotion Activities

In 2017, we conducted 4 health promotion lectures for employees, including "Recovering Good Muscle Strength", "Invisible Killers for Visions", "Cardiovascular Disease Prevention" and "Free Influenza Vaccination for People over 50 Years Old". The total number of participants was 181, with the total of 432 training hours.

1 health promotion activities



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7-6 Labor-management Communication

GRI 102-41,403-4

Smooth Communication Channels

TFC attaches great importance to the opinions and voices of its employees. It has multiple and smooth channels and has established a number of trade unions. Through smooth two-way communication channels, we can respond to the opinions of employees in a timely and appropriate manner and turn the constructive opinions into polities.

We have set "Points of the Implementation of Labor Relations Forum". Every year, the President leads the top-level executives and convenes the labor forum to communicate with the labor representatives from trade unions together. The labors' comments and suggestions can be conveyed and expressed in the regular trade union member representative assembly, directors and supervisors' meetings and the joint meetings of the chiefs. The Company will reply formally in written forms and start working on the improvement.

Labor-management communication channels

| | |
|--|-----------------|
| Labor Relations Forum | Once/annually |
| <ul style="list-style-type: none">• Labor directors are directly elected by members• Issuance of the dangerous duties allowance for work at Taichung Harbor• Issuing bonuses for senior employees and offering official leave• Building staff dormitories• Adjustment of salary system and improvement of salary structure | |
| Labor-Management Meeting | Once /Quarterly |
| <ul style="list-style-type: none">• Business overview and exchanges• Discussions on employee benefits and other related matters | |

Trade union

TFC complies with the relevant provisions of the International Labor Convention and the Labor Union Act. All employees are free to organize and join trade unions, and they can conduct collective bargaining in accordance with relevant laws and regulations. There was no violation of freedom of association and collective bargaining during the reporting period.

Trade unions

| | |
|------|--|
| 1961 | Time of establishment : July ,1961 Taiwan Fertilizer Industry Trade Unions Members : The employees in Miaoli Factory and Hualien Factory Number of members:118 Employee participation ratio:100% |
| 1993 | Time of establishment : December ,1993 Taiwan Fertilizer Corporation Trade Union Members:The employees working at the Head Office Number of members:220 Employee participation ratio:99.55% |
| 2015 | Time of establishment:July, 2015 Taiwan Fertilizer Corporation Taichung Factory Trade Union Members:The employees in Taichung Factory. Number of members:327 Employee participation ratio:96.75% |



Collective Agreement

In accordance with the Collective Agreement Law, the Trade Union signs a collective agreement with TFC. On March 19, 2015, the chairman of the TFC trade union and the employer representative of TFC signed a collective agreement which was submitted to the Department of Labor, Taipei City Government for future reference. This collective agreement contains provisions in the aspects of the working hours, vacation, pay, bonuses, recruitment, resignation and retirement, benefits and health and safety. There are 4 Articles concerning health and safety in the agreement, accounting for 13% of the articles in this agreement.

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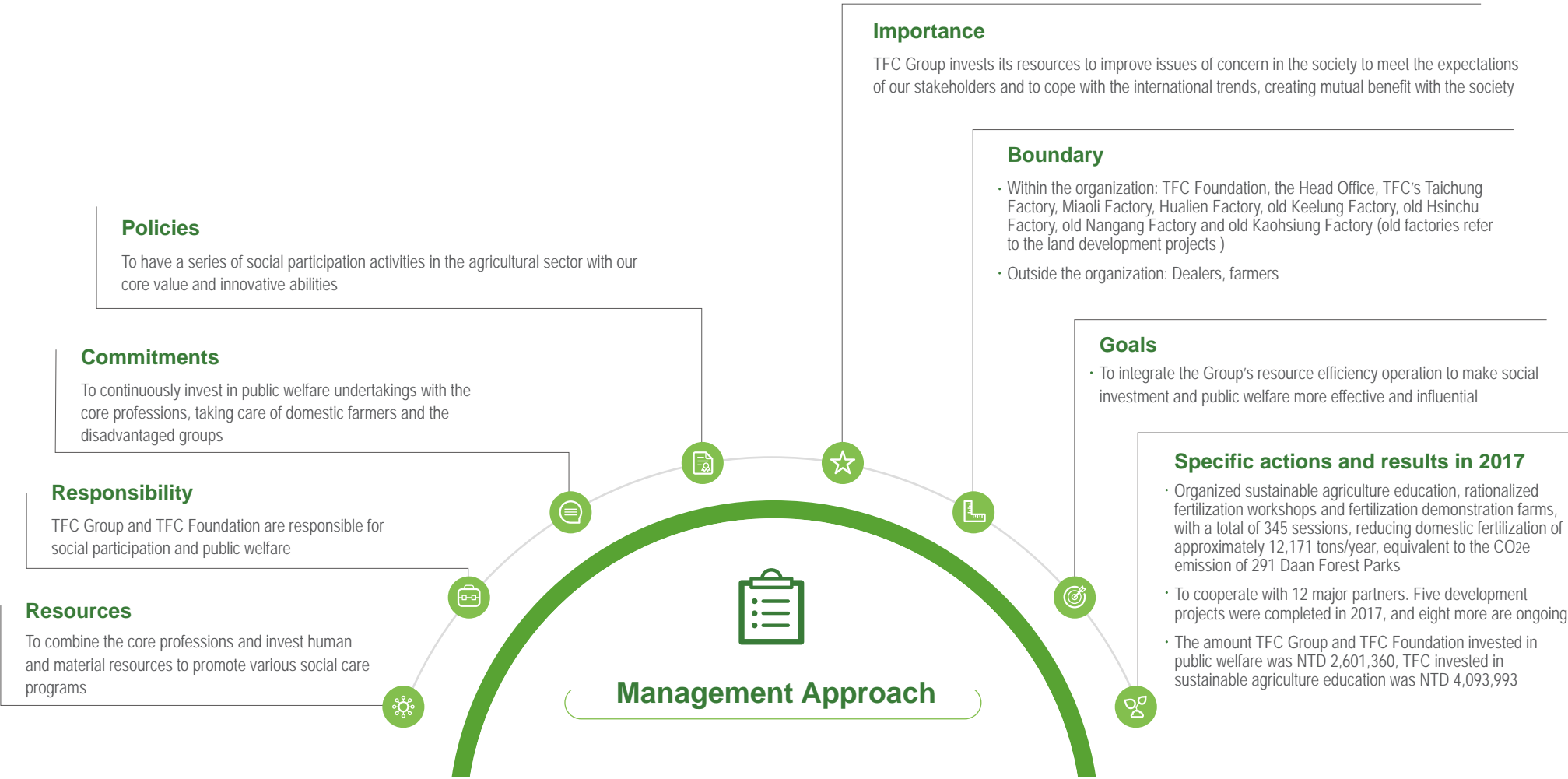


Caring for the society is the most important spiritual asset of the Company. While striving for corporate sustainability, TFC also works hard to fulfill the mission of guarding the land of Taiwan, taking care of farmers, working on social care and promoting public welfare, aiming at playing the role of a good corporate citizen so as to spread love to every corner of Taiwan. TFC is not only the producer and supplier, it is also the bridge connecting the land and the farmers in Taiwan.

Material topics

Local Community

GRI 103-1,103-2,103-3



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8-1 Promotion of Sustainable Agriculture Education

Land health is the foundation for sustainable development of agriculture. In order to implement the most fundamental agricultural education, TFC has to make the farmers understand the basic knowledge of crops. It is also hoped that the farmers can produce safe and high quality crops in the premises of a cost-saving, time-saving, labor saving and environmental protection on agronomic basis to achieve the goal of reducing chemical fertilizers, which not only improves the farmers' income but also is eco-friendly to the land while taking care of food safety.

Spreading the concept of rationalized fertilization, saving farmers money and efforts

TFC often organizes rationalized fertilization workshops. The so-called "rationalization of fertilization" is to adjust the amount of fertilizer, items, fertilization methods and fertilization time in accordance with different cultivated land conditions and crop types. In other words, it is "to apply right amount of fertilizer at the right time".

Rationalized fertilization education

To apply right amount of fertilizer at the right time

Teaching good farming methods in the fertilizing demonstration farms

In recent years, TFC has produced various high-quality fertilizer materials in cooperation with the transformation of farming practices, assisting farmers to smoothly transform into safe farming that is good for humans and also the environment. TFC also organized fertilization demonstration for safe or organic farming on the demonstration farms in agricultural towns across the country, transforming knowledge learned in class into practical operations in the fields.



Fertilizing demonstration farms

In 2017, TFC held **129** sessions of safe or organic farming on the demonstration farms throughout Taiwan



Free soil testing to help improve soil productivity

Every year, TFC provides free soil acidity and electric conductivity testing for farmers. After the soil is tested, suitable materials are suitable crops are recommended to farmers based on the characteristics of the acid or alkaline soil to improve soil quality or assistance is provided in finding other factors that affect crop growth .

Soil testing

In 2017, TFC conducted soil fertility testing for farmers at **144** locations in total

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Contributions and results

Over the years, TFC has been committed to promoting rationalized fertilization education and fertilizing demonstration farms, investing human resources and expenses every year and has achieved fruitful results. According to statistics, in the past three years, a total of approximately 3,000 people have participated in the promotion activities, and the expenses invested reached NTD 10,106,323, with a total of 935 sessions of fertilization workshops and demonstration farms.

Statistics of workshops on rationalization of fertilization and demonstration farms

| | Rationalized Fertilization Workshops | Demonstration farms for rationalization of fertilization | Soil testing | Internal input of human resources (person-times) | External input of human resources (person-times) | Implementation expenditure (NTD) |
|------|--------------------------------------|--|--------------|--|--|----------------------------------|
| 2017 | 216 | 129 | 144 | 1,251 | 1,596 | 4,093,993 |
| 2016 | 292 | 107 | 144 | 1,168 | 1,528 | 3,395,694 |
| 2015 | 147 | 44 | 130 | 588 | 750 | 2,616,636 |
| 總計 | 655 | 280 | 418 | 3,007 | 3,874 | 10,106,323 |



Change farmers' concept of fertilization to reduce fertilizer use



Promote the concept of organic agriculture



Enhance the acceptance of new green fertilizers and increase willingness to use them

Note: Due to the fact that TFC introduced "Hey Won" compound fertilizer series in 2016, there were more sessions of workshops on rationalization of fertilization that year.

Good results have been achieved in the promotion of eco-friendly fertilizers

After years of continuous promotion of eco-friendly bio-fertilizers and the implementation of fertilizer efficiency tests and demonstration of the results, we have seen good results and obtained recognition and support from farmers. Over the past three years, the sales of Taifer Biopower Stimulants and organic fertilizer have increased drastically, with an increase of nearly 45~50%, indicating the farmers' acceptance of the new eco-friendly products, which not only brings economic benefits to the Company but also promotes sustainable agricultural development in Taiwan.

Sales information of Biopower Stimulants and Biotech organic fertilizer

| | Taifer Biopower Stimulants | | Biotech Organic Fertilizer | |
|---------------------------------|----------------------------|----------------------|----------------------------|----------------------|
| | 📦 Sales Amount (mt) | 💰 Sales revenue(NTD) | 📦 Sales Amount (mt) | 💰 Sales revenue(NTD) |
| 2017 | 153 | 16,187,474 | 4,707 | 50,055,958 |
| 2016 | 143 | 11,746,588 | 3,251 | 37,522,364 |
| 2015 | 151 | 11,104,304 | 2,549 | 33,217,937 |
| 2015~2017 annual growth rate(%) | 1.3% | 45.8% | 84.7% | 50.7% |

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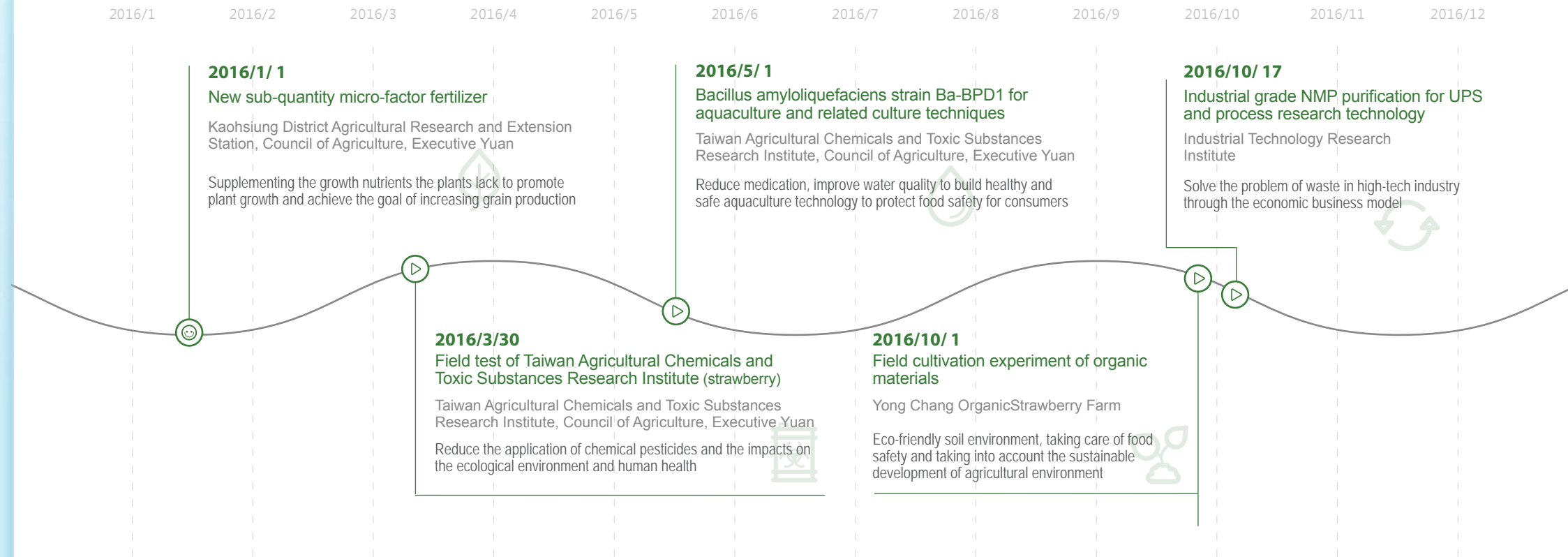
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TFC aims at transforming into high-tech industry and biotechnology industry by using its core technology of fertilizer production. Therefore, TFC introduces new technologies through industry-university cooperation to shorten the development schedule and takes into account environmental protection, resource reengineering and the concept of safeguarding people's health, continuing to work on key core technologies such as microbial and organic fertilizer, application of deep ocean water in non-toxic aquaculture and recycling and reuse of electronic grade chemicals.

Cooperative development projects

😊 Cooperative development projects completed in 2017

▶ Cooperative development projects in 2017, and are still in progress in 2018

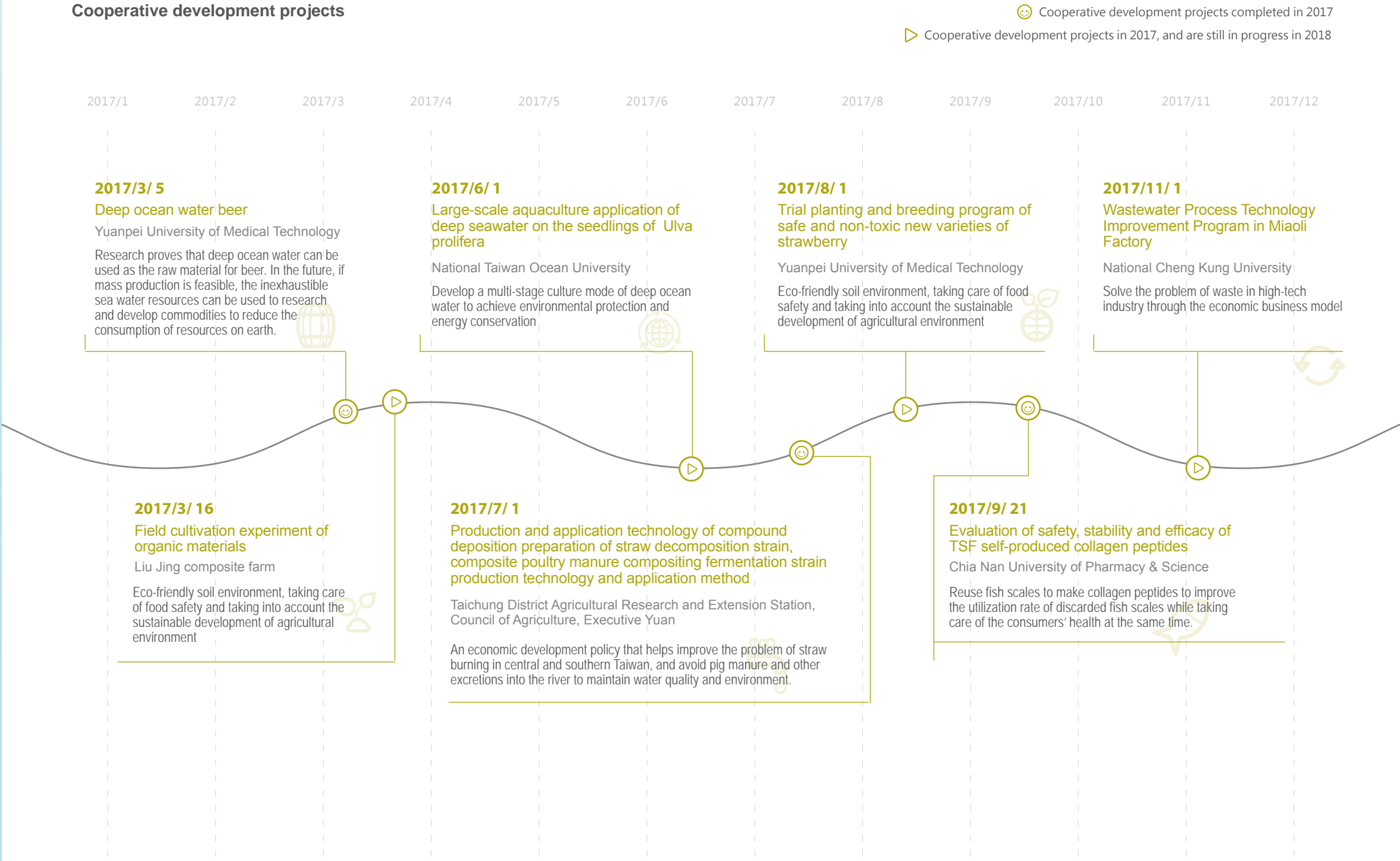


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Cooperative development projects



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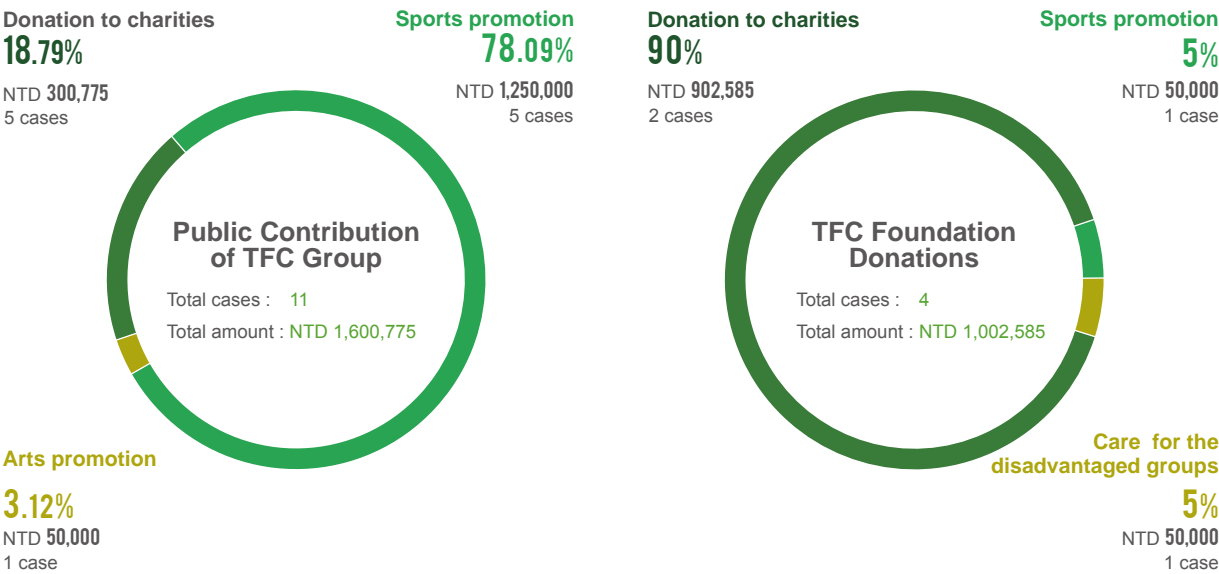
8-3 Implementation of Corporate Social Responsibility

With the idea of “solving social problems with core competence of the corporation”, we have promoted social care and public welfare activities. Furthermore, we also incorporate daily operational activities into social welfare, investing resources and human resources to continue public welfare undertakings.

GRI 203-1

TFC Group and TFC Foundation public welfare contributions

In 2017, TFC Group (including TFC Foundation) made public contributions in donation to charities, arts promotion, sports promotions and so on. In terms of concern for the disadvantaged groups, the Foundation assisted in the subscription of high-quality domestic red beans cultivated by local farmers. For sports promotion, TFC Group donated the funds of NTD 2,601,360 for the implementation of the 3rd Chunan Cup Community Baseball Invitation Tournament in Chunan Elementary School in 2017.



Providing scholarships for agricultural operation plan to cultivate new agricultural talents

In order to cultivate talent in agriculture, the Scholarship Awards are set up through TFC Foundation to encourage outstanding students in strained circumstances to keep working hard. To solve the problem of aging agricultural population in Taiwan, TFC has especially set up the “Scholarship for Eco-friendly Agricultural Operation Plans”, requiring the combination of Business Management and Agricultural Management in the operation plan, attracting graduate students with agricultural and business management background to contribute their ideas. A number of innovative concepts are mentioned in the submissions, such as the application of the financial statement in the planning of operation model, the risk concept for the planting planning, and even the proposal of a “vertical farm” operation model that echoes the considerations of Taiwan’s agricultural environment and global climate changes. This project not only provokes young students’ enthusiasm in agricultural management but also encourages the combination of learning and agricultural development, inviting joint efforts with TFC to develop new opportunities for Taiwan’s agriculture.

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Cooperating with the social enterprise to guide young farmers to implement organic farming

In 2017, TFC for the second time, cooperated with a farmer in Guantien District in Tainan, Mr. Hu through the social enterprise, Taiwan Domi, for the use of the TFC's organic fertilizer and the supplementary organic cultivation technology to cultivate 969.92 m² of Tainan No. 11 rice and 1 hectare of rice, mango, water chestnut and other local specialties.

Mr. Hu had worked as an operator for 12 years in the Guantien Industrial Zone, He returned back to the hometown to take care of his elderly parents and engaged in agriculture with his father. Due to the exposure of many chemical agents in his previous job, he deeply felt the importance of environmental protection and eco-friendly land, and therefore, he took the plantation of safe and non-toxic agricultural products as his life work.

In the process of cooperation, TFC's R&D Department and Sales Department jointly provided safe, non-toxic agricultural fertilizer management and supporting technologies and eco-friendly agricultural materials such as microbial fertilizers to guide the farmers, and also taught farmers to utilize microbial fertilizers to improve yields and quality of farming. The score of the rice quality in the organic test area was increased to 78 points, higher than the 72 points in the conventional practice area (the score of 75 points and above in the Miaoli District Agricultural Research and Extension Station indicates the good quality of rice).



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8-4 Make Proper Use of Land to Create Harmony between the Environment and the Community

TFC upholds the belief of developing a good relationship with the surrounding environment and community. We are pursuing symbiosis with the environment in the industrial use of land. We are seeking an interactive model with the community in the commercial and residential use of land. While developing, TFC complies with all the laws and regulations and fully communicates with stakeholders to reduce the impact of development on the environment and the community.

GRI 413-1,413-2

100% Impact Assessment of TFC’s Business Units

At the beginning of planning the industrial use of the current production factories of Taichung Factory, Miaoli Factory and Hualien Factory, public exhibitions and explanation sessions were held in accordance with the provisions. In addition, local residents or groups also submitted written comments during the period of exhibition in public, and after the approval from the Urban Planning Commission, the industrial use of the factories could then start. We conducted the environmental impact identification when Taichung Factory was constructed. After the conservation measures were drafted and the environmental impact assessment (EIA) was submitted, we held public briefings to collect comments from local residents and stakeholders. The construction did not start until the EIA was reviewed and approved by the Environmental Impact Assessment Review Committee. The percentage of the implementation of local community engagement, impact assessment and development plan of TFC’s business units reached 100%.

Start the development of old plants and share the development benefits

TFC used to have 6 production factories in Taiwan. With the industrial transformation and urban expansion, Taichung Factory has been reintegrated into the base for fertilizer and chemical production and logistics, while Miaoli Factory becomes the agricultural biotechnology R&D base and Hualien Factory as the production and R&D base for deep ocean water. Property Management Development and Real Estate Development Department are responsible for the land development operations of old Nangang, Hsinchu, Kaohsiung and Hualien Factories, and the operations would cooperate with the surrounding urban development and planning. Besides, public hearings, symposiums and public exhibitions were also held in accordance with the law to listen to the expectation and opinions of the community residents, so as to reposition the transformation and utilization of the old factories.



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2017 Real Estate Development Plan

Taipei (old Nankang Plant)

To cooperate with the government's overall planning, it was changed into residential and commercial land designated for the "Nankang Economic-Trade Park Project". Currently, congregate housing, international tourist hotels and office buildings have been gradually developed.

Old Hsinchu Factory

- The original Hsinchu Factory is changed into commercial land designated for the "Hsinchu Science and Technology Business District" to cooperate with the government's overall plan.
- Hsinchu Factory completed the demolition operation in 2016, and currently it is under two phases of urban land rezoning, and the reassigning in the first phase has been completed. It is scheduled to develop commercial office buildings, shopping centers and congregate housing in the future. Hsinchu TFC 1 Building, TFC's first commercial office building was completed in 2017, and some domestic and international companies have entered and stationed in it.

Old Kaohsiung Factory

The original Kaohsiung Factory is changed into specific area designated for "Kaohsiung Multi-functional Commerce & Trade Park". Kaohsiung Factory completed the demolition operation in 2016. It will undergo urban land readjustment by Kaohsiung City and is scheduled to be developed into commercial and office area in the future.

Old Keelung Factory

After the completion of Taichung Factory, Keelung Factory was decommissioned in 2017. For the short-term plan of the land planning, part of the land will be remained for the backup production according to fertilizer demand. For the medium- and long-term plan, it depends on the market condition for the land reuse proposal. In addition, the change of land use of the land on Dong Ming Road is ongoing as scheduled.

Old Hualien Factory

The land development for Hualien Factory focuses on the "deep ocean water" industrial park. The services and functions include a tourism factory and the development of deep ocean water related industries.

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Appendix 1 Emergency Response and Transport Management

TFC has a sound and complete emergency response management system and sufficient drills to ensure that the employees and residents in the communities can safely, rapidly and properly take response actions when incidents occur. In addition, the factory safety management is strictly implemented for all the transport act within the factory. After the products leave the factory, the shippers are also strictly required to comply with the transport safety regulations. When accidents occur during transport, TFC will provide assistance with the knowledge of the chemicals we produce and related equipment in the handling of accidents to safeguard lives and properties.

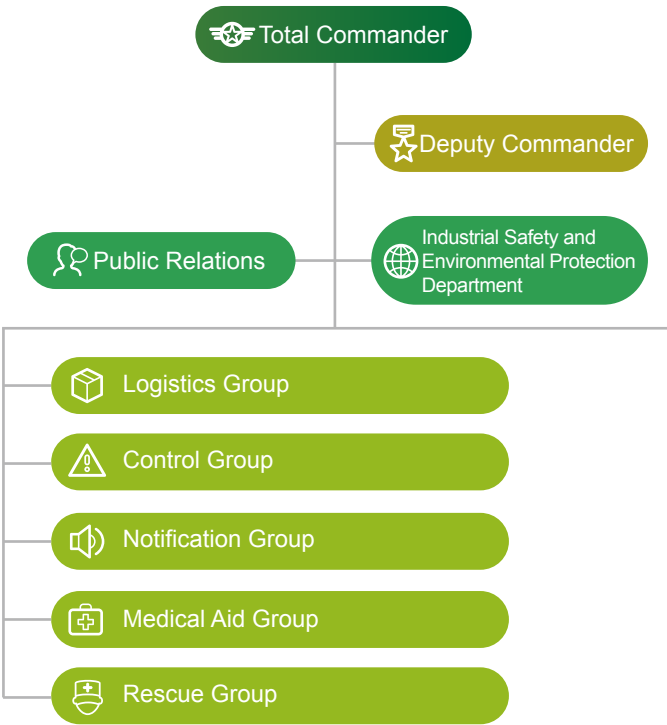
Implementation of Safety Management in the Factory

Emergency Management

The purpose of emergency management is to provide immediate and appropriate treatment and response when accidents or emergencies occur to avoid disasters. TFC has a complete emergency response system and organizational planning that has been constantly updated and carried out via drills, and we have set the Disaster Prevention and Response Operation Team in every factory to strengthen the defense mobilization and emergency and emergency response mechanism so as to improve the response personnel's capabilities in analyzing of and responding to disaster situations. The Disaster Recovery Plan is also in place. Meanwhile, TFC also joins the Mutual Defense in the industrial area to effectively enhance its emergency response capabilities.

The Company has developed "Guidelines on Disaster Prevention and Response Operation" for emergency operation of all types of disasters and emergency of TFC and set up "Disaster Prevention and Response Operation Team" in each factory to facilitate immediate responses so as to reduce disaster losses.

TFC’s Emergency Response Organization Chart



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Hierarchical Management System for Disasters

We adopt a hierarchical management system for disasters to ensure that the manpower and resources in and outside the factory can be promptly combined to take proper contingency measures to deal with emergency and disasters when incidents occur. Se set a three-stage on-site response mechanism based on the severity and scope of the impact. We also work closely with the employees in and outside the factory, residents in the community, nearby factories and local authorities to jointly take emergency response actions.

TFC's Three-stage Emergency Management Operational Process

Stage 1

When a disaster occurs, the unit involved in the accident is capable of controlling and does not need support from other units.

- Confirm the occurrence of disaster (including the type and the extent of the disaster)
- Be alert of the water sources, turn off fire and stop all hot work
- Direct relief work on-site

Start internal reporting procedures

Stage 2

The contingency has greater harm or is in a greater area and may result in threats to human lives and property, and support from other units are required.

- The total commander sets up an emergency command center and ask the response groups to stand by.
- Prepare response equipment.
- Set the control area to control personnel access.
- Determine whether emergency shut-down is needed.
- Perform various contingency measures.

Increase the level of internal reporting.

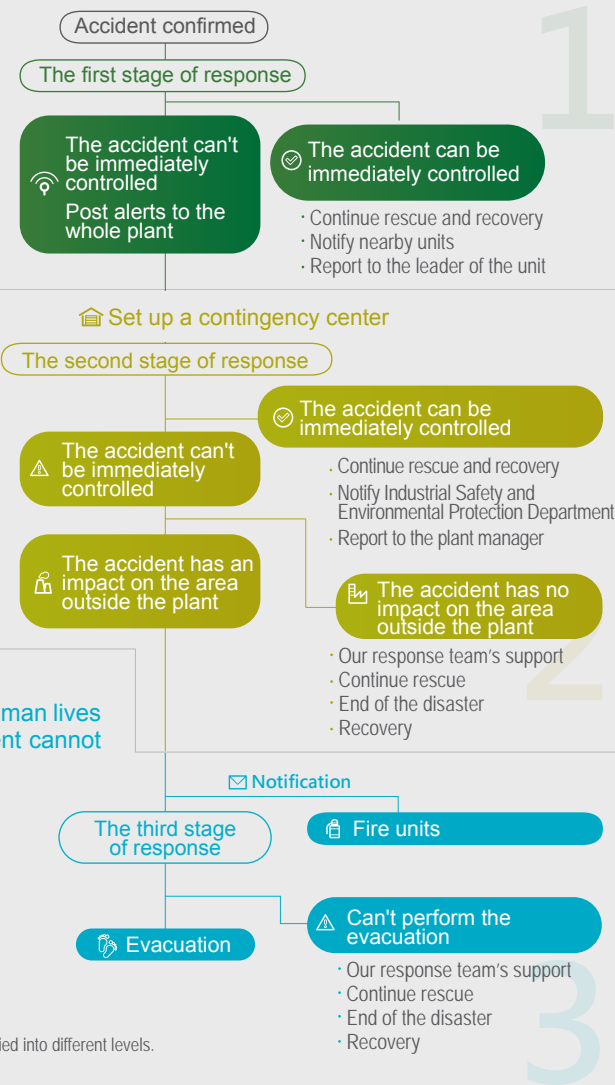
Stage 3

The impact area is huge and the contingency has serious impacts on human lives and property safety, and the manpower as well as the rescue equipment cannot respond accordingly and support from outside is required.

- Request external support, notify the government, fire department, labor inspection and environmental protection units.
- Expand the scope of alert.
- When the external supporting unit arrives for rescue, the command is transferred to the commander of the supporting unit.
- Assisting the supporting unit in the relief work.

Local government response center,Fire departments
Labor inspection units,Environmental protection units

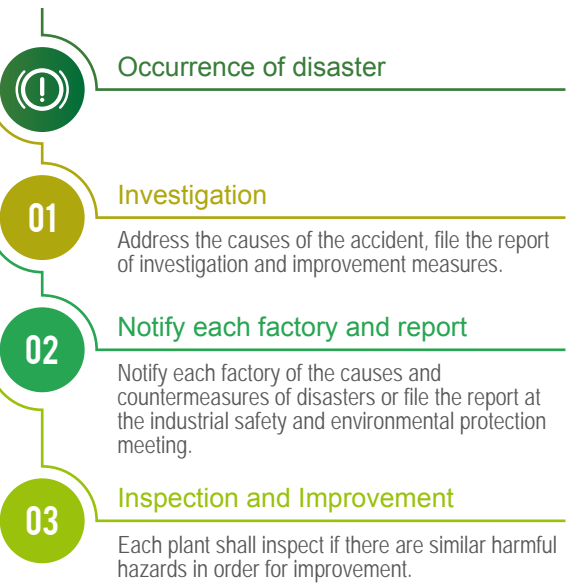
Note:Based on different stages, the scope and level of the response units and notification objects will be classified into different levels.



Disaster Investigation and Improvement Procedure

In the event of a disaster, the unit in charge of the event will conduct an investigation and prepare the investigation results and related remedial measures in the "TFC Accident Injury Report Form" and follow the event investigation procedure. Before the next day of the disaster or emergency, the industrial safety unit of each factory will assign personnel to the scene of the incident for investigation, and such personnel will report the cause, investigation report and improvement countermeasures of the incident. The Industrial Safety Unit of the Head Office shall notify each factory of the causes and countermeasures of disasters or file the report at the industrial safety and environmental protection meeting, asking all factories to inspect if there are similar potential hazards in order to make improvement and prevent similar incidents from happening again.

Disaster Investigation and Improvement Procedure



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Emergency Drills

Before the end of each year, every production plant submits the plans of disaster prevention and emergency drills and budgets for purchasing protective equipment. Various emergency drills are conducted as scheduled annually.

After the completion of the emergency drill, a review report is prepared by the Industrial Safety and Environment Department of each plant, and the factory's industrial safety agency is responsible for the integration of ideas in the drill and the improvement and correction of the emergency response procedure to enhance the resilience capabilities in the face of emergencies. TFC held a total of 19 sessions of emergency drills in 2017, with a total of 189 participants in the drills of liquid ammonia tanker transportation accident, liquid ammonia leakage, acid leakage, acid leakage, electro-chemical leakage, and fire drills.

Liquid ammonia leakage drill



| | |
|---|---|
| 1 | 2 |
| 3 | 4 |

- 1. The on-site personnel discovered the leakage of the liquid ammonia storage tank and reported the situation immediately.
- 2. An emergency response team was immediately set up, and the deputy commander was in charge of explaining the incident.
- 3. Emergency response personnel with A level protective clothing conducted emergency shutdown, and reported safety with hand gestures.
- 4. Emergency response personnel with C level protective clothing and gas mask conducted emergency maintenance and confirmed safety with hand gestures.

Drill for the acid storage tank leakage



| | |
|---|---|
| 1 | 2 |
| 3 | 4 |

- 1. The response area was divided into hot zone, warm zone and cold zone and personnel was dispatched for access control.
- 2. Assisted the emergency response personnel with the protective gear and confirmed the adhesion of the gas mask.
- 3. Recovery of acid leaking into the dike
- 4. Immediately sprayed Diphoterine on emergency response personnel to reduce damage of the acid splash.

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Pipeline Management

In accordance with the provisions of the national standard of CNS 9329 for pipeline identification, we have set up “Key Points for Identifying Units in Charge of the Pipelines”. We use graphic expressions and colors to identify the pipelines for raw materials or fluids for production use to different factories so that the field workers can soon be aware of the materials in the pipelines, the properties of the materials and the degree of risk. There is a dedicated unit in charge of the maintenance of the pipelines to ensure the normal operation of the pipelines.

Compliance with the Transportation Safety Rules

Management of Unloading Materials

Raw materials needed for fertilizer production mainly depend on imports from abroad through shipping. The unloading, deliver and transport of the raw materials of chemicals needed for production, such as liquid ammonia, sulfuric acid, nitric acid, and phosphoric acid all follow the “Working Instruction for the Uploading and Storage Team in Taichung Factory of TFC”, and we have established a sound management standards and paid attention to the safety and health management in every detail of the transportation process. Furthermore, the standard operating procedures (SOP) of the operations during the unloading of materials have also been set up as the basis of the execution of the details to ensure the safety of the material handling process. TFC adheres to the rigorous attitude when carrying out the management of shipping unloading operations. There were no significant accidents in the transport and loading and unloading operations in 2017.

Key points of unloading operation management

Operations before unloading

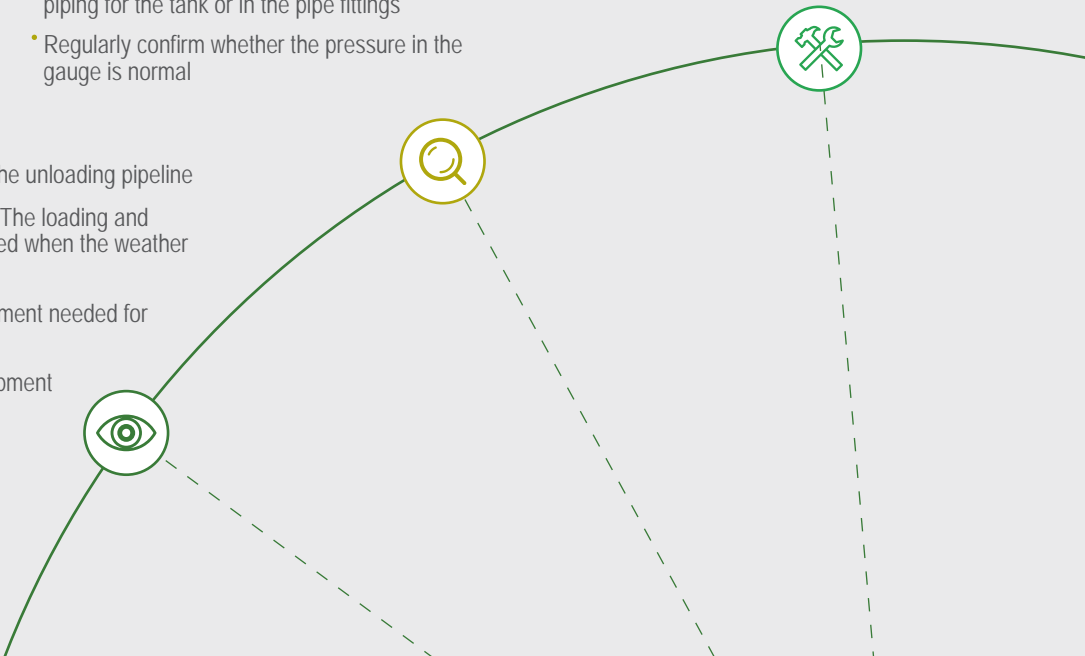
- Monitor the temperature and control the unloading pipeline
- Monitor the weather condition onsite. The loading and unloading operations will be suspended when the weather condition is poor
- Check each and every piece of equipment needed for unloading onsite
- Confirm the field workers’ safety equipment

Operations during unloading

- Regularly inspect whether there is leakage in the piping for the tank or in the pipe fittings
- Regularly confirm whether the pressure in the gauge is normal

Operations after unloading

- Remove the residues in the pipes after unloading
- Wash and clean out the site after unloading
- Inspect and maintain the equipment and devices needed for unloading regularly



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Management of Tank Vehicles

The chemicals sold in the Company are transported by tank vehicles arranged by the clients to take delivery of goods at TFC's factories. The Company has set up "Industrial Safety and Health Management" and "Points for Safety Management of Hazardous Materials Transport on the Highway". Transport vehicles entering TFC factories should comply with related safety and health regulations, and after leaving the factories, the tank vehicles should strictly abide by the government regulations and TFC's management rules to prevent the occurrence of transport accidents.

Key point for management of tank vehicles

Compliance

- Strictly request the carriers to comply with relevant laws and regulations of the government for the carriage operations of dangerous goods and receive training, inspection and supervision from the competent authorities and the Company
- The vehicles for carrying the goods should pass the inspection from the Motor Vehicles Service Station and before the transport of goods, application for the issuance of a "Pass" should be submitted to the local Motor Vehicle Office of Directorate General of Highways

Personnel management

- The drivers the carriers hire should possess relevant licenses, receive dangerous goods transport training, be physically and mentally healthy and physically capable of the job
- When the carrier enters the factory to take delivery of goods for the first time, the person in charge or the designated agent and the driver should receive safety and health training from the Industrial Safety and Environmental Protection Department in the Company's factories and the hazard notification is also given
- Tanker drivers and the field workers should confirm the safety equipment before the loading and unloading operations

Equipment management

- Vehicles and tanks should be inspected routinely. Observe the tank safety valve and pressure gauge at all times to make sure they function well. In addition, important car parts, such as breaks and wheels should also be checked
- Check the vehicles and tanks before and after loading and unloading should be made on the pressure gauge, safety valves, loading and unloading valves, loading and unloading pipes, ground wire of the tank car and the removal of the unloading pipe after unloading and before driving
- Avoid transporting goods during rush hours
- The carrier should prepare personal protective equipment onboard depending on the nature of the hazardous goods
- Strictly request the drivers to follow the rule of "No open flames"

When the incident occurs

- When notified of the tank accident, a rescue team is immediately set up to confirm the situation of the accident and prepare rescue equipment and protective gear in order to help rescue as soon as possible
- TFC's rescue team receives the commands from the total commanders on the scene to help deal with the accident

After the incident

- After handling the accident, a written report on the situation of the accident and the rescue process will be presented to the company

Drill of the liquid ammonia tanker leakage



Liquid ammonia tanker leakage



Absorbed ammonia with water mist



Emergency response personnel implemented the tank loading and unloading pipeline connection



Disaster disposal truck assisted in the liquid ammonia transfer operation

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GENERAL DISCLOSURES

Category / Topic

● Core

● Comprehensive

GRI 102 : General disclosure : 2016

| GRI Standards disclosure | | | Related CSR Section | Page number(s) | Reasons for omission/Instructions |
|--------------------------|--------|--|---|----------------|-----------------------------------|
| Organizational profile | | | | | |
| ● | 102-1 | Name of the organization | Overview of the Company | 6 | |
| ● | 102-2 | Activities, brands, products, and services | Overview of the Company | 8 | |
| ● | 102-3 | Location of headquarters | Overview of the Company | 6 | |
| ● | 102-4 | Location of operations | Overview of the Company | 7 | |
| ● | 102-5 | Ownership and legal form | Overview of the Company | 6 | |
| ● | 102-6 | Markets served | Overview of the Company | 8 | |
| ● | 102-7 | Scale of the organization | Overview of the Company | 24 | |
| ● | 102-8 | Information on employees and other workers | 7-1 The hire of employees | 78 | |
| ● | 102-9 | Supply chain | 6-4 Supplier management and procurement | 73 | |
| ● | 102-10 | Significant changes to the organization and its supply chain | About this report | 2 | |
| ● | 102-11 | Precautionary Principle or approach | 2-3 Risk management | 29 | |
| ● | 102-12 | External initiatives | 1-4 External Organization Participation and Support for and Compliance with International Initiatives | 22 | |
| ● | 102-13 | Membership of associations | 1-4 External Organization Participation and Support for and Compliance with International Initiatives | 22 | |
| Strategy | | | | | |
| ● | 102-14 | Statement from senior decision-maker | Message from the Chairman | 4 | |
| ● | 102-15 | Key impacts, risks, and opportunities | 2-3 Risk management | 30 | |

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Category / Topic ● Core ● Comprehensive

| GRI Standards disclosure | | | Related CSR Section | Page number(s) | Reasons for omission/Instructions |
|--------------------------|--------|---|---|----------------|-----------------------------------|
| Ethics and integrity | | | | | |
| ● | 102-16 | Values, principles, standards, and norms of behavior | Overview of the Company 2-2 Corporate governance | 7 26 | |
| ● | 102-17 | Mechanisms for advice and concerns about ethics | 2-2 Corporate governance | 28 | |
| Governance | | | | | |
| ● | 102-18 | Governance structure | 1-3 Interaction with and management of stakeholders 2-2 Corporate governance | 15 26 | |
| ● | 102-19 | Delegating authority | 1-3 Interaction with and management of stakeholders 2-2 Corporate governance | 15 26 | |
| ● | 102-20 | Executive-level responsibility for economic, environmental, and social topics | 1-3 Interaction with and management of stakeholders | 15 | |
| ● | 102-21 | Consulting stakeholders on economic, environmental, and social topics | 1-3 Interaction with and management of stakeholders | 15 | |
| ● | 102-22 | Composition of the highest governance body and its committees | 2-2 Corporate governance | 26 | |
| ● | 102-23 | Chair of the highest governance body | 2-2 Corporate governance | 26 | |
| ● | 102-24 | Nominating and selecting the highest governance body | 2-2 Corporate governance | 26 | |
| ● | 102-25 | Conflicts of interest | 2-2Corporate governance | 28 | |
| ● | 102-26 | Role of highest governance body in setting purpose, values, and strategy | 2-2Corporate governance | 13 | |
| ● | 102-27 | Collective knowledge of highest governance body | 2-2 Corporate governance | 26 | |
| ● | 102-28 | Evaluating the highest governance body's performance | 2-3 Risk management | 29 | |
| ● | 102-29 | Identifying and managing economic, environmental, and social impacts | 2-3 Risk management | 29 | |
| ● | 102-31 | Review of economic, environmental, and social topics | 1-3 Interaction with and management of stakeholders 2-3 Risk management | 15 30 | |
| ● | 102-32 | Highest governance body's role in sustainability reporting | 1-2 CSR development visions and organization structure | 13 | |
| ● | 102-33 | Communicating critical concerns | 1-2 CSR development visions and organization structure 1-3 Interaction with and management of stakeholders 2-2 Corporate governance | 14 15 27 | |

Items that have to be discussed by the Board of Directors follow the prescription of Taiwan Fertilizer Corporation Rules of Procedure for Board of Directors Meetings stipulated in accordance with the Regulations Governing Procedures for Board of Directors Meetings of Public Companies.

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| Governance | | | | | |
| ● | 102-35 | Remuneration policies | 2-2 Corporate governance | 27 | |
| ● | 102-36 | Process for determining remuneration | 2-2 Corporate governance | 27 | |
| Stakeholder engagement | | | | | |
| ● | 102-40 | List of stakeholder groups | 1-3 Interaction with and management of stakeholders | 15 | |
| ● | 102-41 | Collective bargaining agreements | 7-6 Labor-management communication | 92 | |
| ● | 102-42 | Identifying and selecting stakeholders | 1-3 Interaction with and management of stakeholders | 15 | |
| ● | 102-43 | Approach to stakeholder engagement | 1-3 Interaction with and management of stakeholders | 15 | |
| ● | 102-44 | Key topics and concerns raised | 1-3 Interaction with and management of stakeholders | 20 | |
| Report profile | | | | | |
| ● | 102-45 | Entities included in the consolidated financial statements | About this report | 2 | |
| ● | 102-46 | Defining report content and topic boundaries | 1-3 Interaction with and management of stakeholders | 21 | |
| ● | 102-47 | List of material topics | 1-3 Interaction with and management of stakeholders | 21 | |
| ● | 102-48 | Restatements of information | About this report | 3 | |
| ● | 102-49 | Changes in reporting | There was no major changes in the scope of disclosure in 2017. | - | |
| ● | 102-50 | Reporting period | About this report | 3 | |
| ● | 102-51 | Date of most recent report | About this report | 3 | |
| ● | 102-52 | Reporting cycle | About this report | 3 | |
| ● | 102-53 | Contact point for questions regarding the report | About this report | 3 | |
| ● | 102-54 | Claims of reporting in accordance with the GRI Standards | About this report | 2 | |
| ● | 102-55 | GRI content index | Appendix 3 | 109 | |
| ● | 102-56 | External assurance | About this report Appendix 2 | 2 108 | |

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GRI Topic-specific disclosure

GRI Topic-specific disclosure / GRI 103 : Management approach 2016

| Category / Topic | Disclosure | Related CSR Section | Page number(s) | Reasons for omission/ Instructions |
|--|------------|---|---|------------------------------------|
| 200 Economic performance | | | | |
| GRI 201 : Economic performance 2016 | 103-1 | Explanation of the material topic and its boundary | 2-1 Business management | 24 |
| | 103-2 | The management approach and its components | 2-1 Business management | 24 |
| | 103-3 | Evaluation of the management approach | 2-1 Business management | 24 |
| | 201-1 | Direct economic value generated and distributed | 2-1 Business management | 25 |
| | 201-2 | Financial implications and other risks and opportunities due to climate change | 2-3 Risk management | 30 |
| | 201-3 | Defined benefit plan obligations and other retirement plans | 7-2 The remuneration system and benefits | 81 |
| GRI 202 : Market presence 2016 | 202-1 | Ratios of standard entry level wage by gender compared to local minimum wage | 7-2 The remuneration system and benefits | 81 |
| | 202-2 | Proportion of senior management hired from the local community | 7-1 The hire of employees | 80 |
| GRI 203 : Indirect economic impacts 2016 | 203-1 | Infrastructure investments and services supported | 8-1 Promotion of sustainable agriculture education | 95 |
| | | | 8-3 Implementation of corporate social responsibility | 99 |
| GRI 204 : Procurement practices 2016 | 204-1 | Proportion of spending on local suppliers | 6-4 Supplier management and procuremen | 74 |
| GRI 205 : Anti-corruption 2016 | 205-2 | Communication and training about anti-corruption policies and procedures | 2-2 Corporate governance | 28 |
| | 205-3 | Confirmed incidents of corruption and actions taken | No corruption incidents occurred in TFC in 2017. | - |
| GRI 206 : Anti-competitive behavior 2016 | 206-1 | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | 1-4 External organization participation and support for and compliance with international initiatives | 22 |

300 Environmental

| | | | | |
|--------------------------|-------|--|--|----------|
| GRI 301 : Materials 2016 | 301-1 | Materials used by weight or volume | 5-3 Raw Material Management | 58 |
| | 301-2 | Recycled input materials used | 5-3 Raw Material Management 4-3 Diverse Usage of Renewable Raw Materials for the Creation of New Value of Waste Resources | 58 50 |
| GRI 302 : Energy 2016 | 103-1 | Explanation of the material topic and its boundary | Chapter 5 Energy conservation and environmental management | 52 |

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| GRI 302 : Energy 2016 | 103-2 The management approach and its components | Chapter 5 Energy conservation and environmental management | 52 | |
| | 103-3 Evaluation of the management approach | Chapter 5 Energy conservation and environmental management | 52 | |
| | 302-1 Energy consumption within the organization | 5-2 Energy resource management | 54 | |
| | 302-3 Energy intensity | 5-2 Energy resource management | 54 | |
| | 302-4 Reduction of energy consumption | 5-2 Energy resource management | 54 | |
| | 302-5 Reductions in energy requirements of products and services | 4-2 Environmental protection and energy saving deep water park in Hualien | 47 | |
| GRI 303 : Water 2016 | 303-1 Water withdrawal by source | 5-2 Energy resource management | 55 | |
| | 303-3 Water recycled and reused | 5-2 Energy resource management | 55 | |
| GRI 305 : Emissions 2016 | 103-1 Explanation of the material topic and its Boundary | Chapter 5 Energy conservation and environmental management | 52 | |
| | 103-2 The management approach and its components | Chapter 5 Energy conservation and environmental management | 52 | |
| | 103-3 Evaluation of the management approach | Chapter 5 Energy conservation and environmental management | 52 | |
| | 305-1 Direct (Scope 1) GHG emissions | 5-4 Greenhouse gas management | 59 | |
| | 305-2 Energy indirect (Scope 2) GHG emissions | 5-4 Greenhouse gas management | 59 | |
| | 305-4 GHG emissions intensity | 5-4 Greenhouse gas management | 59 | |
| | 305-5 Reduction of GHG emissions | 5-4 Greenhouse gas management | 59 | |
| | 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions | 5-4 Greenhouse gas management | 60 | |
| GRI 306 : Effluents and waste 2016 | 103-1 Explanation of the material topic and its boundary | Chapter 5 Energy conservation and environmental management | 52 | |
| | 103-2 The management approach and its components | Chapter 5 Energy conservation and environmental management | 52 | |
| | 103-3 Evaluation of the management approach | Chapter 5 Energy conservation and environmental management | 52 | |
| | 306-1 Water discharge by quality and destination | 5-5 Wastewater and waste management | 62 | |
| | 306-2 Waste by type and disposal method | 5-5 Wastewater and waste management | 61 | |
| | 306-3 Significant spills | 2.4 Legal compliance | 34 | |
| | 306-4 Transport of hazardous waste | 5-5 Wastewater and waste management | 61 | |
| | 306-5 Water bodies affected by water discharges and/or runoff | 5-5 Wastewater and waste management | 62 | |

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| GRI 307 : Environmental compliance 2016 | 103-1 Explanation of the material topic and its Boundary | 2-4 Legal compliance | 32 | |
| | 103-2 The management approach and its components | 2-4 Legal compliance | 32 | |
| | 103-3 Evaluation of the management approach | 2-4 Legal compliance | 32 | |
| | 307-1 Non-compliance with environmental laws and regulations | 2-4 Legal compliance | 34 | |
| 400 Social | | | | |
| GRI 401 : Employment 2016 | 401-1 New employee hires and employee turnover | 7-1 The hire of employees | 80 | |
| | 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees | 7-2 The remuneration system and benefits | 82 | |
| | 401-3 Parental leave | 7-4 Equal and friendly workplace of happiness | 87 | |
| GRI 402 : Labor/management relations 2016 | 402-1 Minimum notice periods regarding operational changes | TFC handled it in accordance with article 16 of the labor standards act | - | |
| GRI 403 : Occupational health and safety 2016 | 403-1 Workers representation in formal joint management-worker health and safety committees | 7-5 A healthy and safe working environment | 88 | |
| | 403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities | 7-5 A healthy and safe working environment | 90 | |
| | 403-3 Workers with high incidence or high risk of diseases related to their occupation | 7-5 A healthy and safe working environment | 91 | |
| | 403-4 Health and safety topics covered in formal agreements with trade unions | 7-6 Labor-management communication | 92 | |
| GRI 404 : Training and education 2016 | 404-1 Average hours of training per year per employee | 7-3 Comprehensive personnel cultivation and training system | 85 | |
| | 404-2 Programs for upgrading employee skills and transition assistance programs | 7-3 Comprehensive personnel cultivation and training system | 84 | |
| | 404-3 Percentage of employees receiving regular performance and career development reviews | 7-3 Comprehensive personnel cultivation and training system | 86 | |
| GRI 405 : Diversity and equal opportunity 2016 | 405-1 Diversity of governance bodies and employees | 2-2 Corporate governance 7-1 The hire of employees | 26 78 | |
| | 405-2 Ratio of basic salary and remuneration of women to men | 7-2 The remuneration system and benefits | 81 | |
| GRI 406 : Non-discrimination 2016 | 406-1 Incidents of discrimination and corrective actions taken | 1-4 External organization participation and support for and compliance with international initiatives 7-2 The Remuneration System and Benefits | 22 81 | |
| | 407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk | 1-4 External organization participation and support for and compliance with international initiatives | 22 | |

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| GRI 408 : Child labor 2016 | 408-1 Operations and suppliers at significant risk for incidents of child labor | 1-4 External organization participation and support for and compliance with international initiatives | 22 | |
| GRI 409 : Forced or compulsory labor 2016 | 409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labo | 1-4 External organization participation and support for and compliance with international initiatives | 22 | |
| GRI 411 : Rights of indigenous peoples 2016 | 411-1 Incidents of violations involving rights of indigenous peoples | 1-4 External organization participation and support for and compliance with international initiatives | 22 | |
| GRI 413 : Local communities 2016 | 103-1 EExplanation of the material topic and its boundary | Chapter 8 Value co-creation and social care | 94 | |
| | 103-2 The management approach and its components | Chapter 8 Value co-creation and social care | 94 | |
| | 103-3 Evaluation of the management approach | Chapter 8 Value co-creation and social care | 94 | |
| | 413-1 Operations with local community engagement, impact assessments, and development programs | 8-4 Make proper use of land to create harmony between the environment and the community | 101 | |
| | 413-2 Operations with significant actual and potential negative impacts on local communities | 8-4 Make proper use of land to create harmony between the environment and the community | 101 | |
| GRI 416 : Customer health and safety 2016 | 103-1 Explanation of the material topic and its boundary | Chapter 6 Innovation service and supply chain management | 64 | |
| | 103-2 The management approach and its components | Chapter 6 Innovation service and supply chain management | 64 | |
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