



# Intellectual Property Report 2014



イセキ **NP** SERIES

August 2014

ISEKI & CO., LTD.

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### Preamble in Publishing Intellectual Property Report 2014

The business foundations of the ISEKI Group are in agriculture and agricultural machinery. We are constantly endeavoring to improve the functions, performance, quality, and cost and service competitiveness of our products through our development, production, and marketing activities. Through these activities, we are working to strengthen our competitiveness in the market by differentiating our products and securing a superior position. We engage in business activities placing emphasis on intellectual property, through creative activities in core technologies of agricultural machinery, agriculture-related products and others, and securing technical rights and the use of the resultant intellectual achievements of such activities, such as inventions and creations, by strategic intellectual property activities, leading to new creation.

This Intellectual Property Report 2014 covers a wide range of related topics, including our initiatives in R&D, the creation of inventions and patent strategies, product design initiative and trademarks. It also includes the response to the globalization, system for intellectual property, features and technologies of new products, situation of intellectual property, awards received for our patents and inventions, and information risks related to intellectual property.

#### [Cautionary Statements]

1. This booklet has been prepared to provide information to the public and is not intended to solicit any kind of action.
2. This booklet contains the results of the Company's analyses, including forward-looking statements regarding the outlook for the Company, its plans, policies, prospects, strategies, interpretations of facts, and other information related to the future. All such statements and other information are based on forecasts, assumptions, plans, and other information collected by the Company at the time of preparation of this booklet.
3. In preparing forecasts, with the exception of known facts, the Company makes use of certain assumptions. There are no guarantees that these assumptions are objective and accurate or will prove to be true in the future. These assumptions are dependent on technology and demand trends in Japan and in other countries, economic conditions, competitive conditions, and other factors. If these assumptions change, it is possible that matters and outcomes, other than known facts, stated in this report may differ from the statements in this publication.
4. Data on the number of patents made public stated in this publication, the number of patents held, and other data related to intellectual property are those of Iseki Co., Ltd., and do not include data on subsidiaries or affiliates.

## Message from the President

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Since its foundation in 1926, Iseki Group constantly pursued the streamlining and laborsaving of agriculture as a comprehensive specialized manufacturer of agricultural machinery. During this process, Iseki Group has pioneered a great variety of innovative agricultural machinery ahead of the others and has brought them to the market.

In view of the global issues of growing population and food supply, as well as contemporary issues of food self-sufficiency and national land preservation, we are aware that the social mission of agricultural machinery manufacturers will become progressively more important. Iseki Group will continue our activities based on our fundamental philosophy of contributing to agriculture in Japan and around the world through “offering products that will give satisfaction to users”.

At present, the principal business of the Iseki Group is the “development, manufacturing and sales of agricultural machinery for the rice cultivation, dry-field cultivation and others”. In the midst of a major change of domestic agriculture that is going to taking place, we are engaged in aggressive business activities in both areas of hardware and software. An example of this is the provision of high quality and low priced products in support of energy saving, and low cost agriculture through the eyes of customers, as well as the proposal of useful technologies for low cost agriculture to be used by farmers. Also, for a full-fledged promotion of our global strategy, we will engage in business activities by development of products that are compatible with the diversifying market needs, development of products that are based on regional requirements and also by engagement in common design for Asia. With respect to the forementioned business activities, we are committed to providing active and timely disclosure of corporate information concerning our management strategies, result of activities and other matters with all stakeholders including our customers, shareholders, investors and analysts.

Iseki Group positions intellectual property as an important managerial resource, and we have reported on our R&D activities and the achievements through various occasions such as a securities report, investor relations presentations and a new product presentation.

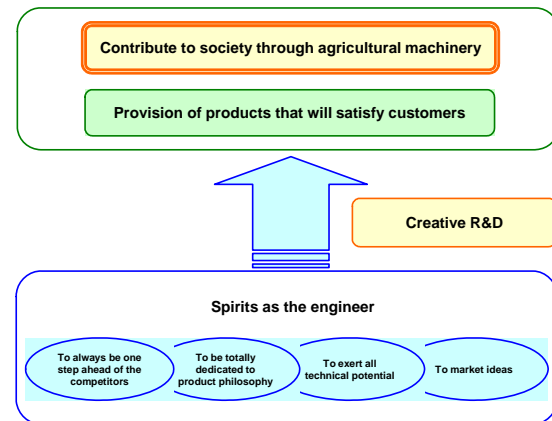
In this Intellectual Property Report, we intend to report on the Group’s basic stance of R&D, its R&D activities, and current state and the use of resultant intellectual properties. We hope this publication will provide you with a good understanding of the commitment of the ISEKI Group, which places much importance on R&D and intellectual property.



President  
Noriyuki Kimura

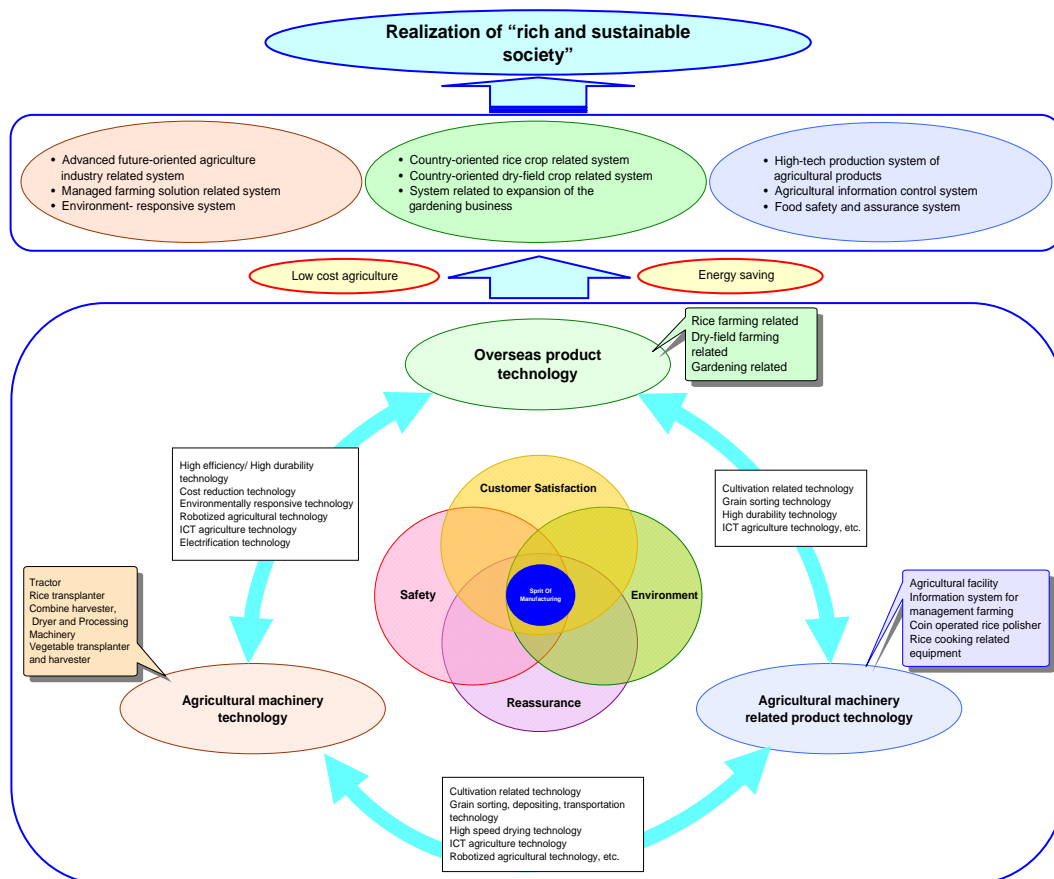
# 1. Guideline for Research and Development

In the midst of the changing environment surrounding the agricultural industry, Iseki Group holds a mission to “contribute to the society through agricultural machinery”; and each one of our technical experts is engaged in creative R&D based on the “spirits as the engineer” with an aim to “provide products that will satisfy customers” inheriting principle of the founder. By fully mobilizing our accumulated technologies since its inauguration, we will contribute to agriculture through providing products and service with a high level of satisfaction from the stand point of customers. We will continue to keep abreast of the agriculture industry for years to come. With regard to the R&D investment, we are making a deliberate investment based on a forecast of the demand and market trend in mid to long term perspectives. R&D expenditure for the consolidated fiscal year 2013 was approx. ¥4.7 billion.



# 2 Strategic Directions of R&D

In every sector of agricultural machinery technology, agricultural machinery related technology and overseas product technology, Iseki has adopted 4 key words, “Customer Satisfaction”, “Safety”, “Conformability” and “Environment” as “Spirit of Manufacturing”, and to promote R&D giving direction in each of the three sectors. In particular, we aim for the realization of “a rich society with sustainable development”, by R&D focusing on “low cost agriculture” and “energy saving”.



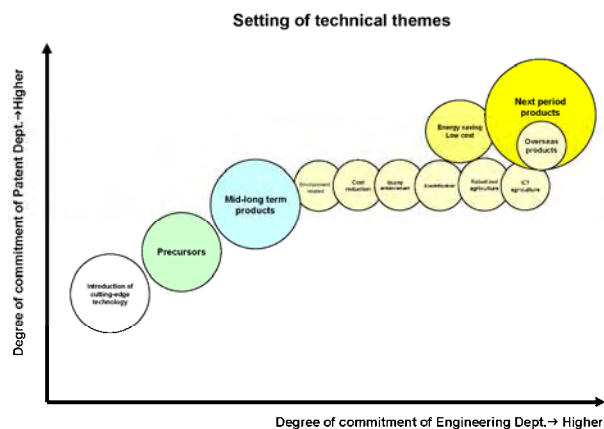
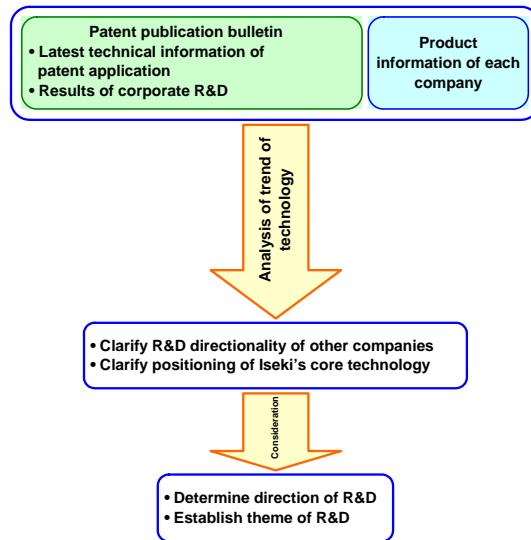
# 3 Intellectual Property of Strategy

## 1. Creation of inventions/Patent application strategy

We conducted an analysis in the trend of technology of our competitors, clearly defining the positioning of Iseki's core technologies, identifying the direction of the R&D of our competitors, setting the direction of our R&D themes and R&D, and making the results common information. These results include technical and planning sections in order to exploit such information as a resource to build business strategies and R&D strategies.

Also, Iseki sets technical themes based on the consensus of the entire company. This consensus includes the development and marketing sections out of core technology and promising technology and the market trend related to core technology, and we are striving for "quality" enhancement and "volume" expansion of inventions by promoting unique invention proposal campaigns employing creative methods addressed to each technical theme centering on our core technologies.

Our technical experts have strong adherence and will to invent / create, proposed inventions regarding technologies which will be put to practical use in the near future are being created actively. Proposed inventions must pass through a vigorous selection process based on our internal regulations and evaluation criteria; furthermore we aggressively apply patents by employing Iseki's unique measures for efficient patent application, thus creating the construction of a patent network, promoting to ensure the priority of product development.



## 2. Design / Trade mark strategy

We promote stronger design protection and enhancement of Iseki's brand value by product differentiation and discrimination with our competitors through the accumulation of appealing designs as well as affectionate pet names of design rights and trade mark rights respectively.

### Iseki's philosophy for product design

<b>Basis Policy for design</b>	• Attractive product which suits the operating environment and product property. • Product which gives bigger attachment in long use.
<b>Design procedure</b>	• Confirmation of actual sites of usage, voice of the market. • Analysis of the design trends and building of concept.
<b>Development of design</b>	• Progression of Iseki's individuality (product features, product colors) • Creation of fresh appeal with a contemporary feeling.
<b>Direction of design</b>	• Appealing design which derives satisfaction from usage. • Design which anticipates the future of agricultural machinery.

### Iseki's stance for trade marks

Basic understanding of pet names

- Agricultural machinery is a helpmate that works together with a farmer.
- Agricultural machinery which allows for familiarity and affection through daily work from land preparation, transplanting of seedlings, maintenance, harvesting and shipping.

Representative trademarks of Iseki

- "SANAÉ" which almost became a pronoun for rice transplanter
- "FRONTIER" which triggered auto threshing combine harvester, unprecedented in the world.
- "GEAS" represents tractor      • "ERENA" represents tiller      • "DRY BOY" for dryer
- "SUPER MATE" for rice huller      • "POLIMATE" for rice weighing and grading machine      • "NAUERU" for vegetable transplanter

Strategy ahead of its time

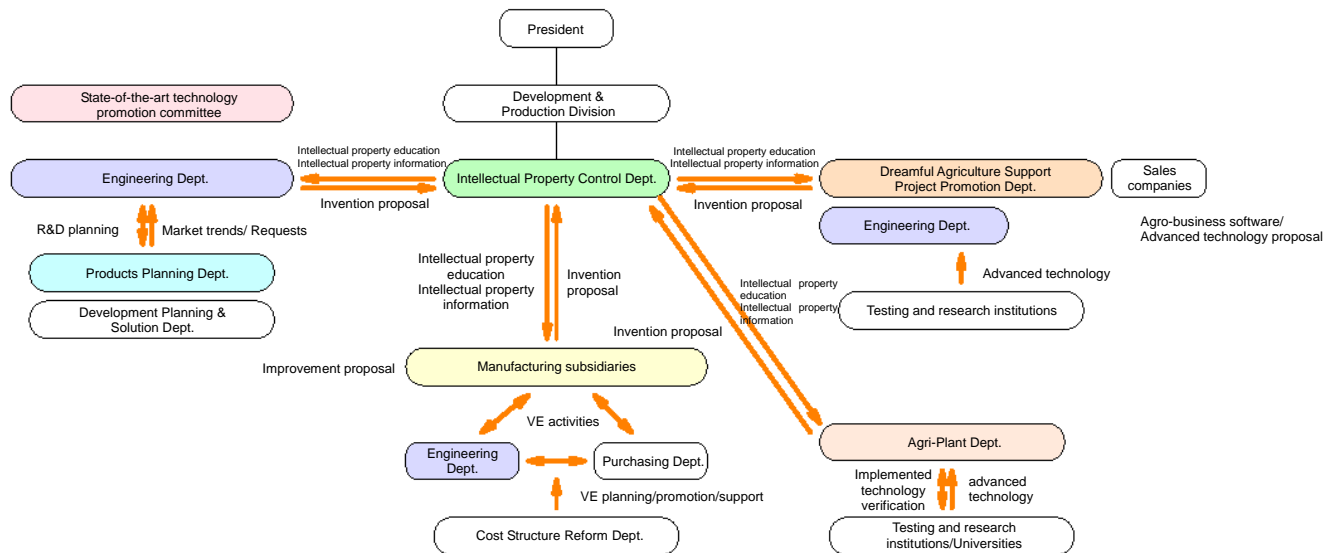
- Creation of pet names associated with the sales strategy responding to bipolarization of the agricultural structure, and low cost agriculture/energy saving.
- Enhancement of the brand image in line with global development of the business activities.

### 3. Iseki's strategy for intellectual property rights overseas

In overseas markets, Iseki is making steady efforts in securing intellectual property rights such as very strictly selected patents, design rights and trademark rights inventions which is consistent with our business strategy addressed to Asian countries including China and ASEAN, the U.S., and Europe. We strive to enhance analytical precision of market trends and situation of intellectual property in each country in line with full-fledged expansion of Iseki's global business activities, and to respond quickly in regard to the intellectual property in close tie-ups with divisions in charge of development and overseas operations as well as with patent offices in each country. Furthermore, we utilize our unique overseas patent information searching system in order to evaluate the effectiveness of our company's technologies in light of the situation of intellectual property and technical trends in each country.

Thus, we apply highly effective technologies in each country, trying to secure effective rights and accumulate such rights in each country.

## 4 System for R&D and Intellectual Property



### 1. R&D organization chart

Iseki Group has established a system to promote R&D by exerting comprehensive strength of each development/manufacturing/sales divisions. We have set up "State-of-the art technology promotion committee" to the system for a closer cooperation of each department in order to promote and accumulate state-of-the-art technology including technology adapting to changes in the crop system, ICT utilization and robotization of agriculture and plant factory and facility.



### 1) Engineering Department

As an organization to engage in R&D of each product, they strive to accumulate technology and know-how peculiar to each product. Together with the Product Planning Department which suggests product strategy and direction of the R&D based on the market trends and requests in each area, they make planning of R&D to engage in R&D to respond quickly to clients' needs both domestic and overseas.

In order to promote personal development and OJT effectively, they conduct rank-based intellectual property education according to years of experience to improve their levels. This has resulted in the number of proposed inventions in excess of 20,000 every year in a row, and advanced technologies and innumerable high quality inventions have been generated.

### 2) Manufacturing subsidiaries

We will strive for creation of high quality and low cost products based on Iseki's manufacturing technology that has been nurtured for many years. We introduced an improvement proposal system with an aim to promote quality enhancement, cost reduction and man-hour reduction. The number of improvement proposals in 2013 exceeded 60,000, promoting quality enhancement and efficiency of manufacturing.

Outstanding proposals among such improvement proposals have been awarded "Award for Contributes to Creative Ingenuity" of the Minister of Education, Culture, Sports, Science and Technology in recognition of highness of the manufacturing technology. The accumulated number of award-winning of this award has reached 10 cases.

Also, based on planning/promotion/support of the Cost Structure Reform Department, they strive to attain low cost products by VE activities to study cost reduction through changes in designing/manufacturing method/part procurement method, etc.

### 3) Dreamful Agriculture Support Project Promotion Department

In order to realize dreamful agriculture in the midst of major changes of the environment surrounding agriculture, Iseki supports agricultural management from two aspects of agricultural machinery and farming software, and we promote support for low cost agriculture proposing profitable agriculture (agriculture with high profit margin) based on actual proof together with our sales companies.

Specifically, as Iseki's engagement in low cost agriculture support, our instructors of sparse planting farming propose to farmers proactively the "sparse planting technology" that has been nurtured by Iseki for many years, as a technology which allows substantial reduction in required amount of seedlings and production of high quality rice. In addition, we propose "high density seeding & sparse planting" which is an evolution of "sparse planting technology" that reduces further necessary amount of seedling by technology of sparse planting using mat seedling of high seedling density, and promote empirical research towards increased diffusion.

Also, Iseki participates to the government's demonstration business for reconstruction of the devastated areas by the Great East Japan Earthquake to restore them as food production areas, "Advanced technology development business for restoration of food production areas" with its "variable fertilizing rice transplanter" which is under joint study with the Ishikawa Prefectural Agriculture and Forestry Research Center, being engaged in the empirical research.



The “variable fertilizing rice transplanter” avoids excessive fertilization by control of the amount of applied fertilizer with high precision according to the depth of prepared soil of the paddy soil and its fertility which is detected in sequence while running. We would like to contribute to rice making in future by aiming at further low cost in combined use with the “sparse planting technology”. Also, we are engaged in “Agri Heroes support projects” which support farmers who are “Agri Heroes” by means of versatile farm management proposals including production/cultivation control, not limiting to agricultural machinery. We will contribute to Japanese agriculture by way of developing human resources within Iseki Group, promoting proposals such as proposals of soil preparation/cropping techniques and production management method, as well as advanced ICT used agricultural technology in support of farm management, thus providing on-the-spot support for farming works.

#### 4) Agri-Plant Department

We engage in sophisticated facility business like plant factory in proactive interexchange in cooperation with universities and experiment and research institutions. Specifically, we are promoting a study regarding plant factory of “agricultural crops high-tech production system” with Ehime University, and we are promoting studies for establishment of cultivation technique of high sugar content tomatoes and for “intelligent plant factory that includes self-propelled plant growth diagnosis system” in the course of plant factory design engineering at Ehime University (endowed course). Also in 2013, Iseki participated in “Forefront agriculture industrialization demonstration business” that is aimed at reconstruction of devastated areas by the Great Eastern Japan Earthquake. In addition to designing /construction of sunlight use plant factory that conduct environmental control, we jointly developed plant growth diagnosis system with Ehime University.

The plant growth diagnosis system has been verified at the plant factory of an agricultural production corporation, assessing the growth condition with high precision. It also attracts attention as a next-generation agricultural technology at various exhibitions.

## 2. Cooperation system with research institutions

We promote joint research and development with universities, testing and research institutions and the like focusing on their superb technologies, research achievements, etc. in order to accomplish speedy as well as efficient R&D.



Joint study with universities and testing & research institutions universities

## 3. System for Intellectual Property

Iseki Group has an integrated administration system to conduct administration / guidance / education of intellectual property of the Iseki Group as a whole by our Intellectual Property Control Department.

Intellectual Property Control Department conducts appropriate administration of intellectual property, promoting acquisition of high quality intellectual property rights and effective use of intellectual property rights.

With respect to inventions and ideas, acquisition and management of rights, corporate confidential information, etc. we stipulated their handling in our working regulations, regulations for the handling of inventions created by job assignment, regulations for treatment of trade marks, code of conduct of the Iseki Group, patent business manual, etc., thus we conduct a thorough compliance.

We provide incentives for inventions and creation to the inventors with compensation for transfer of inventions, compensation for implementation, awards and prizes in and outside the company through interpretation and use of these regulations.

We also manage intellectual property in the strictest of manners by numerous regulations and



standards from the time of creation of the invention until its renouncement. For instance, in evaluating the value of patents, we created our “Criteria for Evaluation of Patent Rights” which sets forth methods for calculating the price of patent rights. We conduct periodical review of these criteria to ensure that they are in accord with common understanding and practices in the society, taking advantage of it in our patent assets management, patent rights negotiations and so forth.

Further, in order to realize activation of creativeness of the Iseki group as a whole and exert its full technical capacity, we make efforts in personnel training that constitutes their basis, providing intellectual education/creativity education.

Iseki Group also holds presentation meeting of technical research every year. It was 24<sup>th</sup> meeting last year, and it contributes to enhancement of the skill level of the entire Iseki Group by sharing R&D results and mutual close application and education through arguing.

## 5 Implementation of Intellectual Property for Each Product (Example)

### 1. Agricultural Machinery Technology

Hereunder, we would like to explain features of new products and associated technologies regarding tractors, rice transplanters, combine harvesters and others.

- 1) **Tractor** We developed large tractors for large scale farm management “T. JAPAN TJW” Series and “T. JAPAN TJV” Series that cope with demand from customers including large scale farmers, farming groups and agricultural corporations. The design has been renewed, and the machines are mounted with DPF for exhaust gas treatment and common rail engine, and equipped with “ISEKI AGRISUPPORT”, “accelerator transmission” and “memory transmission”.



TJW Series



TJV Series

#### ISEKI AGRISUPPORT

Information from the body sensor is effectively transmitted to the operator through a tablet terminal and smart phone, and record of information of daily operation control/ machine control serves for the analysis. Display of accumulated data such as details of operation in each farm field, control information of fertilizer/chemical application and daily fuel consumption and the analysis allow systematic operation, helping efficient operation and cost reduction.

#### Accelerator transmission

Since the electronic governor provides optimum adjustment of the engine rotation speed and its control device selects the optimum main transmission for automatic shift transmission, it enables smooth acceleration with a minimum transmission shock, allowing comfortable on-road driving. In addition, the selection range of the main transmission may be expanded from 4 speeds to 6 speeds, which allows finely-tuned transmission and comfortable on-road driving.

#### Memory transmission

With the retained memory of the main gear position used to work the previous field, the work may be restarted in the next field without the cumbersome operation of the main speed gear shift, which realizes comfortable and highly efficient work for the operator. Furthermore, with the added function to remember and set the number of shifts of the main speed gear preferred by the operator, a speed gear shift suitable to the work conditions may be determined promptly.

**2) Rice transplanter** We developed riding rice transplanter “NP” Series of a common design for Asia which realized high basic performance/durability/cost performance through standardization by basic design unit. Not only the attempt to improve operation efficiency of well reputed 37 stocks sparse planting, they are equipped with “Sanae just planting”, “Sanae fertilizer arm”, “Sanae DX rotor” and “Sanae DX shift”.

**Sanae fertilizer arm**  
By auxiliary arm, heavy fertilizer bags on the mounting stand may be carried easily from the field edge in front of the machine body to near the fertilizing machine.

**Sanae DX shift**  
By integrating three functions in a single lever, namely, electric transmission function that enables delicate and smooth speed change of HST from stopping to maximum speed; the auto accelerator that controls the engine rotation automatically to a rotation speed suitable to the vehicle speed; and multiple operation of the planting portion which enables the raising and lowering of the planting portion with a single touch; it allows comfortable operation and safe entry and exit of the field.



**Sanae just planting**  
By one touch operation of the transmission lever laterally from the stop position of running, it allows seed planting in stopped state of the machine body, enabling seed planting from very close to ridge edge.

**Sanae DX rotor**  
By separate positioning of land-leveling rotors in two stages front and back, height control of the land-leveling rotors can be done by dial at hand by electric motor, allowing land-leveling of the field while limiting mud pushing/undulating, and neat planting in the field which requires headland treatment with abundant admixtures.

**3) Combine harvester** We developed 6/7 row combine harvesters “Japan HJ7123/6123” as evolved versions of our flagship model “Japan” Series with higher operational and environmental performances, being equipped with a common rail and DPF and mounting the most powerful 123HP engine among Japanese combine harvesters. In addition to Iseki’s unique twin eight threshers/swing & zoom augers/ i-T.A.C.H., the machines are newly equipped with “HST driven-type reverse rotation cooling fan” “Safety device for paddy rice supply by hand” and “New automatic height control for reaping”.

**HST driven-type reverse rotation cooling fan**  
Overheat of an engine is prevented by driving cooling fan of the engine with a dedicated HST, blowing off straw waste adhered to the dust proof net by regular reverse rotation by speed control of this HST. Further, cooling effect of the engine is enhanced by accelerating regular rotation speed of the fan when cooling water temperature rises, thus stable engine performance is exerted even under heavy load such as high speed rice reaping.



**New automatic height control for reaping**  
Since up-and-down of reaping part is automatically adjusted by ground contact sensor that detects ground unevenness, penetration of reaping part can be prevented, providing higher efficiency of reaping operation.

**Safety device for paddy rice supply by hand**  
Since feed chain is switched to low-speed drive state by lever operation for starting hand supply operation, the work of paddy rice hand supply to the thresher can be done easily. Further, power transmission to feed chain is disconnected instantly together with the engine stop by pushing an emergency stop button located near the start edge of feed chain, safety of hand supply operation is enhanced.

Also, we added to the line up easy to use, light and compact 5/6 row combine harvesters “Japan H6098/5098” that have succeeded the high precision/high efficiency/high durability of “Japan” Series. They are equipped with “safety device for paddy rice hand supply (HST-type)” and “free grain recovery chamber”.

**Feed chain synchronizer**

Since it is driven by dedicated HST and controls variable transmission continuously by synchronizing the HST to the vehicle speed, it stabilizes posture of the paddy rice which is relayed from reaping device to feed chain, resulting in reduced occurrence of threshing loss and straw waste.

**Grain recovery chamber**

Grain recovery chamber is installed in the rear part of threshing drum to recover grain stuck in waste straw by dropping it to selection shelf. This reduces discharged grain to outside of the machine together with waste straw, increasing recovery ratio of grain.



**Safety device for paddy rice hand supply (HST-type)**

Since HST for feed chain drive is deceleration controlled by lever operation for starting hand supply operation leading feed chain to a low-speed drive state, work of the hand supply to the thresher can be done easily. Further, HST is stop controlled together with the engine stop by pushing an emergency stop button located near the start edge of feed chain, enhancing safety of hand supply operation

Also, we lined up 2/3 row combine harvesters “Frontier N HN” Series which realized labor-saving and high efficiency with easy operation. The machine is equipped with Iseki’s unique zoom auger which provides easy adjustment of discharge position by expanding/contracting the grain discharge auger freely.



**4) Vegetable growing machinery** We developed anew single riding onion transplanters “PVHR4-145S1G/145A1G” for riding semiautomatic vegetable transplanter “PVHR” Series. They are equipped with “hopper cleaner” and “press wheel cover” which allow a single operator to engage in 4 row planting.

**Hopper cleaner**

Adhered mud on the exterior of planting hopper is removed securely by bilateral rubber plates which hold the planting hopper, assisting satisfactory planting.

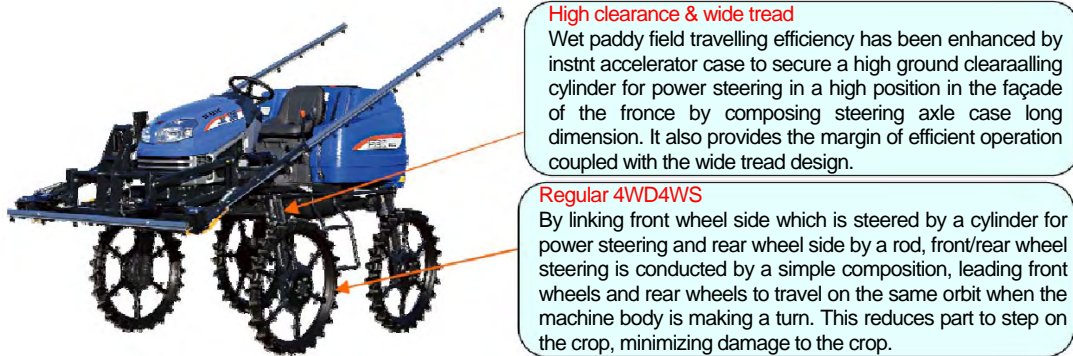
**Press wheel cover**

Adhesion of mud on press wheel cover is prevented by the cover covering side of the press wheel cover, allowing proper planting and repression.

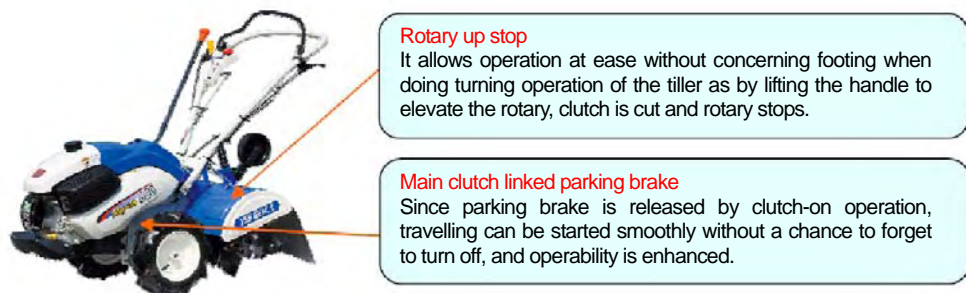




- 5) **Riding pest control dedicated machine** We developed riding pest control machine of a common design for Asia “JKB18” which realized low pricing mainly by positioning driving function of the pest control pump inside of transmission case. Further, it is mounted with a diesel engine of large displacement and equipped with large capacity tank/ large discharge amount pest control pump, “high clearance & wide tread” and “regular 4WD4WS”, allowing efficient spraying operation.



- 6) **Tiller** We developed mini-rotary specialized tillers “KCR653/603/503” which are adoptable from kitchen garden to full-scale farming operation. They are equipped with “rotary up stop” and “main clutch linked parking brake”.



## 2. Product technology related to agricultural machinery

Hereunder, we introduce features of our new products and their incorporated technology regarding agricultural facilities and farm management information system.

- 1) **Agricultural facility** We conduct a joint study with Ehime University on an “agricultural product high-tech production system”, and we developed plant diagnosis system “PD6C” for the first time in the industry as a research result of this industry-academia collaboration.

By photographing with CCD camera chlorophyll fluorescence of plants while autonomously travelling inside of agricultural facilities, which is measured/recorded automatically, growth condition of plants which cannot be recognized by visual observation can be assessed with a high precision, allowing early response to damage due to disease and improvement of cultivation environment.



- 2) Farm management information system** We developed “ISEKI AGRISUPPORT” by which machine controller of tractor or combine harvester is connected with the tablet terminal by radio, and display of information such as operation information and irregular information and memory storage are made. Having functions of “operation control support” and “machine control support”, it supports better farm management of customers.



**Operation control support**

History of fertilizer/chemical application, operation results of each field and history of work processes are recorded in tablet to display on the monitor, and waste of work is eliminated.

**Machine control support**

Since the condition of agricultural machine can be detected easily, it provides smooth inspection and maintenance. It also prevents occurrence of contingency by detailed display of content of the abnormality, thus enabling maintenance of agricultural machinery.

Further, through our collaboration with Fujitsu Ltd., we started services of “ISEKI smart farmers support” which customized production control software “Akisai (Fujitsu’s registered trade mark)” for our company. This system accumulates information including work results, growth information and application results of fertilizer/chemicals on the cloud and analyses, and thus contributes to increase profitability of farm management through our support for improved work plan and streamlining.

**3. Overseas product technology**

Hereunder, we would like to introduce features of our products introduced in overseas markets and the current situation of development, according to each area.

- 1) Europe** As strategic products for further business expansion in Europe, we developed large rear discharge front mowers “SF450/438” for landscaping market for professionals, and small tractor “TM3185” for private agricultural needs and small scale landscape preparation.

Large rear discharge front mowers “SF450/438” provide stable travelling and mowing work even in slopes with their design of low center of gravity that placed the engine in a low position. They also provide highly efficient mowing work with mounted large capacity collector.



Small tractor “TM3185” realized easy travelling in narrow places like a space between trees and under trees with its light weight/compact design of the main body weight of 500kg, which provides enhanced working efficiency. By the light weight design, damage to lawns while travelling can be reduced. With its engine bonnet that can be opened fully, maintenance of the engine area can be made easily.



- 2) North America** We are engaged in development of tractors with enhanced function of the exhaust emission control system.



- 3) **China** Along with a model change of self-detaching type 4 row combine harvester “HF608”, we developed riding pest control dedicated machine “JKB18” of a common design for Asia. In addition to Iseki’s unique twin eight threshers, the self-detaching type 4 row combine harvester “HF608” is newly equipped with a grain recovery chamber, having enhanced grain recovery efficiency. Also, we lined up anew grain tank specification model. It is equipped with a grain discharge auger with a larger turning/rise and fall range, allowing enhanced efficiency of grain discharging work.



Riding pest control dedicated machine “JKB18” realized low pricing mainly by positioning driving function of the prevention pump inside of transmission case. Traveling efficiency in wet paddy fields has been improved by its high clearance design. Also, working environment can be improved by optional installation of anti-scattering plates which prevents chemical drifting to the operator.



- 4) **Korea** We developed sweet potato transplanter “PVH1-70PBLGE16” which enabled planting in inter-plant spacing of 19 cm peculiar to Korea. It is able to water directly to seedlings in the earth with its transplanting claw which also serves as watering nozzle, promoting root taking of seedlings. It also helps satisfactory planting with its equipped scraper that removes mud adhered to the transplanting claw.



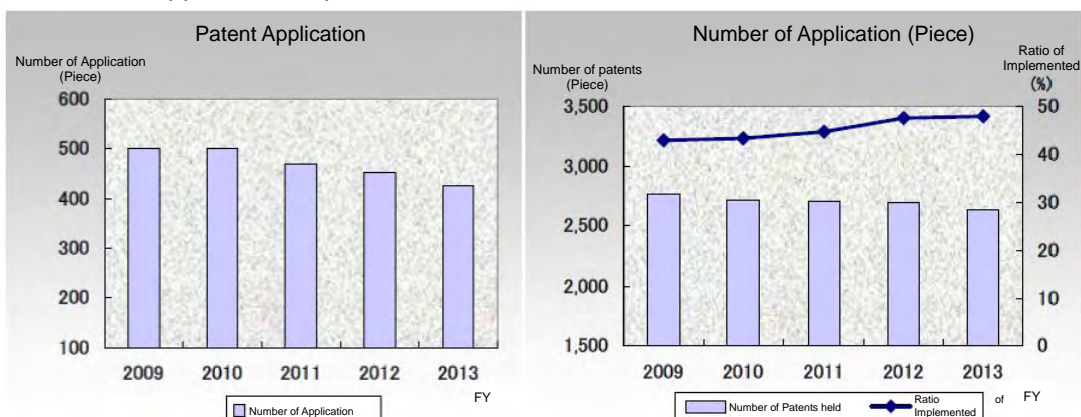
- 5) **Taiwan** We are developing large tractors/rice transplanters/combine harvesters with high efficiency/durability.  
 6) **ASEAN** We are developing high durability agricultural machinery which are low-priced and suitable for working conditions and field conditions peculiar to each country.

## 6 Situation of Intellectual Property

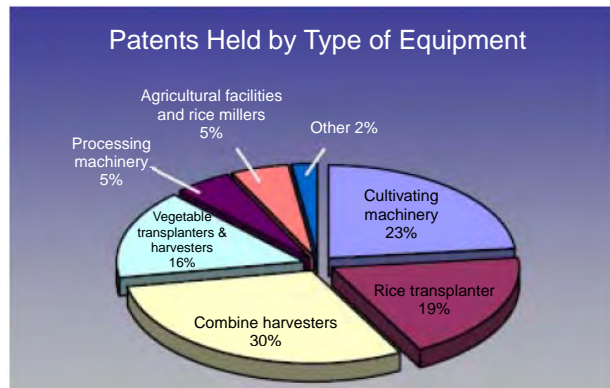
### 1. Patents Held

#### 1) In Japan

We make application of inventions that are strictly screened by our internal regulations and the evaluation criteria in a proactive manner, trying to acquire and build up effective patent rights, which reached approx. 2,600 patents as of the end of March, 2014.

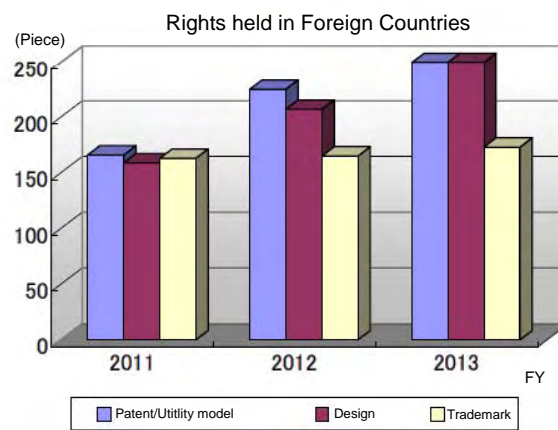
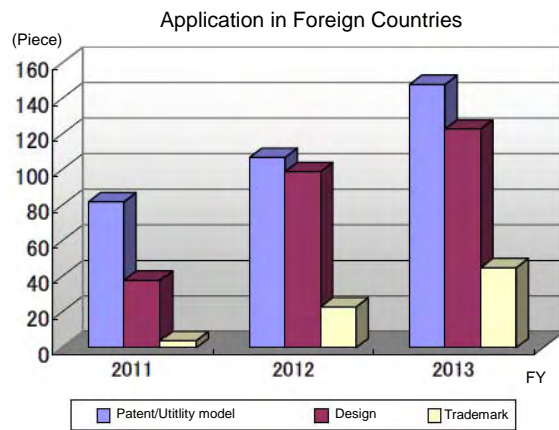


As of March 31, 2014, the number of patents held for our three major product categories (cultivating machinery, rice transplanters and combine harvesters) as well as vegetable transplanters & harvesters accounted for 88% of the total patents held.



## 2) Overseas

We are making applications for carefully selected intellectual property to Europe, USA and Asian nations including China/ASEAN. The number of intellectual property rights held is on the rise every year. In particular, we make aggressive applications of our design and trade marks in the Asian countries in order to eliminate imitation and mockery.



## 2. Patent Assessment Ratio and Applied For

Iseki has maintained high patent assessment ratio every year. And it has been ranked high being top in all industries between 2004 and 2010, the second in 2011 and the first in 2012 and 2013.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Patent assessment ratio	84.6%	83.7%	90.4%	89.3%	85.8%	88.5%	91.8%	91.8%	94.7%	97.0
Rank in all industries	First	First	First	First	First	First	First	Second	First	First

Patent assessment ratio = Number of decision to patent grant / (Number of decision to patent grant + Number of decision of refusal + Number of withdrawals or abandonment)

\* Number of withdrawals or abandonment = The number of applications withdrawn or abandoned after notice on the reason of rejection.

In the agriculture and fishery sector among the sectional list of public patents in Japan, Iseki has been ranked top for 7 consecutive years from 2000 to 2006, followed by the top rank in the “other special machinery sector” for 6 consecutive years from 2007 to 2012 when the sector was reclassified. This means top ranking for 13 consecutive years.

Sector	Agriculture and fisheries							*The other special machinery						
	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Rank	First	First	First	First	First	First	First	First	First	First	First	First	First	First

\* Since the 2009 edition, the sector classification has been changed, and agriculture and fisheries were included in [the other special machinery sector].

(Patent Administration Annual Report 2002 edition – 2014 edition)

## 7 Awards and Recognitions

### 1. History of Awards

Iseki has produced a long list of prize-winning technical experts who have received national decorations, national medals of honor, citations as contributor to scientific technology, citations for inventions, official commendations by the Minister of Education, Culture, Sports, Science and Technology, official commendations by the Agricultural Machinery Academy for their contribution to the development, improvement and commercialization of agricultural machinery technology. In 1952, Kunisaburo Iseki, founder of Iseki received a national prize for invention from the Japan Institute of Invention and Innovation.

In 1993, Iseki was awarded the Chairman's Prize to Commemorate a Century of Agricultural Experimentation and Research (jointly sponsored by the Ministry of Agriculture, Forestry and Fishery and the Association to Commemorate a Century of Agricultural Experimentation and Research) in recognition of our development and diffusion of head-feeding combine harvesters equipped with automatic threshers of which commercialization was achieved by Iseki for the first time in Japan.

In 2008, Iseki received the "Meritorious Award for Intellectual Property" (Award for Excellent Enterprises Active in the Industrial Property Rights System, Commissioner of the Japan Patent Office Award) in recognition of our traditional management of placing importance on intellectual property rights.

Iseki received excellent awards for in FY2010, 2011 and 2013 in the R&D/New Technology Division of FOOD ACTION NIPPON AWARDS sponsored by the Ministry of Fishery, Agriculture and Forestry.

In 2013, Iseki's tractor GEAS NTA received Development Special Award of development awards sponsored by the Japanese Society of Agricultural Machinery and Food Engineers (Old Agricultural Machinery Society) in addition to excellent award of FOOD ACTION NIPPON AWARDS.

### 2. Awards for Invention

Iseki has received award from the public utilities corporation, the Japan Institute of Invention and Innovation every year, and to date, 200 awards including 18 national awards have been received. The frontier spirit of the founder towards research and development has been succeeded consistently, which created tradition within the Company to create new technology with practical value through intellectual and creative activities.

#### 1) Details of Awards

Number of Award-winning Inventions 200 (As of March 31, 2014)	
○ National Awards for Invention 18	
National Awards for Invention	1
President's Award of the Japan Institute of Invention and Innovation	1
The Asahi Shimbun Award	1
National Awards for Invention	2
Invention Awards	14
○ Regional Awards for Invention 182	
Encouragement Award of the Minister of Education, Culture, Sports, Science and Technology (Former Encouragement Award of the Director-General of the Science and Technology Agency)	9
Encouragement Award of the Commissioner of the Japan Patent Office	5
Award of the Director-General of the Regional Bureau of International Trade and Industry (Award of the Director-General of the Shikoku Regional Bureau of International Trade and Industry)	8
Encouragement Award of the President of the Japan Institute of Invention and Innovation	7
Encouragement Award of the President of the Japan Patent Attorneys Association	4
Total	33
Award of the President of the Ehime Institute of Invention and Innovation ( District Head Award)	13
Outstanding Invention Awards etc.	37
Invention Encouragement Awards	98
Investment Encouragement and Merit Award	1

#### 2) Fiscal Year 2013 Shikoku Region Invention Award

President Award of Ehime Prefecture Institute of Invention and Innovation

Patent No.4983788      Transmission control device of tractor

Invention Encouragement Prize (3 awards)

Patent No.4635547      Operation device of planting part of riding rice transplanter

Patent No.5046140      Selective wind control device of thresher

Patent No.3489238      Subtraction display of cast coin amount of rice polisher



### 3. FOOD ACTION NIPPON AWARDS

Iseki Group participates in FOOD ACTION NIPPON Headquarters established in MAFF as the first registrant, contributing to improved food self-sufficiency.

Iseki has received the award for excellence for two years in a row in the R&D/New Technology Division of FOOD ACTION NIPPON AWARD in FY2011 for the development of the first in the industry, 7 row harvesting combine harvester “HJ7120” to follow the “sparse planting rice transplanter” in FY2010, and “First in the Industry! Development of [Far-infrared rays grain drying machine]” won an award in 2012. Further, in 2013, “Agricultural machine that can be driven with a feeling of a car, which increased efficiency of farm working” of our tractor GEAS NTA received excellent award. With this, three major machine types attained entry in the awards. This represents a high evaluation of our technical competency, and we will support low cost agriculture towards further improvement of the food self-sufficiency ratio, exerting this technical competency.



### 4. Development Award of the Japanese Society of Agricultural Machinery and Food Engineers

Our tractor GEAS NTA received honorable “Development Special Award” in the development awards sponsored by the Japanese Society of Agricultural Machinery and Food Engineers, being recognized as the most excellent development.

New technologies such as “dual clutch transmission” mounted on the tractor GEAS NTA which realizes high power transmission efficiency, “accelerator transmission” and “no clutch stopping mechanism” which provide driving feeling of automatic driving of a car which are also friendly to aged persons and women were recognized as having contributed to security/safety of farm work. This award means that Iseki’s contribution to the Japanese technical development of agricultural machinery and food engineers has been highly regarded, and this resulted in double awards together with the excellent award of “FOOD ACTION NIPPON AWARDS 2013”. These awards are evidences of a high evaluation received by the Tractor GEAS NTA both “academically” as well as “product marketability”.

We were awarded the most authoritative award in the industry in the year that marks the 90<sup>th</sup> anniversary next year .

We are determined to continue to strive for development of “products satisfied by our customers”.



## 5. History of Main Awards for R&D

Awarded Fiscal Year	Name of Awards	Details of Awards/Object
1952	National Awards for Invention, Special Award	Automatic wind power control device of revolving thresher
1954	National Awards for Invention, Invention Award	Automatic rope slant control device of rice huller Banseki
1956	National Awards for Invention, Invention Award	Second processing device of self-feeding thresher
1959	National Awards for Invention, President's Award of the Japan Institute of Invention and Innovation	Feeding device of thresher
1960	National Awards for Invention, Special Award	Rice plant mover with binding device
	National Awards for Invention, Invention Award	Rice break preventive device of self-feeding thresher
	Regional Awards for Invention, Encouragement Award of the Director-General of the Science and Technology Agency	Second slot delivery machine to install to thresher
1961	National Awards for Invention, Invention Award	Second slot delivery machine to install to thresher
1962	National Awards for Invention, Invention Award	Rice huller
1963	National Awards for Invention, Invention Award	Suction selection type thresher
1964	National Awards for Invention, Invention Award	Rice huller
1966	National Awards for Invention, Invention Award	Power transmission device of power tiller
1968	National Awards for Invention, Invention Award	Crimp net frame removal device of thresher
	National Awards for Invention, Invention Award	Pressure control grouping device of reaping binder
1969	Regional Awards for Invention, Encouragement Award of the Commissioner of the Japan Patent Office	Reaping thresher
1970	National Awards for Invention, Invention Award	Reaping thresher
	National Awards for Invention, Invention Award	Tilling device of power tiller
1975	Regional Awards for Invention, Encouragement Award of the Commissioner of the Japan Patent Office	Rice planting device of rice planter
1976	Regional Awards for Invention, Encouragement Award of the Director-General of the Science and Technology Agency	Rice feeding device of rice planter
1978	Regional Awards for Invention, Encouragement Award of the Director-General of the Science and Technology Agency	Traveling device of rice planter
1979	National Awards for Invention, Asahi Shinbun Award	Traveling device of rice planter
	Regional Awards for Invention, Encouragement Award of the Director-General of the Science and Technology Agency	Grain haulm transfer device of combine harvester
1981	Regional Awards for Invention, Encouragement Award of the Commissioner of the Japan Patent Office	Reaping portion vertical position control device of harvester
1982	Regional Awards for Invention, Encouragement Award of the Director-General of the Science and Technology Agency	Traveling device of rice planter
1983	Regional Awards for Invention, Encouragement Award of the Director-General of the Science and Technology Agency	Planting device of rice planter
1985	National Awards for Invention, Invention Award	Seedling raising method
1993	President's Award of A Century Commemorative Society of Agricultural Testing and Study	Development and diffusion of self-reaping combine harvester
1998	Regional Awards for Invention, Encouragement Award of the Commissioner of the Japan Patent Office	Rice transplanter with fertilizing device
	The Japanese Society of Agricultural Machinery, Mori Technical Award	Research concerning development of hydroponic seedling raising and transplanting technology of wet rice
2000	Regional Awards for Invention, Encouragement Award of the Director-General of the Science and Technology Agency	Transmission device of speed-change gear of combine harvester
2002	Regional Awards for Invention, Encouragement Award of the Minister of Education, Culture, Sports, Science and Technology	Transplanter
2003	National Awards for Invention, Invention Award	Transplanter
	Regional Awards for Invention Encouragement Award of the Commissioner of the Japan Patent Office	Agricultural work machine
2004	The Japanese Society of Agricultural Machinery, Kansai Branch, Technical Development Award	Development of air emission system of small size general purpose combine harvester
2005	Encouragement Award of the Minister of Education, Culture, Sports, Science and Technology, Development Division, Science and Technology Award	Development of high performance riding type rice transplanter
2006	The Japanese Society of Agricultural Machinery, Academic Award	Research on wind selection of gain by combine harvester
2008	Intellectual Property Merit Award, Award for Excellent Companies utilizing Industrial Property Rights, Award of the Commissioner of the Japan Patent Office	Patent utilizing excellent company
	Regional Awards for Invention Encouragement Award of the Minister of Education, Culture, Sports, Science and Technology	Speed-change control system of powered vehicle
2010	FOOD ACTION NIPPON Awards 2010, R&D/New technology, Excellent Award	Sparse planting rice transplanter
2011	FOOD ACTION NIPPON Awards 2010, R&D/New technology, Excellent Award	Development of industry's first 7 lane reaping combine harvester "HJ7120"
2012	Regional Awards for Invention Shikoku Bureau of Economy, Trade and Industry Bureau Head Award	Fertilizer air emission system fertilizing machine
	FOOD ACTION NIPPON Awards 2012, R&D/New technology, Excellent Award	FOOD ACTION NIPPON Awards 2013, R&D/New technology, Agricultural machine that can be driven with a feeling [Excellent Award] Development of [Far-infrared rays grain drying machine]
2013	FOOD ACTION NIPPON Awards 2013, R&D/New technology, Excellent Award	Agricultural machine that can be driven with a feeling of a car which increased efficiency of farm work (Tractor GEAS NTA)
	Development Award of the Japanese Society of Agricultural Machinery and Food Engineers (Old Agricultural Machinery Society) Development Awards, Development Special Award	Developed product "Tractor GEAS NTA"

## 8 Information on Legal Actions Related to Intellectual Property

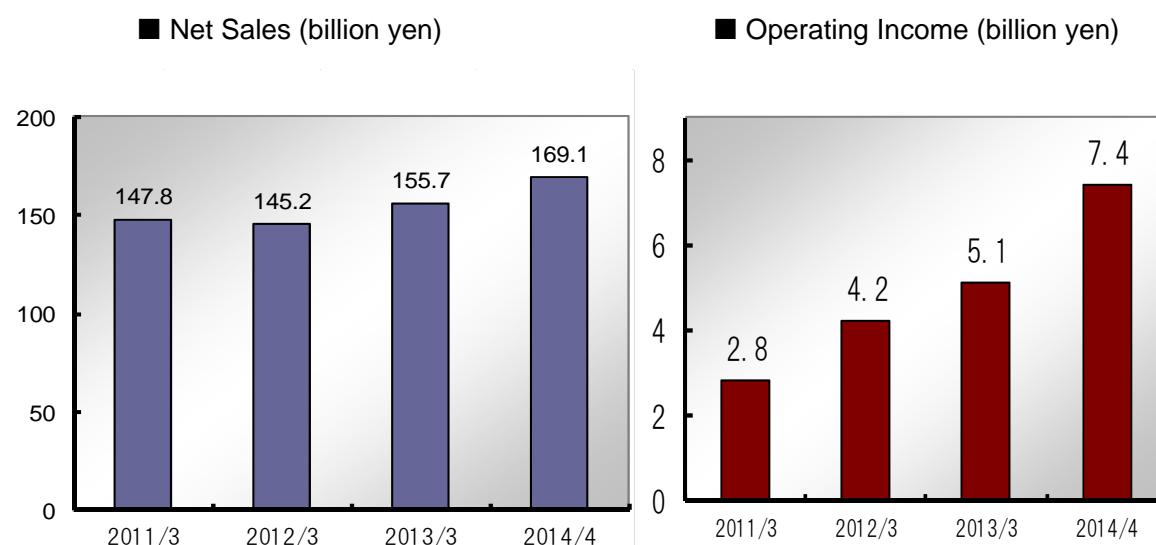
There is no suit at issue related to intellectual property rights which could affect our management in or outside the country. In promoting our business and R&D, we will implement intellectual property strategies steadily with the greatest of care.



## Corporate Data

<b>Company Name</b>	ISEKI & CO., LTD.
<b>Head Office</b>	700 Umaki-cho, Matsuyama, Ehime , Japan
<b>Tokyo</b>	3-14, Nishi-Nippori 5-chome, Arakawa-ku, Tokyo, Japan
<b>Headquarters</b>	
<b>Foundation</b>	August 1926
<b>Paid-in Capital</b>	23,344 million yen (as of March 31,2014)
<b>Employees</b>	Consolidated: 6,295 (as of March 31, 2014)
<b>Principal Business</b>	ISEKI'S principal business is the manufacture and sale of following products Cultivating machinery .....Tractors, Tillers, Riding Cultivators, Mowers Planting machinery.....Rice transplanters, Vegetable transplanters Harvesting machinery.....Combine harvesters, Binders, Harvesters Processing machinery .....Rice hullers, Dryers, Rice polishers, Rice Graders, Vegetable harvesting and Processing Machinery Others .....Farming implements, Repair parts, Agricultural facilities

### Trend of Business Performance





**For further information, please use the following contact points.**

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