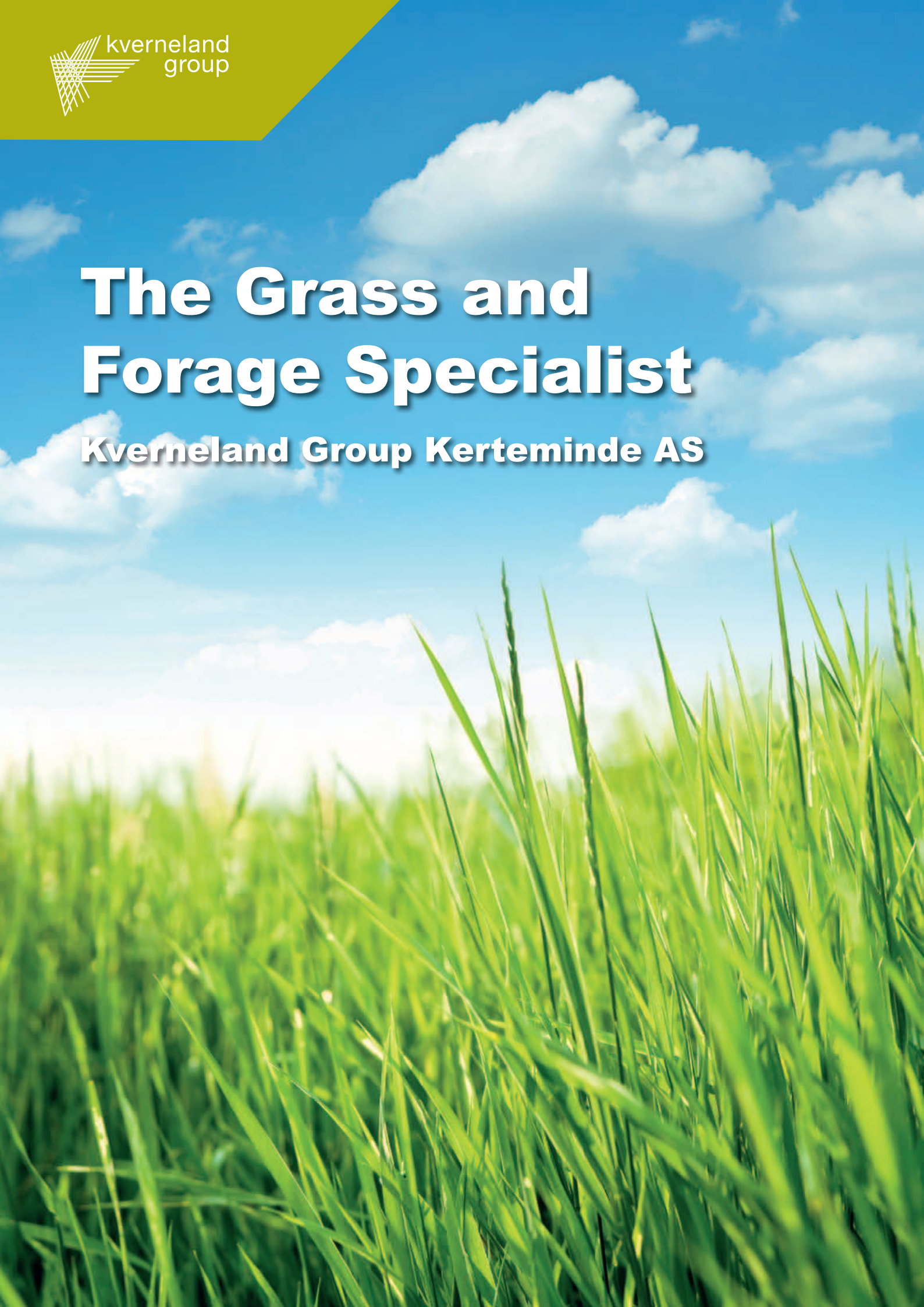
kverneland group

The Grass and Forage Specialist

Kverneland Group Kerteminde AS



Extensive Growth in Kerteminde

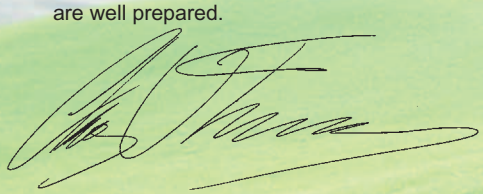
Competence Centre for Forage Equipment
During recent years, Kverneland Group Kerteminde has seen enormous growth. Today, Kerteminde is the headquarters of the Grass Division within Kverneland Group. This means that we cover the entire value chain for forage harvesting.

Global Leader with a Customer Focus
Kverneland Group Kerteminde is truly an internationally oriented company, with more than 95% of the turnover represented by exports to more than 80 countries around the world. With a Danish domestic market of only 5 million inhabitants, we regard the whole world as our home market, and this is also reflected in our product development.

Future Growth Strategy in Kerteminde
- Strengthen our position within the entire value chain of forage harvesting.
- Intensive focus on research and development.
- Optimise production processes and flexibility.
- Continuous investment in manufacturing facilities.

Our product development is based on customer insight. More accurate development is enabled by understanding our customers' needs as well as how they think, feel and behave when they use our products. We develop products offering appropriate functions, efficient processes and attractive design. New concepts and machines are thoroughly tested around the globe in close cooperation with our customers.

The Course is Set
We want the success of recent years to continue, and the target is to convert the factory in Kerteminde into one of the most modern grassland factories in Europe. This is a position that will be achieved through intensive investment in modernising and optimising our manufacturing facilities, and not least through intensive product development. And we are on the right course. During recent years, major investments have been made to increase capacity, flexibility and quality control. At the same time, up to 75% of our product range has been renewed. The future is set for growth in Kerteminde and we are well prepared.



Claus U. Thomsen
Managing Director
Kverneland Group Kerteminde AS

Firmly Rooted within Agriculture

It all began in 1877 in the village of Taarup outside Kerteminde in Denmark, when a smithy was opened by Hans Simon Larsen. Mr Larsen was a skilled craftsman and a man of enterprise, and he soon produced the very first Danish row cultivator.

1877

1911

The single-row cultivator proved to have an incredibly long lifetime, and rapidly became popular with farmers all over the country. Mass production begins, and gradually a nationwide dealer network is established. In 1915, the company moves to the town of Kerteminde.

1911

The high volume requires an expansion of the plant, and in 1954 the company decides to build a whole new 1600 m² factory at the premises where the factory is still based today. Kerteminde starts up its export business.

1954

1957

Kerteminde receives its licence from the USA to manufacture the forage harvester, later to become so well known. The first forage harvester, Taarup S-1500, is produced in 1957, and this marks the start of a period of unbelievable growth.

From being a manufacturer mainly supplying Danish farmers, Kerteminde now develops into a global company, exporting to all corners of the globe. The product range is massively expanded with more complicated machines, such as the Unidry drying system, precision chop foragers and pick-up wagons.

1965

1968

1968

Kerteminde introduces its first disc mower, the Taarup TS 1650, with a working width of 1.68 m and four round discs.

Starting in the village of Taarup more than 135 years ago, Kverneland Group Kerteminde has played a prominent role in the mechanisation of agriculture worldwide. The products from Kerteminde are known globally, and Vicon and Kverneland Taarup are some of today's most popular brand names within forage harvesting products.

Kerteminde is the first manufacturer to combine a disc mower with a conditioner. With the Taarup TSC 2100, the mower conditioner concept is born. This is a new and more efficient system that both cuts and wilts the crop in one pass.

1974

During 1983 Kerteminde plans and executes a substantial 10.000 m^2 addition to the factory. At that time the biggest current building project in Denmark in terms of construction area and the 17th factory expansion since the opening in 1954.

1983

Kerteminde introduces the first mower conditioner with a swath belt. Larger foragers demand larger swaths, so Kerteminde introduces a swath belt solution, placing two swaths alongside each other. The swath belt is still a very popular solution.

1984

Maskinfabrikken Taarup is taken over by Kverneland Group, and the brand name Taarup is gradually phased out. The product range is incorporated into the Kverneland product range, now in red and green colours.

1993

Kerteminde is among the very first to introduce an entirely new concept within mowing. With the triple-mower or butterfly concept, a massive 9 meter working width is achieved using a front- and two rear mounted mower conditioners.

2002

Kverneland Group achieves full control of Gallignani SpA and renames it to Kverneland Group Ravenna S.r.l.

2012

Extended Capacity and Optimised Production Processes
Kverneland Group Kerteminde has taken the next step in an ambitious plan to upgrade production facilities, preparing the factory for future demands. During the last 5 years, heavy investments have been made, to increase capacity and flexibility and to secure premium quality. Substantial investments still lie ahead. The aim is to position the Kerteminde factory as one of the most modern grass equipment production facilities in Europe.

It is important to retain core competences at the factory in order to ensure full control of both quality and delivery performance. This is why large-scale investments are being made to optimise these areas. Substantial investments have already been made in new production systems, automation of processes using robot technology, as well as new laser cutters. At the same time, the LEAN philosophy is gradually being introduced, in order to optimise production flow and facilitate swift adaptation to changes in market demands.

Decision are Taken on the Floor
Production itself is divided into three autonomous flow teams. Each has its own local management, including a planner, purchaser, production manager and order desk employee.

- Flow 1: Mounted mowers and mower conditioners.
- Flow 2: Trailed mower conditioners and BX equipment.
- Flow 3: Bale choppers and rotary tedders.

Flow team management is located at the assembly lines, where new offices have been set up. As a result, decisions are taken close to production itself, and the management team are able to monitor the processes constantly. The chain of command is very short, and any necessary adjustments can be quickly implemented. The wage system is partly bonus based and is set up to support the requirements for quality, efficiency and delivery performance.

Flow Team Setup
- Planner
- Purchaser
- Production Manager
- Order Desk

Wage System
- Payment by results based on delivery performance, quality and productivity
- Qualification wage based on skills, flexibility, responsibility and experience
- The base wage is the same for all employees

Securing Our Future through Massive Investments

1 2

Cutterbar Production and Assembly

This is where the heart of every mower and mower conditioner is made. Kerteminde has manufactured the fully welded cutterbar since 1990, and all stages of the production take place at the factory. This ensures full control over each process and maintains the unique Kverneland design. A high degree of automation is vital, which is why a new layout for the cutterbar housing production facility was installed in 2007. The cutterbars are tested several times during production to ensure uniformly consistent quality. A detailed test report is prepared for every single cutterbar.

3

Laser Cutting and Machinery Department

Four laser cutters and the newly installed high-speed fiber laser are operated constantly in three shifts to keep up with demand. Each laser cutter is capable of handling plates of up to 2 x 4 m with a thickness of 20 mm. A large proportion of the components for the completed machines are fabricated in the machinery department, where a high degree of flexibility enables quick changes in production if market demands should change.

4

Robot Welding

Several welding robots are in operation at the factory. Each robot is equipped with two workstations to ensure efficient utilisation of capacity. While one object is being welded, a second one is being prepared, which means that the robot is working non-stop. Another system used is FMS (Flexible Manufacturing System) welding, where the conveyer feeding the robot is loaded with different objects, which the robot is able to identify via bar codes. This ensures welding adapted to each individual object. One of the more specialised solutions at the factory is the drum-robot used for the conditioning rotor. This fully automatic robot welds the flaps for each conditioner finger onto the rotor and is capable of handling objects of up to 4 m.

5

Powder Paint

Before assembly on the assembly lines, a thick layer of protective powder paint is applied to the machines. The parts are hung on a 350 m long conveyer belt, and before they reach the powder paint cabins they are sand blasted, cleaned and zinc phosphated thoroughly, effectively removing all dirt, grease and impurities. Three different colours of powder paint can be applied to the parts – red, grey and green, depending on which brand they are intended for. The powder paint is hardened at 200°C, ensuring an excellent finish for the new machines. The time taken from the parts being hung on the conveyer belt until they are processed and ready for assembly is approximately 3 hours.
A completely new paint line for thin material plates has been installed in 2013 to cope with the increasing demand and production volume.

Effective Flow in the Entire Production Process

6

Assembly

The assembly areas are divided into four sections: Mounted mowers and mower conditioners; trailed mower conditioners and BX equipment; bale choppers, and rotary tedders. The brand new assembly hall dedicated to mounted mowers and mower conditioners is divided into five assembly lines. Two lines are dedicated to mower conditioners and the remaining three to mowers. The keyword is flexibility, making it easy to switch production capacity between the different lines, to ensure a rapid response to changes in market demands.

7

Shipment

This is where the assembled machines and equipment are sent to destinations around the globe. More than 40 trucks are loaded daily during the peak season. Machines destined for Europe are delivered via trucks, while machines for customers in overseas markets such as the USA, Japan and Australia are shipped in 40-foot containers. More than half of the machines leaving Kerteminde are assembled to order, which means that the finished machines are transferred directly from assembly to shipment.

Facts about Kverneland Group Kerteminde

- Headquarters for the Kverneland Grass Division
- Founded in 1877
- 50,000 m² roofed facilities - 100,000 m² land
- 350 employees
- Brands: Kverneland Taarup and Vicon plus private label production for Deutz-Fahr (mowers, rakes, tedders and loader wagons)
- Competence centre in Gottmadingen, southern part of Germany, responsible for product development of rakes, tedders and loader wagons.

Creating Value
Through Innovation

Innovations Lead the Way

Research and development is a vital fundament for all of us at Kverneland Group Kerteminde, and we constantly strive to create value for our customers by optimising and developing new products, concepts and manufacturing methods. The development of new solutions is based on the challenges that our customers face in their everyday work. Good ideas often spring from a single mind, but it takes a cross-disciplinary team effort to make them a reality and translate market demands into effective product strategies.

At Kverneland Group Kerteminde the R&D department, product management and manufacturing work closely together with our customers when developing new machines and concepts. All new machines are thoroughly tested in collaboration with farmers and contractors around the world to ensure the right quality and design.

An understanding of new market trends and the possibilities of new technologies has always been a key factor when developing new Kverneland Taarup and Vicon implements. We have a proud history of being the first on the market with new concepts.

Strong and Up-to-Date Product Range

Our product range clearly demonstrates that we 'walk the talk'. The pace of product renewal at Kerteminde in the past few years has been exceptionally high. Since 2008 more than 75% of the product range has been renewed, which ensures one of the strongest and most up-to-date product portfolios in the market. With very few exceptions, the complete range of mowers and mower conditioners has been renewed and completely new models have been introduced. At the same time, Kverneland Group Kerteminde has entered into new product segments through the acquisition of the new transport and loader wagon programme in 2009.

And there are more new products in the pipeline. Never before have we invested so many resources in research and development, enabling us to continue to supply the most efficient machines for the most economically viable processes within forage harvesting.

Active in All Parts of the Value Chain

The Forage Specialist
Kverneland Group offers one of the broadest and most attractive product ranges within forage equipment. The extensive range covers the entire value chain within feed production. The product range includes disc mowers, mower conditioners, tedders, rakes, bale choppers, diet feeders, loader wagons, balers and bale wrappers.

Two Strong Product Brands
The Kerteminde product range is marketed under the two well-known brand names Vicon and Kverneland Taarup, each with their own profile and identity. In addition, Kerteminde produces disc mowers, tedders, rakes and loader wagons as private label products for Deutz-Fahr.


ry Rakes
Balers
Bale Wrappers
Loader Wagons
Feeding
Optimum
Feed Ration

A Complete Range of Mowers and Mowers Conditioners

With the extensive product development that has taken place during recent years, Kverneland Group is able to offer an exceptionally comprehensive, fully updated, array of mowers and mower conditioners, designed to fulfil any need within the modern farming community.

More than 35 unique machines are offered in the two brands Vicon and Kverneland, stretching over working widths of 1.65 – 9.5m.





Mowers
Mower
Conditioners
Rotary Tedders
Rotary Rakes
Balers
Bale Wrappers
Loader Wagons
Feeding
Optimum
Feed Ration

We Help Protect Your Business, From the Ground Up

The experience gained through almost 50 years within rakes and tedders has created the opportunity to benefit from a fully proven technology base, when designing machines capable of performing in even the toughest of conditions.

Kverneland Groups tedder and rake range is suitable for all sizes of operations and any requirement, with 14 tedders and 19 rake models offered in both Vicon and Kverneland, in working widths ranging from 4.6-13.3m and 3.2-15.0m for tedders and rakes respectively.





Mowers
Mower
Conditioners
Rotary Tedders
Rotary Rakes
Balers
Bale Wrappers
Loader Wagons
Feeding
Optimum
Feed Ration

We Carry the Baler Culture with Us!

Kverneland and Vicon balers and bale wrappers incorporate knowledge accumulated during more than 50 years in the baler business. This brings you an assurance of reliable operation, even in the toughest working conditions.

Highly competent and experienced people form the cornerstones of the unique knowledge base around balers and bale wrappers within Kverneland Group. An extensive range of 17 balers, 3 baler-wrapper combinations and 9 bale wrappers is offered.





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Feed Ration

Wagons and Feeding Equipment – The Final Links in the Chain

Kverneland Group is firmly positioned as one of the leading full line suppliers within the forage business. To complete the process from mowing in the field towards feed out, a broad range of transport, loader and silage wagons are offered in combination with a wide array of feeding equipment.

In total 36 different wagons are offered as both Kverneland and Vicon, while the feeding equipment comprises 45 horisontal and vertical auger mixers and bale chopper/feeders.





Mowers
Mower
Conditioners
Rotary Tedders
Rotary Rakes
Balers
Bale Wrappers
Loader Wagons
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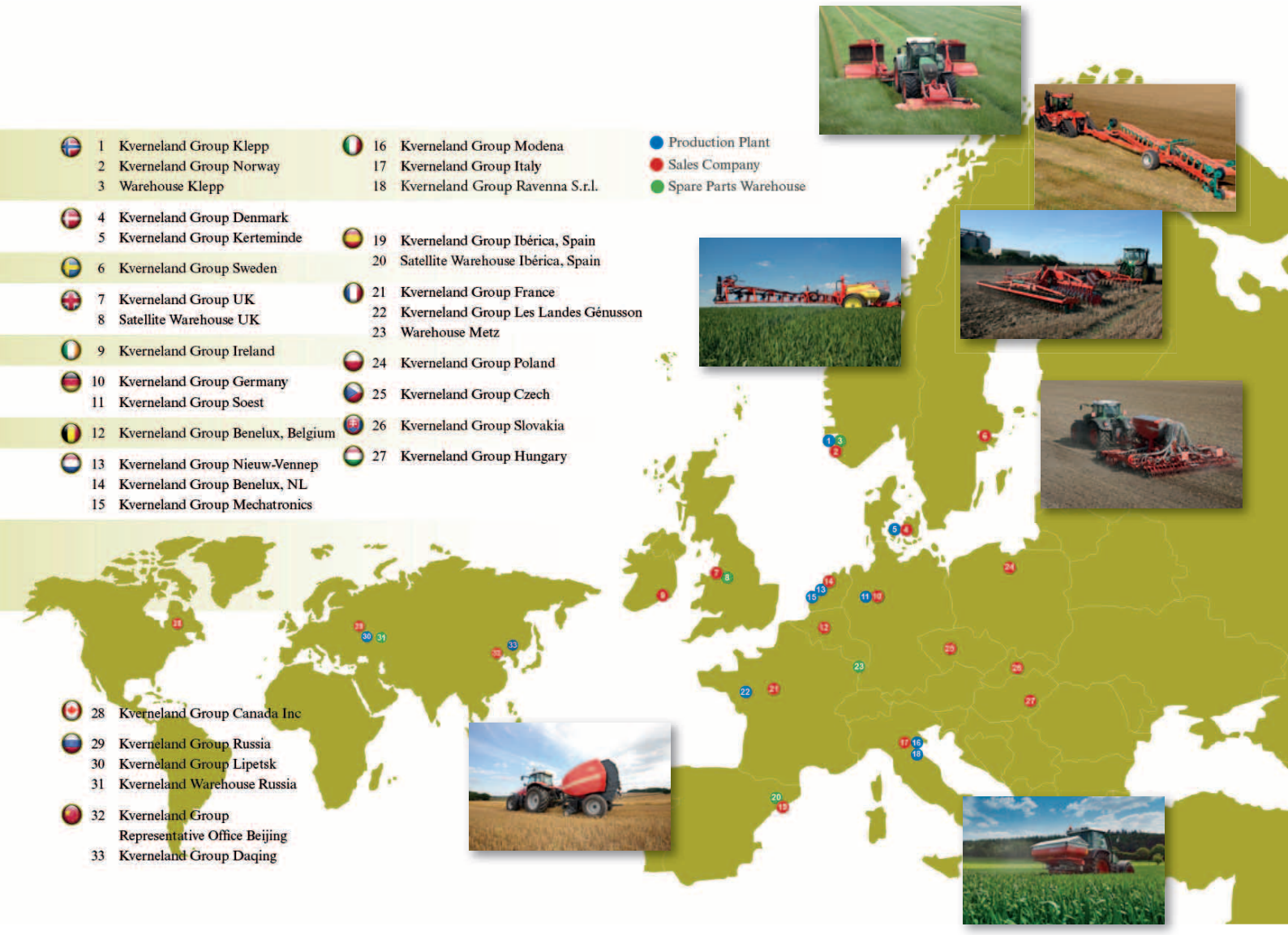
Feed Ration

Kverneland Group
A leading International Manufacturer of Agricultural Machinery

Kverneland Group has a strong global as well as local presence. The Group has its own sales companies in 19 countries and exports to a further 60 countries. The products are produced in 9 factories, all acting as specialised competence centres with production, R&D and product management closely linked. Kverneland Group's factories are located in Norway, Denmark, Germany, France, the Netherlands, Italy and Russia.

Kverneland Group was founded in 1879, has 2000 employees and its headquarters at Klepp near Stavanger, Norway.



Kerteminde

- Disc mowers and mower conditioners.
- Rakes and tedders.
- Diet feeders and bale choppers.
- Loader wagons.

Klepp

- Ploughs.

Soest

- Seed drills.
- Seed drill combinations.

Nieuw-Vennep

- Sprayers.
- Spreaders.

Mechatronics

- Control terminals.
- ISOBUS solutions.

Ravenna

- Balers.
- Bale wrappers.

Modena

- Choppers.
- Rotary tillers.
- Power harrows.

Les Landes Genusson

- Cultivators.
- Disc harrows.

Lipetsk

- Seed drills.

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Kverneland Group

Kverneland Group is a leading international company developing, producing and distributing agricultural machinery and services.

Strong focus on innovation allows us to provide a unique and broad product range with high quality. Kverneland Group offers an extensive package aimed at the professional farming community, covering the areas of soil preparation, seeding, forage and bale equipment, spreading, spraying and electronic solutions for agricultural tractors and machinery.