

# XtraBlatt



**SWITZERLAND**

Majoring in cheese

**NEW-GENERATION  
MECHANICS**

“Workshop Live” at Agritechnica

**40 YEARS**

of round balers from Krone





With some 450,000 visitors from 138 countries, this year's Agritechnica once again reached the record peak of 2015. Most of the visitors from outside Germany came from the Netherlands, Denmark, Austria and Switzerland.





### DEAR READERS,

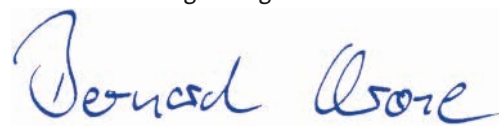
You now hold in your hands the latest edition of XtraBlatt into which our editorial team packs a multiplicity of agricultural themes and aspects. Round balers are in focus this issue, marking 40 years of production by Krone this year. We now offer 27 different models, by far the widest model range in the market. This doesn't represent a luxury for us. After all, as the only specialist with a full range for the forage harvest, it's a matter of course for us to ensure we are able to fulfil the very different requirements in professional harvesting machinery you have as farmers and contractors. It's no surprise that Krone has been market leader in round balers for many years. Indeed, almost every third round baler that's sold in Germany comes out of our factory. We are naturally very proud of this and will celebrate this jubilee right up to the end of the year with a number of sales programmes. Your Krone dealership will inform you about the details.

As to the overall situation in the agricultural and farm machinery sectors, we are currently very confident. The increase in milk prices this year has helped. We've already registered a substantial increase in demand. Grounds for optimism in 2018 also come from the just concluded Agritechnica. However, one aspect we will have to get more accustomed to covers increased fluctuations in agricultural product prices. This includes milk prices. In fact, it especially applies to milk. For this reason, despite

the satisfaction we experience when you invest in our products, I would like to add the caution to all our readers to be more than ever aware of the importance of establishing sufficient financial reserves to keep your business viable when prices turn bad. Perhaps you will utilise the quieter period now lying ahead to consider with your family how you can financially secure your business during the good times, because it's very hard to do so when the situation worsens.

For the coming festive season, I would like to convey our best wishes from here in Spelle to you and your family. I wish all of you a peaceful and blessed Christmas festival and a healthy and happy New Year in 2018.

With sincere greetings from Emsland.

  
Your Bernard Krone

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40 YEARS OF ROUND-BALING

## ROUNDING THE GLOBE

40 years ago, Krone produced its first round baler. Now-days, this manufacturer is number 1 for round baler sales in many lands. We've spoken with Dr. Klaus Martensen, development manager for round balers, large square balers and forage wagons, over the milestones achieved during these four decades.

Title theme:  
40 years round balers  
from Krone

### SCHLÜTTER FAMILY, XANTEN NIBELUNG COWS



The river banks of the Rhine near Xanten form a dedicated nature reserve. This is where Rolf Schlütter and his wife Carmen Müser manage their "Gut Grind" farm with around 270 Limousin suckler cows plus followers. Livestock winter forage features 1700 round bales of silage, hay and straw.

Rolf Schlütter relies on round bales for forage and straw.

### SICHLER FAMILY, GUNZESRIED A ROUND CONCEPT



Farmers in the upland Allgäu region of southern Germany face the challenge of producing milk from small units as efficiently as possible. Clever marketing is also needed. The Sichter family near Sonthofen manages this in an interesting way through extensive management, traditional Alpine Braunvieh cattle and cheesemaking.

Efficient forage  
harvesting in Allgäu



How can it be that a country where rice production plays an important role with cropland generally very scarce is, at the same time, one of the most important markets for self-propelled forage harvesters? Research there by reporters from "traction" magazine solves this puzzle for us.

A recent thinking of agriculture in Japan has partly fields that are used for forage harvesters and more. But this is mostly what you can see on the ground. The northernmost in Japan's main islands. The rice fields are used for forage harvesters. The rice fields are used for forage harvesters. The rice fields are used for forage harvesters.

Forage harvesting  
in Japan

### WORKSHOP LIVE CAREERS IN THE SPOTLIGHT



The aim of creating enthusiasm amongst youngsters for a career as agricultural and construction engineering mechanics was behind the first Agritechnica "Workshop Live" in 2007. From this developed a permanent institution – one that again emphasizes the importance of this theme for the industry, the specialised trade and the end-customers.

Jubilee at Agritechnica:  
10 years "Workshop Live"

### IMPERIAL LOGISTICS PULLING OUT ALL STOPS



The logistics of spare parts supply remains a core competence which Krone keeps under its own management. But for handling merchandising products such as brochures and toys, the agricultural machinery manufacturer relies on logistic specialist Imperial.

From professionals for professionals: spare parts logistic at Imperial

### CONTRACTOR VÖHRINGER FEED FROM THE ALB



The Swabian Alb are upland areas not exactly well known for high yields from field and meadow. However, of greatest importance for farmers is best possible forage quality, making this a priority on the agenda of the Gebrüder Vöhringer Lohnbetrieb GbR in Steingeborn.

The day our reporters have visited the agricultural contractor Vöhringer Brothers is, long before a good 10th of August in the German calendar. All signs, the weather was clear and sunny. From the high hills of the Alb, the sun shined down on the fields. The air was warm. The fields were green. The air was warm. The fields were green. The air was warm. The fields were green.

Contractor Vöhringer relies on forage harvesting technology from Krone.

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INNOVATIONS

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FRANCE

## IN FAMILY HANDS



The Cassin family from Coron near Le Mans run a dairy farm with four family members and one employee. Together, they care for 30 milking cows plus followers. Further growth is the aim.

France: Family Cassin invests in the future

FRANCE

## ALL LENGTHS COUNT



Eight machines, nine headers, chop lengths from 4 to 30 mm: this describes the key points of the OptiMaize concept. At a demonstration in Irèmentines, Krone France showed this technology in field application over two days. OptiMaize goes international.

Kick-off for OptiMaize campaign in France

SERIES: "PREVENTION INSTEAD OF CURE"

## THE QUALITY MUST BE RIGHT



The report on the advisory concept of the "Veterinary practice on Güterstraße" in issue 1-2017 caused resounding reaction from Xtra-Blatt readers. Sufficient reason for taking individual themes from the report and delving deeper into them via a small series. We kick-off on the theme feed quality.

Series: "Prevention instead of cure", part 1: Basic forage quality

SWITZERLAND

## MILK TO CHEESE



From the Bigler family's cow barn one looks over the village of Moosseedorfen near Bern. In the barn itself the visitor looks over 120 cows and a best prospect for a good future with milk. "It's wasn't for the milk price..." says Rudolf Bigler, putting this idyll into perspective.

Cheese brings Swiss dairy farmers best value.

AGRITECHNICA 2017

## INSPIRATIONAL!

The Krone stand in Hall 27 is definitely established as a real magnet for Agritechnica visitors. Guests of all age groups soon found themselves exhilarated by the machinery innovations and all the information on offer. The Krone team sincerely thank all guests for their great interest!



Exhibition review Agritechnica 2017

Agricultural machinery dealerships

## TRADING TRENDS



He is a top expert in this sector having observed and accompanied the agricultural machinery trade over decades. Jürgen Boomgaarden is publisher and chief editor of the magazine "Ellobote", a publication that, week after week, informs the farm machinery branch about latest developments on the market.

How goes the specialist trade? Interview with publisher Jürgen Boomgaarden.

LANDTECHNIK VAN LAAK

## MORE FAMILY SERVICE



For the agricultural and construction machinery specialist firm van Laak in Kalkar, forage harvesting machinery is a definite focal point. A fast and professional service and good customer contact are of the highest importance for the van Laak team.

Since 1990 van Laak has moved through the main part of the van Laak Agricultural and Construction Machinery specialist firm in Kalkar the region's most modern and most complete forage harvester. The most of these great and many new things could have given away the situation. The hall, completely empty but for the sale of this setting, was being demonstrated. "For us, the sales event is just like a working unit, and

Flexible family business: Agricultural and construction machinery van Laak in Kalkar

NEWS-TICKER

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40 YEARS OF ROUND BALING

# ROUNDING THE GLOBE





**40 years ago, Krone produced its first round baler. Nowadays, this manufacturer is number 1 for round baler sales in many lands. We've spoken with Dr Klaus Martensen, development manager for round balers, large square balers and forage wagons, over the milestones achieved during these four decades.**

**XtraBlatt:** The idea for round balers was born in the Krone works in 1977. Godfather at that time was the farmyard manure spreader. How did this fit with the round baler?

**Dr Martensen:** *The inventor and constructor was Wilhelm Ahler, then Krone's manager for predevelopment projects. His idea was to take the chain floor scraper from the Optimat manure spreader and apply it as spike chain in the first-generation KR Krone round balers. Thus, the first fixed chamber machine was created whereby the scraper chain formed bales within an enclosed sheet metal housing. At that time, three models were built, giving bale diameters from 120 cm to 180 cm. Based on this chain spike elevator principle, Krone produced almost 100,000 round balers over a 40-year period.*

**XtraBlatt:** What was used for binding the bales at that time?

**Dr Martensen:** *Hay and straw were the materials baled. Silage wasn't considered then. Binding simply involved a single string of twine and no knotter. Twine was just wrapped round and round and the end left loose, an operation that took several minutes. The first net wrapping came at the end of the 1980s and shortened the binding action to a few seconds.*

**XtraBlatt:** At the end of the 1980s, Krone was also trying out the first non-stop technique ...

**Dr Martensen:** *... that's right. Krone developed a prototype with the KR 160 Non-Stop, although this machine wasn't actually sold. A bunker was fitted in front of the bale chamber for the material that was to be baled and this was conveyed via scraper chain into the bale chamber. The problem with this system was that double the throughput had to be temporarily handled and, through this, bale density was substantially reduced. Additionally, there was no cutter at that time.*

**XtraBlatt:** When did this come into play?

**Dr Martensen:** *That was in 1992. Krone produced at that time the KR 130 S, the first round baler with 14-knife cutter. In principle, this resembled the present standard, i.e. a rotor with bearing-mounted knives above and below. Remarkable here was the absence of a feeder auger in the pickup. Material flow was via the 160 cm pickup straight into the*





140 cm cutter and then into the 120 cm bale chamber. This sort of consolidation behind the cutter rotor would no longer be possible nowadays because of the greatly increased amount of crop material handled.

**XtraBlatt:** Until then, Krone had only fixed chamber balers. When did the variable chamber machines follow?

**Dr Martensen:** In 1991 we presented the KR 8-16, the first round baler with variable chamber of from 80 to 160 cm and cutter. This was also starting shot for the round baler in silage production. It was also the time when the first bale wrapper came onto the market.

**XtraBlatt:** Krone never built solo wrappers but instead concentrated on baler-wrapper combinations. When did that start?

**Dr Martensen:** Back in 1997, Krone was first to manufacture and sell a baler-wrapper combination with the CombiPack 1250 – a 125 cm fixed chamber baler with consecutively activated one-arm wrapper. Both machine and wrapper were entirely developed by Krone in Spelle. At the same time came models with variable chambers from 100 to 150 cm diameter.

**XtraBlatt:** Was the euphoria regarding the success of Krone's baling-wrapping combinations so great that it was almost compulsory to develop a self-propelled version?

**Dr Martensen:** One could say that. In 2000, Krone had developed its self-propelled variable chamber CombiPack 1500 and then constructed and tested it. At that time the success

of the BiG M had without doubt given special encouragement to the idea of a self-propelled round baler.

The machine was powered by a 120 HP Deutz engine, the drawbar replaced by an articulated steering system. Only one model was built, however. The concept finally failed because of the end price.

**XtraBlatt:** Krone had, however, quickly turned to new targets following this trip into self-propelled technology ... such as the Comprima model series ...

**Dr Martensen:** There was a clear requirement: a new generation of round balers was to be developed. One to replace all the models so far – from the KR right through to the CombiPack. The aim was to simplify production. However, it soon became apparent that the initiative didn't meet customer requirements. There was a variety of customer types. And these farmers needed different lines and models of balers. Thus, we wanted a range of different round baler model lines. Nowadays, we can produce these differing models at the same time without problem. In any case, by 2007 a new line had been established – the Comprima. Bale density and throughput were the criteria, with four solo machines and two baler-wrapper combinations. For the new semi-variable principle, Krone won a gold medal at that year's Agritechnica, incidentally a first ever for Krone. Behind the system was a patented combination of fixed and variable chamber with which different diameters of bales could be produced.

**XtraBlatt:** The non-stop idea from the 1980s experienced a comeback in 2011 with the Ultima. What was involved technically?





- 1** Dr Klaus Martensen is Krone development manager for round and large square balers as well as forage wagons.
- 2** For the first fixed chamber round baler, the floor scraper chain from the Optimat manure spreader got a new role as spike chain in the baler, forming bales within an enclosed sheet steel housing.
- 3** A prototype from 2000: the self-propelled Combi-Pack 1500.
- 4** Between 1977 and now, Krone has built almost 100,000 round balers.

**Dr Martensen:** *The Ultima is based on the semi-variable bale chamber with preceding bunker. And this first non-stop baler-wrapper combination on the market won the next Krone Agritechnica gold medal. The difference to the prototype is the cutter rotor. This originated in the forage wagon. During the net wrapping procedure, the rotor packs the preceding bunker full. The pre-packed material is then pressed into the newly emptied bale chamber in a single action which avoids loss of density. We achieve the same bale density as a comparable solo machine, the procedure is continuous and the Ultima so achieves 50% more throughput. With that, we were trend setter at that time.*

**XtraBlatt:** The Fortima was also presented at the 2011 Agritechnica as Vario Pack replacement. Although it wasn't completely new ...

**Dr Martensen:** *Yes. The Fortima variable round baler was based on proven technology through face-lifting the Vario Pack. The design was modernised and the model equipped with the latest electronics. As with the Comprima, the pickup is camless. Two years later there came the Round Pack as Fortima. During the 2012 harvest in eastern Germany, a world record was established with a Comprima F 125 XC achieving a baling performance of 149/hour in a field featuring long continuous swathes of wheat straw.*

*By 2013, the aim of offering professional customers still more performance led to the Comprima X-treme. The innovation here featured more robustness and, in the combination, more throughput performance through faster bale transfer and wrapping procedures. Nor should we, however, forget the Bellima, also introduced in 2011. This is a further development of the KR, the first generation of Krone round balers.*

**XtraBlatt:** Latest development with round balers is wrapping in plastic sheeting. What are the advantages?

**Dr Martensen:** *Krone has had the Comprima with sheet wrapping on the market for two years now. An advantage is that the sheeting lies snug around the bale, keeping bale shape and achieving a very good coverage. Additionally, the procedure allows faster unwrapping, with the only waste the plastic sheet. With frost, for instance, it can be difficult to separate netting from bale surfaces. A negative factor is the high price of sheeting. Despite this, I see the share of plastic sheet wrapping with round baling already at almost 20%, with a strongly increasing tendency. Incidentally, we are the only manufacturer that runs the sheeting though at full width, exactly as with netting, and this reduces sheeting loss.*

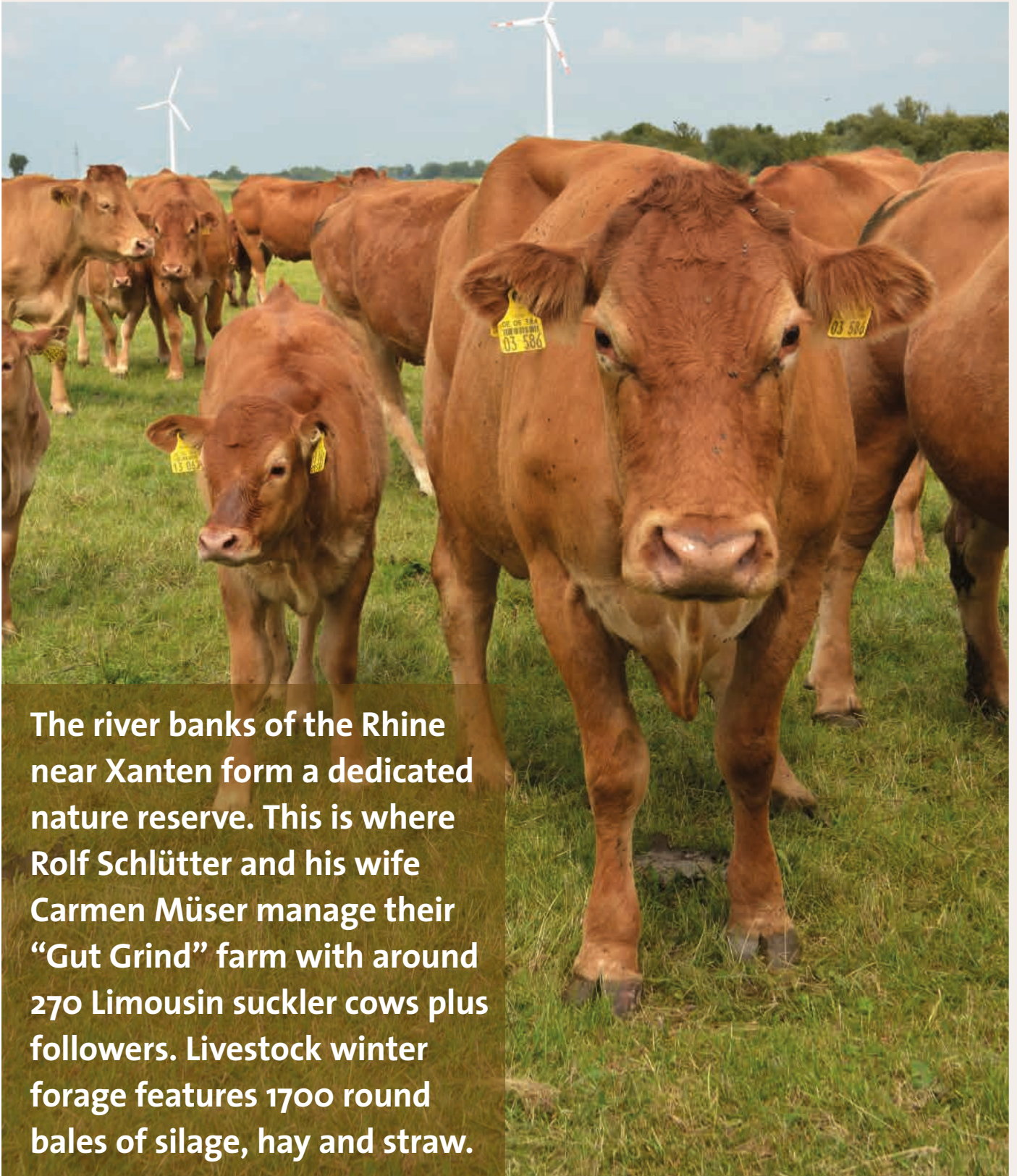
**XtraBlatt:** What trends are developing now? How is it possible to get more performance from balers?

**Dr Martensen:** *The TIM system, i.e. Tractor Implement Management, whereby the implement quasi steers the tractor, continues to offer a lot of potential for relieving the operator and increasing performance. It's also possible to get more throughput from modern headland management solutions. Throughput performance involves driving speed, i.e. performance of pickup and chopper, and knife sharpening once daily or hydraulic blade group control with 26-knife cutter. However, in the same way, more material has to be compressed according to HDP. The question is: does the HDP system pay with round balers? It's my opinion that the trend moves towards compact, robust machines with reduced servicing requirement and reliable performance through the short harvest period." «*



**SCHLÜTTER FAMILY, XANTEN**

# NIBELUNG COWS



The river banks of the Rhine near Xanten form a dedicated nature reserve. This is where Rolf Schlütter and his wife Carmen Müser manage their “Gut Grind” farm with around 270 Limousin suckler cows plus followers. Livestock winter forage features 1700 round bales of silage, hay and straw.



Happy quartet: Carmen Müser, Rolf Schlütter and their children Mats (standing) and Mika.

Anyone leaving the B 57 in Xanten, Lower Rhine, drives past the Archaeology Park between the main road and the town centre. This park includes a Roman museum, harbour temple and amphitheatre: interesting indications of the settlement's long history. A short walk towards the town centre, more precisely to the cathedral, brings us to the nearby Siegfried Museum, opening yet another chapter in the community's history. After all, the world-famous dragon slayer came from Xanten, according to the Nibelung Saga.

North of the B 57, however, the visitor finds a very modern tourist attraction in the suburb of Wardt: a leisure centre with adventure park, surfing and canoeing schools and diverse camping sites established on a lakeside peninsula, separating the body of water into Xanten North and South Lakes and attracting many visitors in summer. But drive on through Wardt's idyllic centre and you're stopped by a dyke protecting the village from Rhine floodwaters. If you stop and climb this, you enter what feels like an oasis of peace and quiet. The view sweeps over the water meadows to the "fabled Rhine". Although signs of the Nibelung Treasure remain hidden to mortals, in summer the eye is still caught by the splashes of colour in the form of hundreds of cows and calves - and first indication of the reason for our trip: the farm "Gut Grind", situated some 250 m behind the dyke.



## 165 ha GRASSLAND

Gut Grind was bought by the Schlütter family a good 14 years ago. The actual steading is on a 2 ha site little more than 250 m from the dyke, on a small plateau above the surrounding fields. Directly behind, the track to the meadows drops by around 4 m. "For decades, gravel was scooped from this area. Now, our grazings are barely above river level. This results in our land being flooded at least once almost every year," explains farmer Rolf Schlütter. The farm name "grind" actually means sand and gravel in the local dialect.

His suckler cows are all Limousin. Up until 1999, the previous farmer ran a dairy herd here, then swung over to extensive cattle husbandry. "So we took over 130 suckler cows with the farm which included 15 ha owned land in grass. A parcel of 150 ha pasture is rented from the Ruhr Regional Association. Total farm area here on the banks of the Rhine is all part of the nature reserve "Reeser Schanz". Additionally, the area is part of the Unterer Niederrhein EU Bird Sanctuary. Thousands of geese overwinter here and this puts our grass pastures under considerable stress," reports Rolf Schlütter.





1

Geese damage means it's mid-May before the sward has recovered enough to allow grazing by the cows and calves. The cattle are run in three herds, one comprising heifers only. A total seven bulls are runs with the other two herd. "Normally, we calf year-round. Only with first-calvers do we try to arrange calving mainly within the grazing season. With this in mind, we turn two bulls into the heifer herd starting August," adds Rolf Schlütter's father Gisbert who, despite his 77 years, still helps almost daily on the farm. "At grazing, the cows calve on their own. Being Limousin, they manage well without us," adds the third generation in this family concern, six-year-old Mats Schlütter. He already knows the farm business well and is always enthusiastically present when papa and grandpa are working in barn or field. Since August, Mats attends primary school so he's a "big boy" now, while little brother Mika, just approaching three years, will soon be ready for kindergarten ...



2

## SELF-HARVESTED FORAGE

Optimum first calving age for his heifers is around 30 months, reckons Rolf Schlütter. This might be later than normal, but it makes for easier calving for the somewhat bigger-framed animals here. Around 40 heifers are kept as replacements each year. All the rest, and bull calves, are weaned for auctioning at around 300 kg. The weaners provide main farm income. Feeding the males to slaughter and marketing the meat doesn't (so far) fit the farm concept. "The work involved would be greatly increased so that my wife, my parents and myself wouldn't manage on our own," he says.

This is also the reason why the forage for winter on Gut Grind is mainly harvested by the family too. Depending on grazing requirements in the nature protection area, around 100 ha are cut once per year, mainly around mid-June. In 2017, 1000 1.50 m diameter round bales were carted home, 300 hay and 700 silage. "Haylage would be more accurate than silage, the forage is

very fibrous," grins Rolf Schlütter. "Naturally, outsiders might ask why the forage harvest is not left to contractors. But then we would have to cart home everything at once. This doesn't fit with our work plan because not all the fields are ready for mowing at the same time."

Mowing, turning and tedding are handled by the Schlütter trio alone, as is baling and wrapping. A front and rear mounted mower combination (working width 6 m) with conditioner is part of the mechanisation involved, along with two turners (11 and 15 m working width), a twin rotor tedder (7.5 m) and two round balers. The oldest baler is soon to be replaced by a baler-wrapper combination. In spring, Rolf Schlütter managed to test drive a demonstration machine and it was then clear that such a machine would greatly ease the work. Up until now, bales are wrapped with a wrapper mounted on a wheeled loader: always possible but still very time consuming.





## MAIZE FOR WEANERS ONLY

Hay bales are kept dry in a variety of farm buildings while silage bales are stacked outdoors in three layers forming an imposing pyramid. Right behind this, there's an equally impressive and neatly covered long row of straw bales. These are primarily used for bedding, although smaller amounts are used for feed. All straw is bought in. "While we do farm 30 ha arable land about 12 km away, we mainly use this for forage maize and feeding rye, explains Schlütter Snr. Incidentally, feeding rye is grown here instead of grass "because the geese don't like rye so much," adds his son.

This brings the subject round to feeding in the Schlütter herd where cows get only hay and silage through the winter. The weaned calves also get maize silage and a little concentrate feed in their ration as they have to put on good body condition during the period up to their auction. There's no mixer wagon, a Hoftrac loader being used for feeding. After all, the aim is not high performance, as with dairy cows or beef finishers, says Gisbert Schlütter. Still, feed uptake in the three herds is good and forage loss through "selection at the trough" low.

Apropos selection: to the most exciting operations of the year undoubtedly belong those in November at housing, with the calves separated from their mothers at the same time. A general health check also takes place then, as well as worming and scanning for pregnancy. This is when the entire family is required, as well as outside helpers, for handling and housing in three herds up to 500 head. In 2017 this operation turned out especially stressful because two of the herds had mixed into one another when extremely low river levels in spring had allowed cows to walk round a fence. Separation during the grazing period was too dangerous, reckons Rolf Schlütter. "Limousin cows do not like it at all when someone gets too near their calves. This is a small disadvantage with this breed." Despite this, he is very satisfied with his herd. Incidentally, the extreme low river levels just mentioned still did not bring to light any of the legendary golden cups or chains from Hagen von Tronje's sunken treasure, smiles the farmer. But who needs things like this when they already have the splendid "Nibelung cows"? «



- 1** Senior family member Gisbert Schlütter also works nearly every day on the farm.
- 2** Rolf Schlütter relies completely on round bales for feed and bedding material. Annually, this comprises up to 700 bales of silage, 300 of hay and 700 of straw.
- 3** Weaned calf sales provide the farm income. The calves are fed up to 300 kg liveweight in the barn and then sold at auction.
- 4** Own machinery, including the baler, is used for forage harvesting.



JAPAN

# BIG IN JAPAN



**How can it be that a country where rice production plays an important role with cropland generally very scarce is, at the same time, one of the most important markets for self-propelled forage harvesters? Research there by reporters from “traction” magazine solves this puzzle for us.**

**A**nyone thinking of agriculture in Japan has paddy fields first in mind. Hardly anyone imagines large-scale dairy farms, machinery rings with self-propelled forage harvesters and mowers. But this is exactly what you come across on Hokkaido, the northernmost as Japan's main islands. This lies at around latitude 43°N, about the same level of southern France, Tuscany or the Balkans. However, as it is an island in the North Pacific washed by cold sea currents, the climate tends to be rather cool (annual average 8.2°C), comparable more with the north





of the US or southern Canada, areas also lying between latitudes 40 and 45 N. This also means that winters are long, sometimes lasting right into May, with lots of snow – in total about 4 m of the white stuff. Average precipitation is a plentiful 1100 mm per year.

For the above reasons Hokkaido tends to be unsuitable for rice cultivation compared with the main central islands of Japan. Neither is it a typical arable region. The relief map is characterised by ranges of mountains and hills. So farmers are

left with the options of livestock raising and grass husbandry, rural skills that are highly regarded in the region. You see this right away getting off the 'plane at the local airport of Nakashibetsu, with regional dairy products proudly presented on the premises. Vegetables are also grown in many parts of this island.

Alongside concentrates, grass silage is the main feed for cattle. Growing period for maize is generally too short here, with just 75 - 85 days. However, small maize fields are seen here and there. With the



more common grass, the weather allows only a maximum of two cuts per season, in June and September.

## NEW BLOOD A PROBLEM

Even although agriculture in Japan, and especially in Hokkaido, is highly respected within the population, there's a real problem in encouraging younger generations into the sector – as in many other parts of the globe. Average farmer age is 64. Every year, the number of farms reduces by 4%. With young people, a career in farming is just not “hip”, a problem known all too well throughout industrial countries.

Masashi Yasuda found his happiness in farming, running an 80 ha dairy farm only a few kilometres out of Nakashibetsu. “200 cows, 95 of them in-milk, are in my barns. Average milk production: 10,000 l/year.” He belongs to a machinery ring with members farming a total 300 ha. The society runs a BiG X 650 with 3m pickup for the first silage cut over about one third of the land area. But the larger proportion of forage is baled as grass silage by round balers. “We have two cuts per year whereby average yield is about 20 t fresh weight per ha,” explains Yasuda. At harvest, dry matter content (dm) is around 30% and chop length 13 mm. The low dm means silage additive is usually added in the clamp. Wilting depends on the weather and there's often only half a day for this. On the few forage maize fields, the climate also means that only 50 t/ha can be carted home. Hereby, none



200 head including 95 milking cows are run by Masashi Yasuda, who also farms 80 ha land.

of the farmers sit in the BiG X but instead a “leased” truck driver operates the machine. This is quite usual on Hokkaido where self-propelled harvesters are not used that much, and the silage transport trucks come from the same firm.

The farms themselves are strongly reminiscent of North American steadings with their sheet steel buildings. “Japan clearly orients itself in terms of farm structure and management on the USA,” informs Krone sales promotion manager Martin Seggering. Substantial support comes from the government. Each litre of milk produced brings the farmer between 80 ct and 1 euro - definitely dream prices compared with Europe. On top of this, there’s a government subsidy of 5 – 6 ct/l. This gives Masashi Yasuda an annual turnover equivalent to just under 800,000 euros. But then production costs are much higher here than in Europe and include an estimated 200,000 euros for concentrate feed shipped in from the USA to add more energy to rations.

## HIGH SUBSIDIES

Supported even more strongly by the Japanese government are large-scale machinery rings such as the “Grass-1” enterprise we visited. Grass-1 was also an immediate customer of the Japanese Krone importer GSP Corporation. Its CEO Takashi Kudo and sales manager Naoki Watanabe accompany us and translated during our tour. “The machinery ring, grounded in 2015, comprises seven farmers,” explains Takashi Kudo, or Kudo-san, as one says in Japan. “However, it started up with just four members. Via



Grass is chopped to 13 mm, although straw scarcity means farmer Yasuda cannot add this to boost ration fibre content.

the dealership Iseki Hokkaido, we sold the ring a Krone BiG M II and a BiG X 650, this last being replaced in 2016 with the more powerful BiG X 700.”

Even at first glance, the 25 gleamingly clean silage clamps on the farm are impressive with their capacity for 480 ha harvested grass. Chopping is very short here at just 10 mm. Two farm-owned wheeled loaders handle all clamp leveling and rolling. “Transport from field to farm is with six trucks,” says Masakatsu Oishi, Grass-1 managing director. “Two of

them belong to the society, four to individual farmers. And because of the short harvest window, a butterfly mower combination is sometimes leased, working with the farm-owned BiG M which is used at far below the capacity usual in Europe. Grass-1 harvests and chops at only 20% dm, and that immediately after the mower.

The BiG M II machine is to be exchanged by Grass-1 for a newer BiG M 400 which fits better the performance capacity of the following BiG X 700. A subsidy re-





The machinery sharing society "Grass-1" includes two truck-mounted feed mixer wagons.



The baler-wrapper combination for maize is built by Takakita and allows silage to be wrapped and deposited directly on farms that have no clamps or silos.

quest for this is already written out. Up to 50% of the purchase price is subsidised in Japan because the government wants to further professionalise dairying and aid efficiency, and thus increase milk production. The farm's own feed mixing plant together with large-capacity feed mix wagons were subsidised, the office building and the silage clamps, however, were not. In total, around 6 m euros has been invested in machinery and buildings since 2015. "The first machinery ring, TMR for short, was founded in 2001," recalls Martin Seggering, who has been working

in the Japanese market, along with several other regions, for some years. "In the last five or six years, however, ring numbers have increased massively, Japan's government investing a lot of money in order to reduce dependency on food imports. After all, the average milk production performance, thanks to TMR, has increased within around 15 years from 7000 – 8000 l to approx. 10,000 l/cow and year. Above all, this has been due to improved feed quality and more professionally conceived and adjusted cow rations. Nowadays on Hokkaido, there should be

around 60 TMRs in operation." And: "The subsidisation for purchase of large scale machinery varies from year to year and this has led to us selling in one year 20 BiG Ms and 20 BiG Xs. In another year, however, sales are maybe only three or four of each. Thus, sales planning is not easy."

The farmer-members of Grass-1, incidentally, together run around 750 cows milked twice a day through carousel or herringbone parlours. Robot systems are not common. The rations for each farm are mixed in the Grass-1 yard and delivered via truck-mounted mixer. Also supplied with this feed are a few customers that are not members of Grass-1.

## STEEP SLOPES

The Akan TMR, also visited on West Hokkaido, works with self-propelled machines from Krone. "We operate three BiG Xs, types 650 and 700, two working the whole season through, and one in peak periods or as substitute machine," explains Akan manager Yoshio Masaki. "Akan belongs to 24 farmers with a total 1500 dairy cows and 760 ha grass plus 260 ha forage maize." Contrary to the other farms we visited, here a pass with the tedder takes place after the mower. The aim is to increase dm content from around 25 to some 30%. Here and there, a couple of wafflers are also used to help dry the crop. Despite this, special lacto-bacilli additives are still used with the silage. According to the manager, the products are more cost efficient than formic acid. "At first cut, we harvest around 38 to 40 t/ha, in the second one only some 20 t/ha," notes Yoshio Masaki. "The





Yoshio Masaki manages Akan TMR (machinery ring) with 24 farms involved.

amount harvested in the first cut, along with the maize (50 - 70 t/ha), supplies sufficient forage for the cows in good years. Then, we mow only a few grass fields a second time and discard a proportion of the harvest.” For the manager, this is apparently not unusual – even with the high level of labour and machinery input invested in the harvest.

A special factor in the Hokkaido forage harvest is the sometimes very steep fields farmed by Akan TMR members. Because trucks cannot run alongside the harvesters on such slopes, and tractors and trailers are fairly unusual for this type of work, special tandem axle wagons are attached to the rear of the harvesters to carry the silage. These trailers can also be used as buffer containers to fill when there’s a gap in the transport chain. The “Star 7000” trailers have a capacity of around 12 m<sup>3</sup> with a rigid frame which enables side-tipping. «



On the slopes of its operational area the Akan TMR almost always harvests using rigid-chassis forage wagons attached behind the harvester.



For many years the government has promoted the image of home produced food, resulting in campaigns with posters as in this supermarket where photographs of producers are on show.



## BiG X 680, 780, 880

# WITH LIFT-CAB

Forage harvester drivers nowadays find themselves always facing a “wall of vegetation” when maize harvesting. Relief here comes from the new worldwide unique cab-lift, presented by Krone on the BiG X 880 at Agritechnica. By pressing a button, the driver can raise the entire cab, which is built on a hydraulic scissors lift table, by 70 cm. This gives a very good overview of the crop and accompanying forage wagon. The new BiG X 880 also scores points in ease of operation and flexibility with its multitank concept. Because worldwide there's a variety of tank content materials to be considered (diesel, silage additive, water, urea), customers can now choose from seven variants for an ideal tank concept.

Great operational flexibility during maize harvest (from 3 mm to 30 mm chop length) is available with the Krone Op-

tiMaize Universal package comprising MaxFlow cutterhead, VariLOC transmission and disc conditioner. Through simple adjustment of drum rpm from 1250 to 800 with a standard spanner, chop length area can be lengthened by up to 53%, making it possible to choose between long and short chop. The VariQuick system enables rapid change between corn conditioner and grass duct. This means the BiG X can be flexibly used in maize, wholecrop silage, or grass. Further plus



points: as standard, the new BiG X offers Krone SmartConnect for transparent data management. Hereby united are mobile radio, WLAN and GPS functions. «

## BALECOLLECT

# COLLECTOR WITH TELESCOPIC HITCH



The new BaleCollect 1230 with operational measurements 4.3m wide and 3.2m long offers place for a maximum three

Further advantages: for BaleCollect a single road traffic certificate can be made out for the whole rig: baler and collection

2.7 m long bales. In contrast to collectors so far, this bale collection wagon has a hydraulically operated telescopic drawbar to ensure safe handling on the road. The system allows the collector to track precisely behind the baler like a second trailer. The bale collector is compatible with all BiG Pack models. Allowance for 50 km/h operation is possible.

wagon, offering more flexibility in tractor choice.

In the field, the hydraulic drawbar is retracted so that the bale collection wagon remains in-track behind the baler. The wheels are then hydraulically freed so that they can turn. The side sections are folded out hydraulically – and BaleCollect is operational. The first two bales are automatically shoved to the sides. As soon as the third bale is on the collector wagon, all three are shoved off. This process enables four different grouping variations and is fully automatic. Another advantage is the weighing system: the bale collection wagon features a lower and upper frame connected only by four sensor pins which determine, indicate and store the weight of all the bales on the wagon. «



**SICHLER FAMILY, GUNZESRIED**

# A ROUND CONCEPT



Farmers in the upland Allgäu region of southern Germany face the challenge of producing milk from small units as efficiently as possible. Clever marketing is also needed. The Sichler family near Sonthofen manages this in an interesting way through extensive management, traditional Alpine Braunvieh cattle and cheesemaking.



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From the North German point of view, Gunzesried near Sonthofen nestles not only idyllically in the Alpine foothills, but also high up. Can one really farm here? Yes, emphatically! The Sichler family has proved this for over 180 years. Living and working on the farm are Ines and Martin Sichler, their two children and the grandparents. The farm runs to 74 ha including 20 ha woodland. Only 24 ha are mowable grassland and 30 ha comprise mountainside pasture, known here as alm. Not to be forgotten are also the 25 Braunvieh cows and the holiday guests on the farm: visitors that can be found there nearly the whole year round. And many of these guests are enthusiastic purchasers of the cheese produced by the Sichler family, along with other coop members of the village “sennerei”, or cheese plant. More synergy between mountains, cows and farmers cannot be found.

“The youngsters are on summer vacation up in the Alps,” jokes Martin Sichler, meaning the herd youngstock summering on the mountainside. He adds: “One of our alms lies at 1000 m, the other at 1250 m over sea level. In the past, the lower alm was used for the cows and the other for youngstock. In 2003, the current loose housing barn was built. Even then, we grazed and mowed the alm until 2005. But mowing was difficult and that’s why we now have two areas near the steading that we cut daily in summer for zero grazing the herd. This gives the cattle fresh forage, even though they are indoors. Not until September do the cows get out to graze.

## HAY QUALITY IS IMPORTANT

Along with the grass, 50% hay is fed, a third of which is lucerne hay bought-in from France to add more fibre. “The advantage is that we can mow often,” explains Ines Sichler. The family have bought lucerne hay for four years now. Price: 285 euros/t. The cows get pure lucerne hay mornings and fresh grass in the evening. Good feed



At home and at work on the Sichler farm are Ines and Martin Sichler, pictured here with their children Leonie and Nepomuk.

quality is important here. To achieve the right structure of forage, the first cut is not too early, mostly carried out in May just as the dandelions begin to flower. Ines Sichler mows, turns and teds. Husband Martin drives the Metrac with self-loading wagon. The Metrac is a special tractor that’s light and easy to handle on steep slopes. Because of the unevenness of the pasture, cutting height on slopes is about 6 - 7 cm. The aim being to cut as clean forage as possible for highest quality feed. The Krone EasyCut front mower is used (3.20 m working width) with mounted conditioner on the rear three-point hitch.

As soon as the dew is off the grass, the mowing starts. The conditioner spreads the grass wide and quite thinly so that first turning can be carried out at around 2 pm. The Krone KW 7.92 has a working width of 8 m. Second turning takes place the next day at around 10 am, followed by tedding with a Swadro TS 620 Twin with the hay then carted in via self-loading wagon.

In total, three to four cuts per year take place. Theoretically, more cuts could be done. But this farm is managed extensively. The only fertiliser applied is slurry and farmyard manure from the herd. Keeping to extensive management means the Sichlers receive state subsidy. On the other hand, less biomass is produced.



## PELLETS IN AUTUMN

“On the lower mountain pastures, we used to make silage in autumn for the youngstock. We needed winter feed for the animals and often didn’t know how we could dry any hay we cut,” farmer Sichler tells us. This is still a problem nowadays. For this reason, this farm business makes some grass pellets. The decision to pellet or not depends on the prevailing weather. “If we get a good spell we can make hay. If this doesn’t happen, then we decide to pellet,” explains Martin Sichler.

There’s a grass drying plant about 8 km from the farm that produces pellets directly from the grass deliveries. Drying costs around 180 /t. Despite the cost, the advantages are obvious. “We can cut early and produce our own concentrate feed in best quality,” says Martin Sichler proudly, adding: “Crude protein content is between 16 and 22%.” The amount of grass available on the farm limits the pelleting possibilities. In the past it has reached 20 t/year. Nowadays, only around 9 t of grass pellets are made.

A factor in the low level of pelleting is the on-farm hay drying plant built at Gunzesried about five years ago. “Since then we’ve naturally been trying to make as much hay at home as possible,” explains Ines Sichler. “Last year, we were still cutting for hay on September 30. In terms of moisture content, the result was more like dry silage. In other words, dm was around 35%. The condenser-drier system needs around 24 hours to handle a cut from 2 to 4 ha. The system cost about 100,000 . But it’s still cost-efficient because the resultant feed is good and reduces the amount of pellets needed.”

The cows get concentrate feed after reaching a daily yield of 18 kg milk with basic forage performance of 5,500 kg being fed. Established as upper limit for concentrate feeding is 10 kg. This is the principle followed by the Sichler family for around five years now and it’s proved a successful one, producing a herd average of 9,500 kg.



Concentrate diet features a special starter feed for the first 100 days’ lactation. Maximum ration of this starter feed, costing 500 euros/t, is 3 kg/cow/day. It enables cows to retain body fat post-calving, which definitely increases performance right through the lactation, reckons the Sichlers.

Long production life is the aim here. Even now, the oldest herd member is in her eighth lactation. Calf-to-calving period averages 370 days. Heifer calves are reared and sold at auction in Kempten. Bulls go off for feeding. Now and again a bull is kept as breeder, running with the cows at pasture.

## SHARED SENNEREI

Since 1892 there’s been a cooperative in the village, through which the Sennerei Gunzesried is operated. Currently, 12 farmers are involved including four larger businesses with between 25 and 30 cows each as well as some others with only 6 to 12 head. Only five of these farms are full-time, the other farmers having jobs outside their respective farm businesses.





The sennerei processes 1.2 million l milk per year. Price paid per litre is currently just below 50 ct and Martin Sichler is glad that this income is coming in, even during otherwise difficult marketing conditions. As well as cheese, the sennerei produces and sells ice cream since 2011. The coop buildings include a shop as well as a roomy snack bar with sitting accommodation. Additionally, cheese is also sold via a grocery chain “Feneberg”, and a wholesaler. The farmer adds that the cheese has been sent as far away as South Africa. “For us, it is important that we never let the sennerei out of our own hands,” he adds.

During the year, Sennerei Gunzesried members get a basic price of currently 30 ct/l. The remaining 20 ct/l or so is paid to members as lump sum each spring. Martin Sichler drives his milk twice daily to the sennerei which has the advantage that the milk doesn’t have to be cooled on the farm. At the plant it goes straight into tank or kettle for the next day’s cheesemaking. “This rounds off the concept and we have a good basis for our farming business,” concludes Martin Sichler. «

- 1** The Gunzesried cooperative cheese plant includes a shop and snack bar.
- 2** A master cheesemaker, two trained workers and a student are responsible for cheese production. A staff of 14 are employed in the shop.
- 3** Daily ration for the 25 Braunvieh cows includes hay and freshly mown grass.
- 4** The Metrac at work on the pasture slopes.
- 5** Two pastures near the steading are used for zero grazing, providing daily fresh grass for the cows.



IMPERIAL LOGISTICS

# PULLING OUT ALL



The logistics of spare parts supply remains a core competence which Krone keeps under its own management. But for handling merchandising products such as brochures and toys, the agricultural machinery manufacturer relies on logistic specialist Imperial.



# L STOPS

Michael Korpak manages the Imperial depot in Herten.

**P**icking, packing, loading – and all of that as fast as possible. These are the first actions in probably all spare parts depots when an order comes in. In the farm equipment sector it's very often the manufacturers themselves that take care of stocking and dispatch preparation while service providers stand ready for rapid transport of the items. This is the situation with Krone as well. Apart from one exception: merchandising articles such as brochures, promotional baseball caps, ballpoint pens and, naturally, the much-valued toy models.

These materials and their handling - from storage to logistics - has been passed on by the Spelle manufacturers to the company Imperial Logistics International which has an Europewide network with around 9000 employees. The logistic specialists service clients from a great variety of sectors from 170 locations, earning 1.6 billion annual turnover. The enterprise has two divisions: "Imperial Transport Solutions" offering express, ship and road freight, and "imperial Supply Solutions" providing complete logistic solutions for key branches such as chemicals and car manufacture as well as plant and machinery construction.

## MULTI-USER DEPOT

The Herten site features a team of more than 160 staff and belongs to "Imperial Supply Chain Solutions". The greatest proportion of the around 43,000 m2 hall area is covered by high shelving for pallet storage. An absolute eyecatcher is, however, the fully automatic small parts depot with 230,000 storage spaces. "The

work is carried out in three shifts, on weekends too when required, because it is part of our service to be able to deliver to customers round the clock," declares depot manager Michael Korpak. In the first instance, this is necessary for a manufacturer of lifts that has developed its complete worldwide spare parts logistics over the Herten depot, all parts being stored there. But such support is also necessary for farm machinery, which also represents a substantial part of the depot turnover and has very time-sensitive seasonal peaks, according to the depot manager. "30% of the material we move is, so to speak, part of plannable operations, the biggest proportion, however, features spontaneous orders."

A total of more than 85,000 different items are stored in Herten from which annually around 600,000 orders with 1.7 million so-called "picks", i.e. removals from the shelves. An interesting point here is certainly the so-called multi-user concept whereby the "depot logistic services" for different big customers are handled together in one depot to save space and reduce costs. In Herten, this applies to a handful of customers. "Long term relationships are important to us, and working together as much as possible. For us, this entails meeting customer requirements and sector-specific specialties as best we can," states the depot manager.

## HIGH NOON TO EXHIBITIONS

A part of such specialties is that Imperial also delivers parts to certain customers on a just-in-time basis straight to the



assembly belts - and sometimes even smaller preassembled modules. It is also accepted as normal by this manager that the business, as "reliable forwarder" also fulfills all the requirements for rapid international air freight traffic. "In fact, we pull out all the stops for our customers."

And it is not as if only technical parts are to be found within the wide depot buildings. In a special separated-off area a glance in the shelves reveals cartons containing a large variation of the merchandising materials mentioned at the beginning. "Normally the action here is not quite so hectic as in the spare parts sector for lifts or farm machinery," reports Michael Korpak. However, this area should not be underestimated regarding speed of turnover. Between August 2016 and July 2017 more than 608,000 positions were sent off for Krone alone, after all.

Exhibitions and similar events regularly ensure work peaks in the dispatch of merchandising articles. In such cases it's quite common that the material reserves that have been taken to events prove insufficient, often having to be re-delivered at very short notice such as happened once again this year during Agritechnica. For example, there the toy models proved so popular – selling like the proverbial hot cakes – that a replenishing consignment left here for Hanover every day," he reports with a smile. «



**CONTRACTOR VÖHRINGER**

# FEED FROM THE A



**The Swabian Alb are upland areas not exactly well known for high yields from field and meadow. However, of greatest importance for farmers is best possible forage quality, making this a priority on the agenda of the Gebrüder Vöhringer Lohnbetrieb GbR in Steingebronn.**

**T**he day our reporting team visited the agricultural contractors Vöhringer Brothers in Steingebronn a good 60 km south of Stuttgart on the upland Swabian Alb region, the steading was a hive of activity. Senior manager Ernst Vöhringer, his sons Johannes and Christian who had taken over the firm in 2011, as well as the farm student Timo Strobel were all in the workshop making final adjustments to two large square balers. The job had to be finished by midday and the machines parked for the winter in the large machinery barn. It's a tight fit there. To make room, two forage harvesters, a handful of bale and silage wagons and the two all-wheel drive trucks with silage wagon bodies all had to be extracted from the back row to make more room before being re-





parked. “Today we’re starting on the maize silage. In the last few days we’ve been getting the machines ready. The weather report promises sunshine this week and our first customers are already pawing the ground, wanting to get into their maize,” says Ernst Vöhringer.

The weather had been more than mixed in the previous weeks. In fact, over the entire 2017 harvest year. This, anyhow, is how Johannes Vöhringer has seen things: “With us, the second grass cut turned out pretty thin because of drought. As a result, many farmers decided to cut more cereal area than usual for wholecrop silage in order to secure enough winter feed. For us, this meant a good 220 ha of chopping,” he explains.



- 1** Four-axle all-wheel drive trucks with self-mounted silage transporting bodies are a specialty of the contractor Vöhringer.
- 2** Every year, the Vöhringer company bales an average 10,000 round and large square bales.

## FARM GROWTH

The relatively heavy rainfall from start of summer helped the third grass cut towards a more normal yield, adds his brother Christian. And things looked “quite acceptable” for the fourth cut in mid-September, he reckons, although this is generally requested by just a few farmers. “And we only think about a fifth cut at all in very good years. But 2017 hasn’t been that kind of season, certainly not for grass anyway,” explains brother Christian. Thus, it’s not surprising that fewer bales than usual have been produced by the contractors: around 4000 silage bales and 1000 hay and straw bales. “Normally, we produce as many as 10,000 round bales with two-thirds hay and silage and the rest straw,” he explains. Big square bale production gives an annual total of 10,000 to 12,000 bales.

Also very important for the Vöhringer firm’s forage harvesting work are naturally both BiG X harvesters, each working an average 500 hours per season working through two-thirds grass and one-third maize and wholecrop. This represents between 2000 and 2500 ha chop-





ped grass per year, or an average 800 to 900 ha per cut. “As a tendency, we’re getting more forage maize to chop on the Alb, despite the despite its relatively short growth period and yields between 30 and 70 t/ha fresh material. This means that in 2017 we’ll cover around 700 ha with both machines. Percentage of chopped grass silage also increases slightly this year at the expense of round bale silage,” calculates Johannes Vöhringer.

He sees one reason for this in the substantial expansion of some full-time dairy farming enterprises. In his experience, these units use a higher share of maize silage in their rations. On the other hand, based on numbers, their customer circle comprises relatively many horse keeping enterprises as well as livestock farms run as part-time units. “This means hay – of which we bale around 700 ha annually – continues to be important for us”, he reports further. “Not to be forgotten, either, are the regular customers that we service with our forage wagons. In 2017 this work represented about 400 journeys in total,” reckons Christian Vöhringer. The family business contracts for a good 250 customers within a 30-km radius, from a shepherd with five sheep right up to dairy farmers with 300 cows.

Naturally dependent on size of client farms and livestock type is the favoured silage chop length, continues Johannes Vöhringer. Where the silage wagons are used, the full number of 46 knives is in action, giving a chop length



of 37 mm. Where grass is chopped in the silage harvester, cut lengths vary between 3 and 25 mm, while in maize this is generally between 4 and 10 mm, according to the contractor. On the other hand, biogas making customers nearly all want 4 to 6 mm chops. “Long chop is less commonly requested here. The high dry matter content in 2016 meant this was out of the question anyway, and in 2017 there’s only limited interest. This is logical. After all the farmer continues to depend on straw and grass in the feed ration,” explains Johannes Vöhringer.

## QUALITY IS IMPORTANT

The experience of both brothers indicates that much more important than chop length is degree of cob processing with maize. “Five or six years back, the most important thing was that all the grains were cracked. Farmers put a lot of value on as many grains as possible being at least quartered. But now every grain should, as far as possible, be quasi milled in order to achieve best possible digestion in the rumen. In short: the grain treatment is decisive. And this represents a challenge for us as contractors,” he stresses.

Without a doubt, this aim is technically possible through narrow setting of the cracker rollers, he explains. Up until now, both harvesters work with roller crackers. Certainly, already considered are plans for disc crackers, although





still to be realized. “This would require a harvesting price increase of something along the lines of 15 euros/ha because our progress through the crop would have to be slower for the desired intensity of corn processing, which in itself drops area performance by around 10%. The price increase related would be acceptable as well as being compensated for many times over by increased feeding performance, but currently farmers are not willing,” reckons Christian Vöhringer.

Readily accepted, on the other hand, has been a small price increase related to plastic sheet wrapping of bales. This wrapping was offered for the first time in 2017 by the brothers, made possible by the purchase of two new Comprima bale-wrap combinations. These allow easy conversion to plastic sheet wrapping. Especially dramatic hereby: the farmers were at once convinced by the advantages so that almost 90% of all silage bales have been wrapped in this way. The experience of this first season with the new method has been very positive, say the contractor brothers. “As far as the resultant feed quality is concerned, we’ll have to wait and see because so far hardly any of this year’s bales have been fed. However, the quality of wrapping was good,” continued Christian Vöhringer. His bother adds: “With plastic sheet

- 1** The proverbial reins of the enterprise are in the capable hands of Johannes Vöhringer’s wife Cornelia in the office.
- 2** Forage harvester out, big balers in: large scale manoeuvring in the barn after the cereal harvest and before the forage maize one.
- 3** Relaxed expressions at the beginning of the maize harvest 2017 with Ernst, Johannes and Christian Vöhringer (l. to r.).
- 4** On the Vöhringer family farm, feeding bulls have taken the place of dairy cattle.

wrapping, bale form and density is better than net binding plus sheet wrapping. And later on, less wrapping, and only one type of wrapping material, must be got rid of. In other words, enough good reasons for the price per bale to be increased because, on the bottom line, the result is more cost effective.” ‹‹



WORKSHOP LIVE

# CAREERS IN THE



The aim of creating enthusiasm amongst youngsters for a career as agricultural and construction engineering mechanics was behind the first Agritechnica “Workshop Live” in 2007. From this developed a permanent institution – one that again emphasises the importance of this theme for the industry, the specialised trade and the end-customers.



# SPOTLIGHT

**A**s far as the experience horizon of many youngsters is concerned, agriculture in general, and in particular a career as agricultural and construction machinery mechatronics engineer, is as far away as the moon is from the earth. Anyone therefore aiming to interest newcomers has to make as understandable as possible what such a career involves. And this in a nutshell is the aim of “Workshop Live” (Werkstatt Live), a permanent feature of every Agritechnica over the last ten years. So 2017 also saw a team comprising 17 trainees, craftsmen and women, servicing technicians and masters from the agricultural and construction machinery mechatronics engineering profession demonstrating in an interesting way in 55 separate presentations an authentic background as to why this career fills them with enthusiasm, how good the career development opportunities are and, above all, how diverse work with this technology can be.



Hand-in-hand in agricultural engineering: for the dealerships, Ulf Kopplin (middle, president of LandBauTechnik-Bundesverband); for agriculture, Carl-Albrecht Bartmer (r. DLG president) and Bernard Krone.

## AG. TECHNOLOGY IS COOL

With this in aim, the German Agricultural Society (DLG) as exhibition organiser, and the LandBauTechnik-Bundesverband (LBT) as specialist partner, once again this year presented a large number of machines from robot grass mowers through to round balers along with the required tools from adjustable wrenches through diagnosing laptops. Workshop Live took place with the support of numerous manufacturers in 320 m<sup>2</sup> of hall 2. On the hour, moderator Nila Louis guided her audience through “shows”, each lasting almost 30 minutes wherein the team explained concrete examples of servicing and repair work. Filmed by two cameras and relayed

onto large screens, every handgrip could be directly followed by the audience.

That this concept works was easy to see. You just had to watch the close attention paid to the action by the mainly young audiences. While many of them could have reflected the modern trend by spending most time checking their smart phones, in fact their eyes remained on the presentations. In this way, many of those in attendance realised that agricultural and construction machinery is very modern, technically complex and simply “cool”. A great help in this relationship was no doubt the informal commentary and conversations involved. In short: the spark of enthusiasm made contact.

## CROWDS OF YOUNGSTERS

For every demonstration, around 150 interested onlookers turned up. The largest proportion of these comprised youngsters from comprehensive schools right across the republic. This was because the DLG had sent many invitations to school classes as part of the preparation, explained Heinzbert Mies who is responsible within DLG for Marketing Agrar, having also taken over the Workshop Live project in 2014 from his predecessor Ulrich Hausmanns. This last person belongs to the Workshop Live initiators along with LBT managing director Ulrich Beckschulte and Krone marketing manager Heinrich Wingels.



"This year, a total 7000 invitations were sent to youngsters by the LBT and by exhibitor companies. Admission for these children is free and travel expenses are partly paid by the exhibitors involved. As in preceding exhibitions, a very large proportion of the invitations was taken up. Naturally, as exhibitors we are very happy about this. I reckon that, in 2017, a total of more than 5000 youngsters came. And since 2007 probably a total 20,000 have attended. This indicates that, in the meantime, many schools are now very aware of the career possibilities and regard Agritechnica as part of the career planning for young students", reports a happy Heinzbert Mies.

Also recording his extreme pleasure is Ulrich Beckschulte. He's very happy with the event progress but also the resonance achieved. Workshop Live is an important component of "Starke Typen" (Strong Characters) promotional campaign for agricultural and construction machinery technology. "Only with a sufficiently plentiful supply of suitable people for the nationwide nearly 4000 specialist workshops can these businesses offer their customers optimum service – and only then can the manufacturers place new technology on the market. It is therefore all the more welcome to see a whole sector pulling together to achieve the aim. And naturally, when we see the extreme commitment with which the entire Workshop Live team works on an honorary basis – with preparation including a training camp and general rehearsal lasting more than 10 days when all is included – we know that we owe all involved a very big thank you!"

## CELEBRATION TIME

Lots of praise for project and participants also came from the three guest speakers addressing, on exhibition Wednesday, a small celebration in hall 2 marking the 10-year jubilee. One of the reasons for LBT president Ulf Kopplin's appreciation was



Delight in the success of the "Workshop Live" concept is also shown by its initiators and organisers (from l.): Ulrich Hausmanns (formerly DLG), Heinrich Wingels (marketing manager, Krone), Ulrich Beckschulte (managing director, LandBauTechnik-Bundesverband) and Heinzbert Mies (DLG Marketing Agrar manager).



Once again, around 5000 schoolchildren from all over Germany visited during the seven Agritechnica days.

that Workshop Live had managed to bring into the focus the themes service and training at an exhibition where machinery alone had been the centre point for ages. The specialist trade had profited from this. He was proud of the what had been achieved so far. It was therefore appropriate to celebrate this – "with the knowledge of working in what is probably the best sector in the world: agricultural engineering, construction machinery and power tools."

From the point of view of the customer, DLG president Carl-Albrecht Bartmer indicated the accelerating innovation speed in the digitization era, encouraged to the limit by all involved in agriculture including service companies, but also the specialised trade and agricultural contractors as well as the production industry. No one could afford a weak link breaking in a technological chain. "Workshop Live carries the



Participants in this year's "Workshop Live" team alongside moderator Nila Louis were three young ladies training as mechatronics engineers for agricultural and construction machinery.

image of an extremely modern career to young people, the strong characters of today are tomorrow's educators. For this reason, Workshop Live had to remain a component of Agritechnica in the future."

Bernard Krone even went a step further than this as speaker for the industry. On its own, he said, this could not bear the immense workload involved. Thus, it was important that customers, the trade and manufacturers worked hand-in-hand. And that all participants not only did their utmost to hire good employees, but also to keep them. Hereby lay the third great challenge of this time alongside electronics and digitization. "Agricultural and construction machinery mechatronics engineers are the oil in the transmission of this sector. Without you, nothing would work," he called out to the youngsters in conclusion. «



## BiG M 450

# ALLROUND NEW

20 years ago, Krone presented at Agritechnica the self-propelled BiG M mower. With the new model series BiG M 450, Krone now introduces an attractive high area

performance mower with numerous new features. In addition to the new cab and new engine, the drive train and mowing concept are also just introduced. Working width is 9.95 m offering a completely realistic area performance of 17 ha/h. The three mower units are redesigned so that the machine is capable of 20% higher throughput compared with the previous

models. New centre-of-gravity mounted mowing units are equipped with an impact protection system which, on collision, protects the mowing unit by swinging it back and upwards. Also standard is hydraulic cutting height adjustment. The BiG M 450 introduces fully hydraulic adjustment possibilities for cutting unit ground pressure: all adjustments from the cab. This self-propelled high-performance mower-conditioner is powered by a 449 HP 12 l capacity Liebherr engine which naturally meets stage 4 requirements for exhaust emissions. Also new with the BiG M 450 is a servicing interval of 1500 hours. Another first-timer is the automatic engine management which independently changes from Eco to M modus and therefore always makes available the required horsepower for the conditions in-field. Practical operations confirm that field work can be carried out at up to 25 km/h with 40 km/h possible on the road. «



## COMPRIMA

# FACELIFT FOR ITS JUBILEE

Fitting for both jubilees: “40 years Krone Round Balers” and “10 Years Comprima All-round Baler”, the Comprima manufacturer presents the machine in a revised outfit. A modernised look comes from new side panels, reworked rear guards and uprated lighting. The “facelift” also includes some interior improvements. For instance, a helical pickup is now standard specification with 2150 mm working width for still better forage uptake and material through-flow. Also new is the ultrasonic sensor that replaces the sensing bar for bales on the wrapping table, as well as an additional running wheel on the bale turner which effectively protects the sward. Krone has also reworked the baler electronics and hydraulics, interfacing them with the KMC job processor. Unchanged is the standard availability of peripheral film wrap for all

Comprima models. The model with semi-variable fixed bale chamber remains in high demand – a technology that worldwide only Krone offers. Thus, the Comprima F 155 (XC) and Comprima CF 155 (XC), produce bales with diameter from 1.25 to 1.50 m even although they belong to the fixed

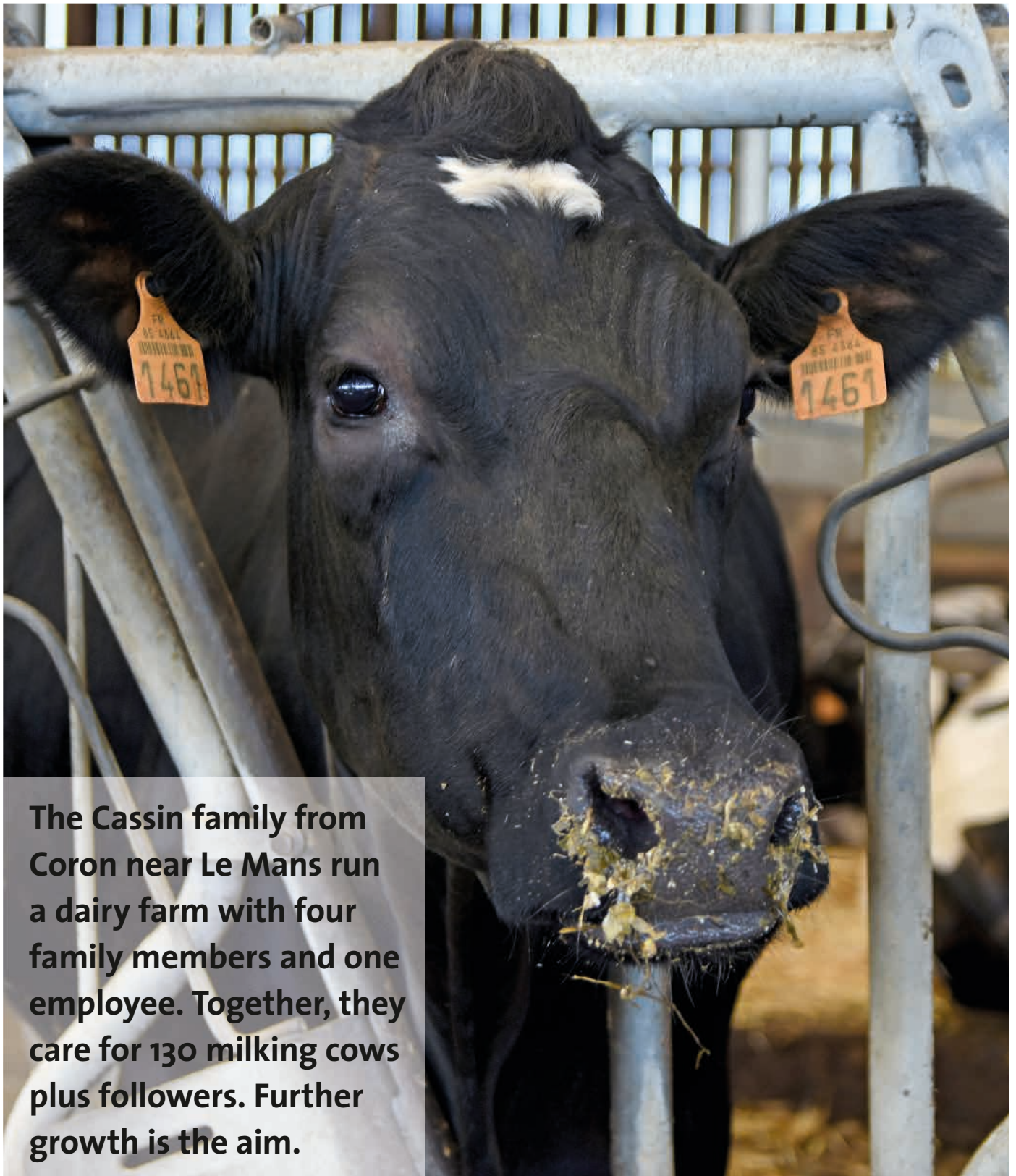
chamber balers. Currently, Krone offers seven different Comprima types. These cover the complete demand range, from fixed chamber over the semi-variable solution right through to baling-wrapping combination. The total portfolio of Krone balers actually includes 27 different types. «





**FRANCE**

# IN FAMILY HANDS



The Cassin family from Coron near Le Mans run a dairy farm with four family members and one employee. Together, they care for 130 milking cows plus followers. Further growth is the aim.





It's almost all in the family on this farm with (from l.) the future son-in-law Jonathan Brossler Gérard, Laurence, Noémie and Arnaud Cassin.



**T**he Cassin family dairy farm lies in northwest France, more precisely in Coron some 80 km east of Nantes. On our arrival, a few cows stood in pens around the farmhouse, a bitch with three whelps lay at the door. With its light colour and low form, the house had a maritime look about it. Direct on the farm road are the barns for milk cows and calves. Alongside, some tractors stand with cultivation implements.

That's the first impression. This farm has been in family hands since 1968 with the two children Noémie and Arnaud taking over as managers in 2013. Around 170 ha are farmed. This includes 55 ha maize, 25 ha grass seed multiplication crops and 45 to 50 ha cereals, mainly barley. "The soil is actually not especially suitable for grain," explains Arnaud Cassin. Maximum grain harvest is 7.5 t/ha. With forage maize the dry matter yield is around 10 to 15 t/ha. The quality fluctuates so much that the cereal grains are usually all used for feed. The rest of the farm area comprises pasture. In part, grass is sometimes sown as catch crop on the arable land.

## FORAGE HARVEST

An agricultural contractor undertakes the maize and cereal harvests while mowing and carting home a portion of the forage is for the most part a family affair. With three tractors from New Holland and Deutz-Fahr, a Deutz-Fahr telescopic loader and a Krone round baler, the grass harvest can be left to the family. Around 900 bales of grass silage are usually made with an average 100 bales of hay and 900 of straw. The remaining machinery for all the work: e.g. further round balers, one with cutterhead, an eight-rotor turner from Krone, a Monosem drill, tipping trailer and slurry tanker from Jeantil have been bought by the family with the help of a purchasing syndicate (Cuma in French) over the dealership Service Agri. Four neighbouring farms are involved in this Cuma. Some of these machines are already over 10 years old. The Cuma also offers equipment for tube silage. On the

other hand, biogas production plays no role in this region. "Our slurry is all spread on our fields. At a distance of 15 km, the nearest biogas plant is too far for us," says Arnaud Cassin.

Normally, silage grass is mowed twice. If the weather allows, a third cut is possible. "However, we prefer to graze the areas then. The quality of the grass is not good enough," explains father Gérard Cassin. Feed legumes such as lucerne don't play any role on the Cassin farm. "The soil here is too acid and too dry," says the senior boss. Irrigation is too dear to consider, he adds. "We are completely dependent on rain. This year it was very dry, and we certainly notice that," explains mother Laurence Cassin. Because of the mild temperatures the whole year, the family has no problems with frost, e.g. frozen water pipes. "Seldom do temperatures sink below -5°C," she adds.



## CALVES KEPT ON

The 130 cows get a silage mix of maize, grass and long stem hay as well as chopped barley straw and purchased mineral feed. Cows are housed in two cubicle barns. A third barn with 100 places is under construction. "The lactating cows stay indoors all the time, only dry cows and young stock get out to grass here," says Gérard Cassin.

In total, 270 of the farm's milkers are Holstein Friesian. Their female calves are always retained. "If we want to sell later on there's always a buyer," adds the senior boss. The male calves are also kept on the farm. After about two years these are handed on to a dealer. "He comes onto the farm in the old-fashioned way. We bargain on the spot over a price before he takes the animals away," explains Arnaud Cassin.

Milking is twice a day and takes two hours a time through a 2x10 herringbone with four people involved, the rest of the family taking care of feeding and the calves. Average yield per cow and year lies at a good 9500 l calculated over three lactations. "As a rule, we manage three calves from each cow, although some have four or even five calves," declares Arnaud Cassin. Lifetime production in this herd averages around 28,500 kg at 4.3% fat and 3.4% protein.

## NO CHANCE FOR ORGANIC

An additional enterprise here is rearing calves bought in from another farm. These are kept and fed on the Cassin farm for about six months and then sold. Up to 330 calves are reared in this way per batch. "This enterprise is a leftover from times when we had less farmland," explains Gérard Cassin.

The family head says there's no urge to change to organic production. "We have too little pasture for the number of animals and wouldn't get organic status," he



says. Additionally, the family see the changeover as too cost and time intensive.

However, an expansion of the present dairy enterprise is underway. "Our daughter's boyfriend wants to come into the business and this will allow us to buy more milk quota," he adds. In France, as soon as a new business manager takes over, it's possible to increase production quota", he explains. "We are in a positive mood, even although the milk price in the last years has not been good". Over the last two years the price was under 30 ct/kg. Now, though, it has recovered a little

to 32 ct/kg. "We market our milk to the private Lactalis dairy because it offers a better price," says Arnaud Cassin. The Lactalis concern claims it is world leader in dairy product sales with a yearly turnover of around 17 billion euros.

## BUREAUCRACY BOOMS

Mother Laurence and son Arnaud handle the farm office work. "However, this becomes more complicated from year to year. None of us like bureaucracy here," admits Laurence Cassin.





- 1** Planned is a new cubicle barn for another 100 cows.
- 2** 900 bales of straw are produced annually by the farm. Mechanisation is aided by the Cuma – a buying syndicate.

To keep up-to-date on current trends, the family travel regularly to regional shows. “We’ve determined that in our region farms either expand or go bust. Often, the bigger ones buy-out the smaller units. For this reason, we invest to keep up,” says Arnaud Cassin. There is, however, yet another trend noticeable: as soon as succession is assured on a farm then the younger generations tend to stay on in the region and not leave for the towns and cities. “It is not always so easy to find a partner that feels comfortable living on a farm,” smiles the junior manager. «

## » FRENCH AGRICULTURE AT A GLANCE

|   |   |
|---|---|
| Farms   | 515,000   |
| Proportion of female farmers/workers            | 27%   |
| Average farmland per unit                       | Between 11 ha (small farm) and >100 ha (large farm) |
| Medium and large farms according to enterprise: |   |
| Cereals and oilcrops:                           | 51,400  |
| Dairy cows:                                     | 48,200  |
| Wine production:                                | 46,900  |
| Mixed arable/livestock:                         | 39,200  |
| Beef cattle:                                    | 33,500  |
| Pigs:   | 6000  |

Source: French Embassy, Germany 2016.



**FRANCE**

# ALL LENGTHS CO

Eight machines, nine headers, chop lengths from 4 to 30 mm: this describes the key points of the OptiMaize concept. At a demonstration in Trémentines, Krone France showed this technology in field application over two days. OptiMaize goes international.



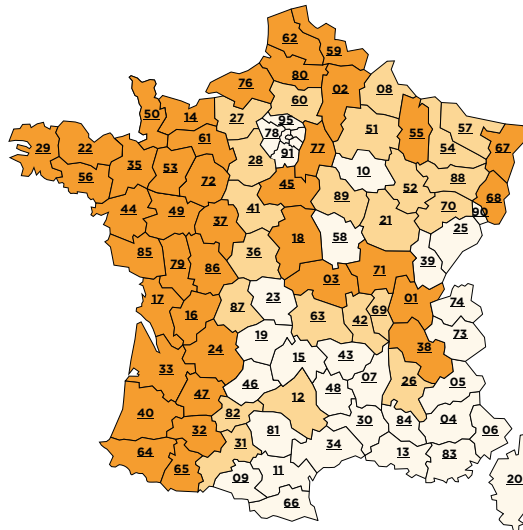


# OUNT

The French mainland and Corsica make up 96 départements. 80% of cropping farmland growing maize is denoted by the darker areas, with 28,000 to 129,000 ha per département. The lighter areas have between a good 15,000 and just under 28,000 ha maize cropland. In the white départements, maize area is under 15,245 ha.

Source: Groupe France Agricole nach Agreste – Statistique Agricole Annuelle, 2015

## Grain and forage maize growing areas in France



**T**he production procedure for maize from drilling through to harvest was covered by the OptiMaize demonstration in Trémentines, a community in West France. The various steps and technologies involved, from seed over NIR technique, harvesting and different chop lengths were all demonstrated by Krone in cooperation with the firms JCB, Limagrain, Orne Conseil Elevage, Holaras, Cofra and Made SA with info stands, workshops and demonstrations. Driving the silage off to the clamp, consolidating and plastic sheeting application were steps also included. Target groups were agricultural contractors and machinery dealers – all showing great interest, especially for Krone machinery.

“In particular the chop lengths S, L and XL are relevant for France,” explains sales manager France James Charron. S is 4.7 mm in length, mainly suited to the biogas sector while L and XL with 11 - 19 and 20 - 30 mm respectively, suitable for dairy cow silage with rations from 60 to under 80% maize. Trémentines was selected as location because the area is typical of dairying, maize growing regions. One month later, a similar event was held in Brittany for the same reasons, also a very important maize growing region.

## FRANCE IS IMPORTANT

The maize harvest in 2017 began about two weeks earlier than usual in this region with in-part very dry and hot days with up to 37°C. Optimum dry matter content lay, according to the estimates of the French forage experts, at 30 - 35%. In the region around Trémentines this had been already reached or even exceeded by the end of August. Despite the conditions, the Krone team was satisfied with the event resonance and the participants estimated that it certainly succeeded in increasing the degree of recognition of the OptiMaize concept.

Introduced first in Germany in 2016, Krone now aims to conquer the French market with the OptiMaize concept. For this, team Krone France even created a special slogan: “OptiMaize –because the length counts for us.” According to Eurostat, livestock count in France, with around 22 million large animal units, is the highest in the EU after Germany. An analysis by the German Maize Committee (DMK) indicates that France also has the second biggest growing area for forage maize in Europe. Incidentally, France is also second for grain maize area, following Romania.

## MORE MARKET SHARE

Two OptiMaize harvesters were already at work in the Trémentines area during the 2017 season. Krone says it has by now achieved a respectable market share in France: one which should be expanded in the coming years especially with the new model series. In fact, Krone market share is even better for its large square balers, according to the sales manager. About every fourth large square baler sold in France comes from Spelle. The VariCut system has also been well received, the market having been waiting for this. Good sales figures are also being achieved in France by Krone round balers, especially the Comprima F 155 XC, and also rotary tedders, turners and bale-wrap combinations. In total, Krone annually exports some 2500 machines to France. «



# NEWS-TICKER

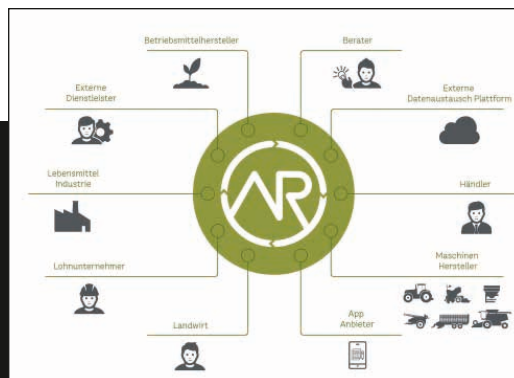
## KRONE KIDS CLUB

Another type of holiday: 30 children from Maschinenfabrik staff members visited the Krone Kids Club during the autumn vacation. Here, the kids were cared-for over three days from 6.30 am to 4.15 pm. A whole lot of fun events were on offer with numerous games and handicraft opportunities – and naturally a factory visit was part of the itinerary.



## SILVER FOR AGRIROUTER

The Internet data exchange platform for farmers and agricultural contractors, “agrirouter” developed by DKE GmbH & Co. KG should spring into action as from spring 2018. The innovative concept earned a silver medal from the DLG. Krone is a founder-member of DKE.



## TYROLEAN GRASSLAND EVENING

At the first Tyrolean Krone Grassland Evening at Thiersee, organised by Krone and marketing partner Hauser, around 1500 visitors studied 25 forage implements with tractors to the backdrop of idyllic Alpine scenery. Tractors were supplied by farmers and contractors.



## AGROPARS EVENT

At Agropars in Shiraz, Iran, Krone importer Rashin Persia presented the ActiveMow mower and a Swadro in the German Pavilion. Both implements attracted considerable interest from visitors and because of this were also demonstrated in action.

## VICE-PRESIDENT OF CLIMMAR

Ludger Gude (2nd from r., managing director of LVD Bernard Krone GmbH) has been unanimously voted CLIMMAR vice-president. CLIMMAR is an association of leading agricultural machinery dealerships and associated servicing and repair organisations from 16 European countries.

## PRIZE-WINNING SUPPLIERS

As part of a gala celebration, Krone honoured the winner of the title: “Supplier of the Year”. Krone suppliers from home and abroad welcomed the recognition through prizes given for seven categories (welding construction groups, assembled systems, drive train, hydraulics, electronics, service and “best newcomer”).



## MEDIA PRIZE

The media prize for the “Green Reportage” of the German Association of Agricultural Journalists awarded by the Dr Bernard Krone Stiftung, was awarded this year to editors from the TAZ and Stern publications and dlz Agrarmagazin, Wochenblatt für Landwirtschaft und Landleben. More than 60 editorial teams entered the contest.



## NEW IN KRONE TEAM

Since the beginning of August, Eide Bösch (32) is new Krone factory representative in the Elbe-Weser triangle region. Bosch is a trained agricultural machinery mechanic and service technician who also has sales experience. He takes over the area formerly managed by the long-serving factory representative Carsten Böger, who starts a well-earned retiral.



## KNOTTER MODEL FOR TRAINING

Krone has presented a model of a BiG Pack knotter to the Handwork Chamber of the Pfalz in Kaiserslautern, Germany. The model is to be applied there for external training of agricultural and construction mechatronics engineers, and further training for master certificate, at the Career Training and Technology Centre.



## SMART DATA, SMART SERVICE

As part of the research project “Smart data, smart service” a practically applicable solution for using and assessing data from machinery and software is to be developed. Aims are efficiency increases and production improvements in agriculture. The event marking the start of the project was held in Spelle.

## EASYCOLLECT FOR OTHER HEADERS

The row-independent maize header EasyCollect FP from Krone can also be adapted to fit other makes of forage harvester. With this development, Krone reacts to the strong demand for the EasyCollect technique right across the forage harvester market. Behind the demand is the proven high quality of the resultant chopped forage.

## DR KRONE HONoured

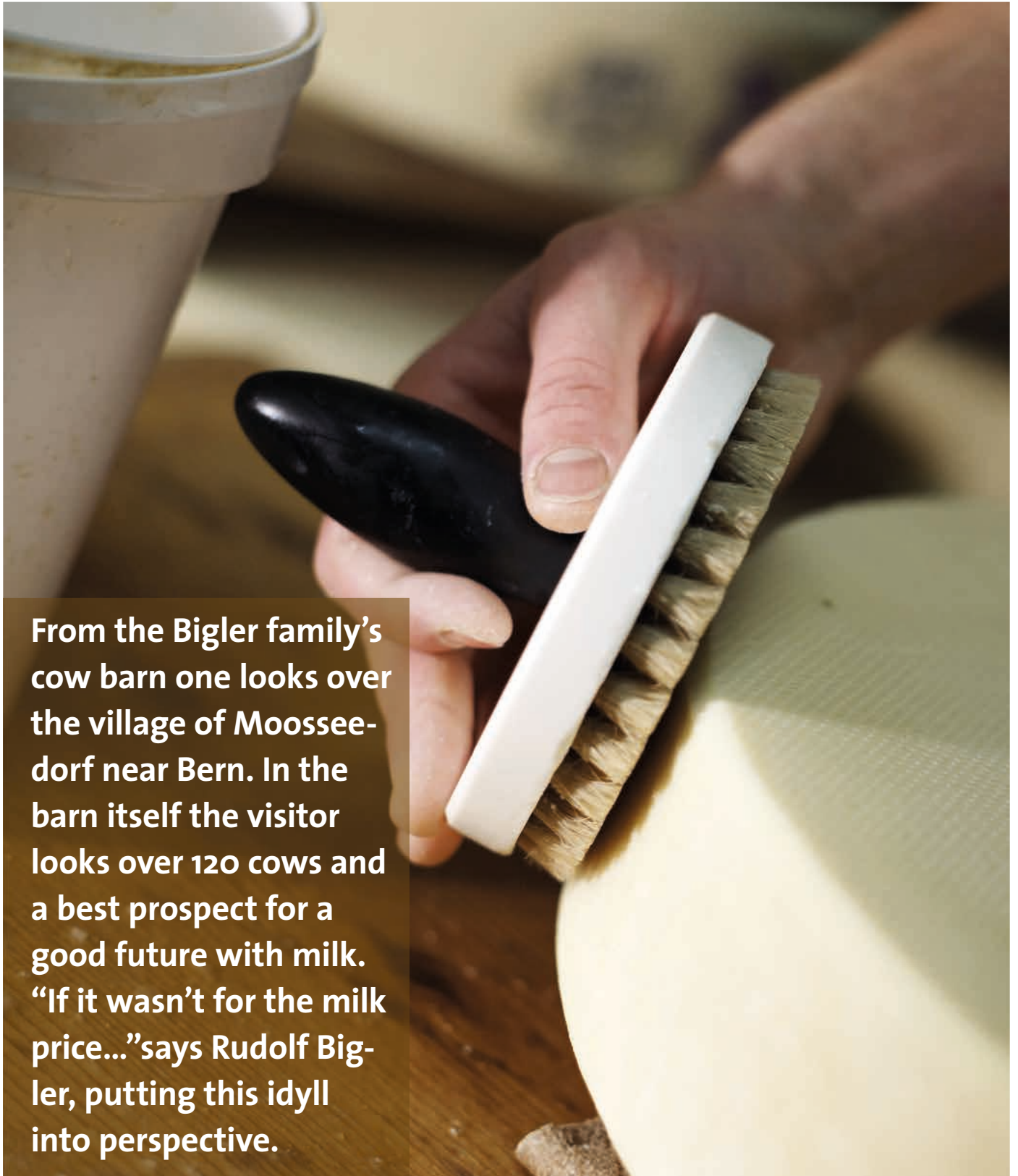
Dr-Ing E. h. Bernard Krone (2nd from r.) has been presented with the “Goldene Olga” lapel pin as a “thank you” for his help and support for the Landesvereinigung der Milchwirtschaft Niedersachsen (Lower Saxony Dairy Industry Association). Dr Krone has continually supported the action “Goldene Olga” since 2002.





**SWITZERLAND**

# MILK TO CHEESE



From the Bigler family's cow barn one looks over the village of Moosseedorf near Bern. In the barn itself the visitor looks over 120 cows and a best prospect for a good future with milk. "If it wasn't for the milk price..." says Rudolf Bigler, putting this idyll into perspective.





The Bigler family's cow barn is fully automatic with robots milking and feeding cows, followers and calves.

**W**hen we visited the Bigler farm a few months ago, Germany was still badly affected by the poor milk price year. We were therefore inquisitive about the milk production situation for producers in “cheese land” Switzerland. “It’s bad here too”, answered Rudolf Bigler. “Our farmers hope for a rise in prices although, honestly, I don’t think this will happen so soon.”

## THE CHEESE DELIVERS

In Switzerland, milk price is not quite milk price, says Rudolf Bigler describing the Swiss confederation system. A third of the farmers, mainly in West Switzerland, deliver hay milk for more easily marketed cheeses (e.g. Gruyere) and get decent prices. In spring 2017 this was 85 rappen (Rp)/l which represented 74 Eurocents. (NB: 100 Rp = 1 Swiss Franc or CHF). One third get acceptable prices (57 ct/kg) e.g. for Emmental cheese, and a final third must accept a price equivalent to just under 44 ct for processing and industry milk. While the prices have risen on average by 5 Rp/l during the summer, they are still not in the proverbial green area. “Put simply, the milk price depends on the market success of the cheese types,” explains Rudolf Bigler.

In Switzerland, the milk price system isn’t easily understood. The farmer told us about the different price levels: A, B and C milk. He has, for example, a monthly contract for a certain amount of A milk from his farm. When he steps over this amount, the oversupply automatically slips into the B price range, or even C sector. That’s not all: this contract amount is flexible, varying according to amount of milk produced in a particular season. Highest deliveries are in March, April and May leading to milk oversupply which then depresses the contractual amount of A milk. Thus, Bigler must accept that, from March to May, more of his milk slips into the B and C categories. In summer, when milk deliveries are less, the sizes of A and B milk contracts can increase.

## SELF MARKETING PAYS

“Future-oriented dairy farmers must plan their costs for survival with a milk price of around 50 Rp,” reckons this Moosseedorf farmer somewhat provocatively. However, he knows very well that most farms won’t manage this and will have to part

with their cows. This is already obvious from the structural changes in his area. “When I was a student 30 years ago there were 17 dairy farmers in our village. Now, there are only two of us left.”

For background, it’s important to realise that the average dairy farm in Canton Bern milks 20 cows on 20 ha land. And that direct payment support is according to land area. Bigler points out that this means farmers will part with their cows before they sell any land. With a 20-ha farm and relatively little work, up to 30,000 CHF subsidy can be achieved, he smiles. The state pays more premium per ha than the rent required for the land which lies, according to Rudolf Bigler, at just short of 880 equivalent, while state subsidy often reaches 1400 /ha. “This blocks the structural change and sets false signals,” he reckons.

Swiss farmers wanting to make money with milk must, alongside watching production costs, also especially choose the right marketing strategy. This means milk for cheese, and not milk for export. On the other hand, cheese is not always

Rudolf Bigler's cows produce an impressive 7000 l from the forage ration alone.

the same as far as guaranteeing a profitable end-price is concerned. With the example of Emmental cheese, this managed an annual production of 50,000 t over many years. Nowadays this figure is 17,000 t. Unfortunately, nowadays half the world produces large-hole cheese like Emmental, with a sad effect on price and the Swiss dairy farmer. Also, here applies: (too) many hunters kill off the hares. Therefore: off to pastures new.

Rudolf Bigler is already on his way towards a better future. His daily work is all about milk. Not that he has to himself milk his 120 cows. His two Lely robots take care of that twice or, depending on milk production, thrice per day. And the feeding, too, is handled by colleague robot. What keeps him busy currently, taking up about one third of his work output, is the marketing of his milk, naturally with the long-term target of better milk price margins, not only for himself but also for thousands of his colleagues.

## “GREENEST” CHEESE IN EUROPE

Alongside honorary undertakings in the milk branch organization, Rudolf Bigler is also administrative president of “aare-milch” ([www.aaremilch.ch](http://www.aaremilch.ch)). Behind this is a milk pool from 2,000 farmers from Canton Bern that together market their milk to various processors. Now, the organisation takes a big step forward, planning its own cheese making plant. “We aim to build the greenest cheese plant in Europe,” enthuses Rudolf Bigler. “With our own cheese production, we see bet-

ter added value and also because environmentally friendly production is a marketing argument.” But what does “greenest” cheese actually mean? “Green, i.e. very protective of the environment, because the system will be energy-efficient and sustainable. We aim to get energy from regionally produced wood chips with warm water and electricity produced on the roof. In the future a proportion of the whey will be used in biogas production,” he hopes.

The fathers of the “aare-milch” reckon on a yearly cheese production of 2000 to 3000 t. Already, the marketing of their own cheese has led to very many contacts signed in other countries, because most of the cheese will be for export. The Swiss cheese market is mostly satiated. Naturally, of great importance to the survival of this aare-milch project is not only sufficient and stable milk supplies, but also personnel skilled in production and marketing. Equally essential: the right retail customers. All this, says Bigler, is possible and – partially – already home and dry. However, most of the 2000 dairy farmers still keep their beasts in traditional byres bound by the neck. Bigler is uneasy about the fact that one factor is unescapable: new cow accommodation will have to be built by many members. The current housing, he fears, could have a negative effect on image and the marketing of the products from the planned cheese plant. Nowadays, consumers are very critical in terms of animal welfare.

He says that the construction of an own cheese plant at Oey Diemtigen is



well underway and that marketing via a daughter society is also well ahead, with contracts already agreed with future customers. Hay milk, but also silage milk, is to be cheesed. A public limited company has been chosen as society form, such an arrangement being more flexible, reckons Bigler, and faster-acting than a cooperative. The 2000 dairy farmers are shareholders within aare-milch which in turn is main stock-holder of the new society formed to build the cheese plant. Currently, 0.5 Rp/l is withheld from producers' payments in order to build-up own capital for the new plant. The architectural blueprints were submitted in summer. And it's planned that production will start in 2019. “This is ambitious. But this way we move onwards, getting results more quickly and how it will suit farmers and customers. That's for sure.” «





## » THE BIGLER BUSINESS IN SHORT

**Farm:** 3302 Moosseedorf, Switzerland. Rudolf Bigler and wife Christine. Children: Anja (27), Manuela (26), Daniela (25) and Simon (22).

120 cows plus followers, over 7000 l from forage, average production life: 4 lactations.

130 sows farrow to finish. 70 ha land, 15 ha woodland.

**Labour:** Farmer and wife, three employees and one farm student.

**Crops:** 10 ha potatoes, 15 ha cereals, 4 ha sugar beet, 15 ha grain/forage maize, 15 ha grassland, 5 ha permanent pasture.

**Feed:** Average five grass cuts of which the 1st and 5th are for silage (made with silage additive). Other cuts for hay (in-barn ventilation). Grass is drilled into stubble after cereal harvest. This catch crop grass is cut once in autumn and once again in spring before establishment of maize, beet and potato crops. Bought-in is feed from around 50 ha of forage and grain maize.

**Harvesting:** Grass with own mower, tedder and forage wagon. Maize harvested and chopped to 20 mm by contractor and mixed with beet pulp in the clamp.



Currently, around 21,000 dairy farmers in Switzerland produce a farm average of 160,000 kg milk.

## » THE SWISS MILK MARKET

**The milk marketing and associated pricing system in Switzerland is somewhat complicated. Because of this, we've asked Dr Roman Engler, chief editor of the "Schweizer Landtechnik" magazine, for a brief explanation:**

- » Nowadays we have a milk sector organisation (BOM) serving as platform for all actors in the milk market (producers, traders, processors). However, this in most cases fails when it comes to applying the aims based on the variety of points of view held by the individual members. The target price is established each month for milk in the individual segments A, B and C. However, as a rule, these targets (at least in the lucrative segments) are never reached.
- » Currently, around 21,000 dairy farmers in Switzerland produce an average 160,000 kg milk per farm annually.
- » The produced milk totals just under 3.5 million t, marketed by 27 organisations at fundamentally different prices. (industry milk, cheese milk, organic milk).
- » Additionally, the produced milk is divided into segments A, B and C. A milk is destined for the inland market and for milk products with commodity price compensation. It is protected from market effects of imported products (border protection). Milk in segment B is for products without border protection or commodity price compensation, aimed for the inland market and export into EU countries. In C segment, the milk products are without any subsidy and only for export outside the EU. Around 90% of the milk is in sector A.
- » The basic prices (April 2017) are: A milk: 65 rappen (Rp)/kg; B milk: 46.8 Rp/kg; C milk: 26.3 Rp/kg. Current average market prices achieved in February 2017 were: A milk: 53.99 Rp/kg; B milk: 41.59 Rp/kg; C milk: 28.06 Rp/kg.





## MODEL SERIES MX

# COMPLETELY REVISED



With the new wagons MX 330 GD/GL, MX 370 GD/GL and MX 400 GL Krone presents a total of five new dual-purpose wagons – with load volumes of 33, 37 or 40 m<sup>3</sup> whereby the initials GL stand for all-steel bodywork, GD for all-steel bodywork with

dosing roller. Common to all the new models is, among other factors, the EasyFlow pickup with 1800 mm working width and five rows of tines. With the new MX, Krone relies on the patented W pattern of double tines; this guarantees continuous feed

flow and uniform filling of the chopping and conveying aggregates over the complete breadth. The conveyor breadth of the cutterhead is 1580 mm; the cutterhead is armed with 41 knives enabling a theoretical chop length of 37 mm. Adjustment for desired chop length is rapidly and simply carried out via central knife control (for 0, 21, 20 or 41 knives). Characterising the MX types 370 GL/GD and 400 GL is the adjustable front wall which offers approx. 4.5m<sup>3</sup> more load capacity and also serves as unloading aid for complete and rapid emptying. Those wanting maximum efficiency out on the farm can select further optional features: e.g. PowerLoad loading automatic, accelerated automatic mode for the floor chain, LED work lights, articulated drawbar automatic, K80 ball and socket coupling in combination with lower hitch, a camera system and the Krone control terminals Delta or CCI 1200. «

## TERMINAL CCI 1200

# PRECISE CONTROL

Ease of operation and security are two important points in focus in the development of the new ISOBUS-compatible CCI 1200 terminal. The new 12-inch touch screen enables simultaneous viewing of two universal terminals (UT) on a single display. In this way, e.g., complex implement combinations such as baler plus bale collector wagon, or camera pictures can be utilised via a single terminal. The advantage: only one display is required. This not only saves money but also simultaneously enables improved all-round vision. The CCI 1200 terminal attracts through its colour-intensive and high-definition display that is very readable and able to be read and operated under all light conditions. For the first time, high-definition

graphics are now presented. Additionally, functions can also be represented in mini-view; hereby the most important information is shown. The mini-view is enlarged through simple tapping. The layout of the CCI 1200 screen can also be easily configured to suit the individual requirements of the driver. In this way the presentation area for machinery and the mini-view window for cameras and joysticks can be arranged vertically or horizontally. Through the softkey order on the righthand side of the display, all operating functions can be rapidly and intuitively carried out with the right hand during field operations. «



SERIES: “PREVENTION INSTEAD OF CURE”

# THE QUALITY MU



The report on the advisory concept of the “Veterinary practice on Güterstraße” in issue 1-2017 caused resounding reaction from Xtra-Blatt readers. Sufficient reason for taking individual themes from the report and delving deeper into them via a small series. We kick-off on the theme feed quality.

**M**ilking cows need three important things in order to give good performance: optimum feed, the correct feed mix at the right time and welfare-based husbandry conditions. “This sound simple, although in practice it appears not to be so easy, because the reality is different,” observes André Hüting, one of the four owners in the “Veterinary practice on Güterstraße” at Hamminkeln in the Lower Rhine. His experience shows that the motto “prevention instead of cure” applied together with his colleagues via intensive on-farm advisory work helps ensure that illnesses of dairy cows do not occur in the first place.



# JUST BE RIGHT



Because of the forage maize harvest results in 2016 and 2017 it was plain how difficult it is to produce optimum silage, says the vet, who himself runs a farm. “At least in our region, the dry matter content in both these years differed greatly. Hot weather in 2016 led to the maize ripening too quickly. And in 2017, the spring drought coupled to our heavy, loamy soil meant emergence was late. Accordingly, ripening was very uneven with resultant too-low dry matter. Sometimes water was running out of the silo during consolidation. From the point of view of the cow, however, optimum silage quality must remain in the foreground. Despite the

weather, there were a few things that could have been done to improve forage quality where more knowledge and sensibility on the part of some of those involved had been brought to play.”

## QUALITY BEFORE SPEED

This advice he writes not only in the guest book of the harvesting contractor, but also in that of the farmer. For grass silage, good feed quality already begins in the care of the grass sole and entails at the least regular reseeded. And with forage maize, variety selection means the foundations for good silage can be laid right at drilling so that all areas do not need to be cut at the same time within a very short window. Practical here could be contractor and farmer planning together. The same also applies, from this vet’s sight, for timely and regular sampling of dry matter content before the harvest. “Here, the contractor can have a very positive effect, when he makes an effort and when the farmer accepts the advice. Incidentally, this applies not only to maize but also at least as intensively to grass silage. Mostly, too much is mowed at one time and driven in to the clamp too late. The grass then has a dry matter of 40 to 45%, and not 35% as it should be. With an exactly planned logistic operation, this can be avoided.”

He also sees as unacceptable the efforts to harvest as much material as possible from each area. The crop is mowed too low, and turning grass can be akin to grubbing, with the very last leaf scratched together during tedding. “The result is an ash content way over the sensible margin, i.e. substantially above 10% of dry matter. This means the silage has already lost out as far as a cow is concerned, before it has even landed in the clamp. And the result has to be sorted out later by we vets. Surely the better way is to avoid illness from the beginning.”



André Hüting also wishes more awareness in the contentious theme maize grain cracking. “Not only cracking, but instead at least quartering is required. Still better is milling.” From his viewpoint, there’s often a problem here on the part of the farmer monitoring of the harvest – and with the flexibility of the contractor. “In the past two years there have been heavy discussions within the sector over technical solutions for length of chop. However, it’s not the chopping system that is the decisive factor but instead the driver that operates it. He must, according to the instructions from the customer, continually check the forage quality and adjust the machinery according to the crop he’s working on. And when the result is not right, the farmer should have the courage to immediately stop the harvest operation. It cannot be that, just through one day’s logistic optimisation, feed quality is adversely affected for 364 days.”

The argument that the contractor cannot, or will not, follow these instructions where the farmer seeks only the cheapest deal and seems unwilling to pay extra for a little more effort definitely applies, says the vet. But extra costs for more time and optimum work quality can be justified in every case. “Let’s take the example of a 50-ha forage growing area. If the contractor got 30 euros/hour more for his work, that would be an extra cost of 1500 euros. The feed value on this area would have a value of certainly 150,000 euros. Good silage supplies 80% of required ration energy, poor silage only 50%. What’s the importance of just an extra 1500 euros when the contractor successfully manages to secure much higher feed quality? The higher milk output from the forage and, above all, the better animal health compensates for this many times over. The farmer should speak to the contractor on this theme very definitely – or vice versa,” emphasises André Hüting.



- 1** Repeated control is important: In maize silage all grains must be broken into more than a few pieces.
- 2** Veterinary surgeon André Hüting is convinced that most illnesses of beef cattle and dairy cows can be avoided in the first place when feed quality, feeding management and husbandry are all correct.

## CONSOLIDATING IS THE BENCHMARK

A further bone of contention in the subject feed quality he sees as the consolidating of feed in the clamp. With grass, the material is, after all, nowadays tipped on the clamp surface from trailers driving lengthways over it. “However, the layers of grass spread before consolidation should never be more than 20 to 30 cm deep. And two or three vehicles for compacting is always better than just one. If the consolidating driver is faced with another load before he has finished rolling, then that’s very bad planning. If need be, the forage wagon just has to wait. This is why the consolidating should be the benchmark for the speed of the entire harvesting chain – not the silage harvester!”

The situation during clamp filling, incidentally, is even more important with maize. It is absolutely sub-optimum if the forage transport vehicle tips trailer contents in front of the clamp and a single consolidating driver has then to spread the forage material. “For this reason, it’s also better with maize if the silage wagon drives lengthways over the clamp distributing the load.” In this way, loads with varying dry matter content material are better distributed by the different wagons coming onto the clamp. «



LANDTECHNIK VAN LAAK

# MORE FAMILY SERVICE



For the agricultural and construction machinery specialist firm van Laak in Kalkar, forage harvesting machinery is a definite focal point. A fast and professional service and good customer contact are of the highest importance for the van Laak team.

**S**hould you have walked through the main door of the van Laak Agricultural and Construction Machinery specialist firm in Kalkar this August, you'd have found yourself in a light-flooded, but almost empty, hall. The smell of fresh paint and newly-laid flooring would have given away the situation: the hall, completely empty but for a few rolls of bale netting, was being redecorated. "For us, the sales area is just like a visiting card. And



after nearly 15 years, renovation was urgently needed,” explains Anita van Laak. Her husband Michael and Anita van Laak grounded the organisation 21 years ago and gradually built it up to its present size with 12 employees. “The renovation has made the hall much lighter. Thus, we can offer our customers a friendly welcome and show off our range of machinery suitably,” adds Michael van Laak.

The range mentioned is impressive. This – naturally – in the first place includes agricultural machinery. Here, this specialist dealer concentrates on a handful of strong core brands, including Krone. He certainly sees a challenge in this respect.



“On one hand, the farmers and contractors are used to getting the suitable machinery solutions for all aspects of their work. On the other, for a firm of our size it is hardly possible for us to support a huge number of different makes. After all, more important than “everything for everyone” is more than ever competence in advice and service, especially for a family firm like ours. However, this can only be delivered with the necessary commitment and intensity with a smaller number of makes. Less is in this sense therefore more,” emphasises the owner.

## FOCAL POINT FORAGE

Husband and wife van Laak and their sales advisor Marco Schorpp see as a challenge currently the structural change within agriculture. They are very aware that in their traditional trading area of 15 to 20 km around Kalkar they are not able to achieve the necessary business turnover with farming equipment alone. In Lower Rhine region, too, farm numbers have been reducing for years now and with that, also the market potential, at least as far as unit sales are concerned. “At the same time, the pressure from larger dealerships grows and they have permeated the mar-

ket over an ever-increasing area for some time now,” observes Marco Schorpp. Meanwhile, his boss is already seeking an additional sales advisor in order to increase the company’s presence in customer circles, and to establish a further special in the team. “However, good sales people are, just like top mechatronics engineers, really difficult to find,” regrets Michael van Laak.

Definite focal point of work within agricultural machinery is the forage harvest, which is not surprising in Lower Rhine with its relatively substantial livestock density. With Krone machinery, the dealer and salesman say they are in a good position and, with regard to Krone’s respectable market share, well represented. This applies specially to round balers but also for mowers, turners and tedders. In fact, more than a dozen BiG X and BiG M machines are running with contractors in the region. “While they carry out a proportion of the maintenance and repair work themselves, we work well together, alone regarding supply of spare parts and wear parts,” reports Michael van Laak. In order to remain accepted as a partner over any length of time as specialist workshop he annually invests a five-figure sum in the training and development





of his mechanics and mechatronics engineers. "While this is a real big cost block, it is indispensable. As specialist firm we want to be, and indeed must be, top rate. This is how quality is measured nowadays." The expenditure pays for itself, he reckons. He is, for instance, satisfied with workshop utilisation rate. Because of the milk price crisis, the service turnover rose above average in 2015 and 2016. Machinery turnover has remained halfway acceptable. "In 2016 the contractor customers invested more with us. In 2017, it is then again more the farmers who have invested – thanks to the better milk prices."

## BROAD SERVICE OFFERING

Alongside farm equipment, further business stand-points are cleaning technology, tyre services and also construction and communal machinery. Here too, the focus is aimed primarily at customers in the surrounding locality. "The larger construction firms and city administrations do not tend to belong to our customer circle, but rather many smaller medium sized handwork and building enterprises," continues van Laak. Particularly in connection with this, the theme hydraulics is a speciality with which this team scores

well, especially with agricultural and construction machinery. "On this theme we have several workshop employees who have specialised, and we have continually invested in the necessary technology. Meanwhile we have earned ourselves a good reputation in this service segment," say the owners, mentioning that a lot of resonance comes through telephone calls from satisfied customers.

Additionally, business is literally going "round" for the van Laak firm because the services on offer include one concentrating on wheels and tyres, whether bought new by customers or taken in for repair. Alongside standard tyre repairs, vulcanization is also catered for as well as foaming, the treatment of tyres making it impossible for them to go flat. "Both are work areas that not every workshop offers," says the van Laak couple.

Michael van Laak and his team also have high standards when it comes to service. Here lies one of the central advantages of the smaller specialist firm compared with the bigger organisations, Anita van Laak is convinced. "We are there when the customer needs us – in emergencies 24 hours per day, seven days the week. While this is not necessary 365 days of the year, it is

natural for service during harvest time. Via our telephone service we are always personally reachable for our customers. And because 90% of these calls mainly come from regular long-time customers, many are on first name terms with us and our staff. The service is very family-like, characterised by great trust. Everyone knows that the team from van Laak will always find a solution: when not immediately, then within a short time. And this also ensures that when new machinery is being thought about, we are among the first dealers visited." «

- 1** The machinery is suitably presented on a green lawn.
- 2** For Anita and Michael van Laak (l.) and sales advisor Marco Schorpp, Krone represents one of the core markets for the company.
- 3** Central area for the technical service is the workshop.
- 4** The hydraulic service is of great importance for the van Laak team, made clear by the well-organised spare parts store.



Agricultural machinery dealerships

# TRADING TRENDS

He is a top expert in this sector having observed and accompanied the agricultural machinery trade over decades. Jürgen Boomgaarden is publisher and chief editor of the magazine “Eilbote”, a publication that, week after week, informs the farm machinery branch about latest developments on the market.





## » THE DIGITAL ADVANCES IN AGRICULTU- RAL ENGINEERING REQUIRE SPECIAL ELECTRICIANS IN THE TRADE.«

Jürgen Boomgaarden

**T**he theme farm machinery is interwoven for generations with Jürgen Boomgaarden and his family. His grandfather had a farm machinery dealership and his father at the end of the 1940s founded a newspaper for the farm machinery trade. The first issue of the “Eilbote” appeared in 1949. Since then, the “Eilbote” has become established as weekly magazine for the farm machinery sector throughout the German-speaking regions. Jürgen Boomgaarden took over the management of publisher and magazine in 1977.

**XtraBlatt:** It's thought provoking that, back then, the farm equipment trade looked different compared to now – or how would you describe the situation?

**Jürgen Boomgaarden:** *In the 1970s, there were still large dealers that delivered not only to the many master blacksmiths, but also supplied farm machinery traders. I recall a big dealer in southern Germany that had a massive range of products, from tractors to the smallest harrow tine. In the north operated, for example, the firm Mager & Wedemeyer as large dealer, and still does. The firm Rau, Kirchheim/Teck was not only a farm machinery manufacturer but also developed a large-scale dealership. In those days, the system worked very well because the machinery did not have the many specifications it now has. Additionally, the variation within a model programme was substantially smaller. These big dealerships had respectable stores of spares and were able to give prompt service to farm machinery traders. When, at the beginning of the 1980s, unit sales began to fall, many of the big dealers disappeared from the market. At the same time, some individual dealerships became even larger.*

**XtraBlatt:** How many firms existed in those days and, in the 1980s, how many staff members had a mid-sized farm machinery trading company?



Publisher Jürgen Boomgaarden has known the farm equipment branch and associated trade very well over decades.

**Boomgaarden:** *For West Germany I estimate the number of farm machinery firms and blacksmiths at around 7000. On average, this kind of dealer would have, at the most, 10 to 12 employees. These were mainly individual firms because the system of branch outlets began first at the end of the 80s. From these have developed the private and cooperative businesses that we still have now.*

**XtraBlatt:** In those days, every dealership still had several brands in the showroom. Was it far away from any exclusivity?

**Boomgaarden:** *Certainly! I remember well dealerships that had John Deere tractors and Claas combines in their range. IHC or Fendt and Claas were favoured combinations in trading. The first company that established exclusivity with its brand was John Deere in the 80s.*

**XtraBlatt:** ... and how have the cooperative farm equipment traders developed?

**Boomgaarden:** *The cooperatives had their regional business areas and nearly every cooperative traded in farm machinery. The strength of the cooperative farm machinery companies increased substantially moving from north to south. In Schleswig-Holstein, private farm machinery traders were dominant and always strong. That had a lot to do with the agricultural infrastructure there.*

**XtraBlatt:** Did the infrastructure of farm machinery dealerships change in 1990 with the unification of Germany?

**Boomgaarden:** *The large private dealerships were quick in establishing branches in eastern Germany. The cooperatives*

*followed. Mostly, new farm machinery dealerships evolved from the former KFLs (district farm machinery supply organisations).*

**XtraBlatt:** How does the farm machinery trade in Germany look now? How do private concerns and cooperatives get on with each other?

**Boomgaarden:** *Well, nowadays I would estimate the market share of cooperative and private farm machinery trade at 40:60. Whereby there are other business constellations such as the Claas establishment of its own subsidiary outlets over the last years.*

**XtraBlatt:** Since the millennium, exclusivity in farm equipment trading has developed strongly. What effect has this had on the numbers of specialist businesses?

**Boomgaarden:** *As said, John Deere established this first. Nowadays, nearly all the long liners go in this direction, or at least try to. This has naturally its consequences. In the register of hand workers there are still 5689 agricultural machinery workshops, including cooperatives, entered. Only some 600 firms are now accepted as so-called A-dealers.*

**XtraBlatt:** Does this mean that specialist agricultural machinery services are disappearing from the countryside?

**Boomgaarden:** *In principle we have to reckon with this, especially where unprofitable branches are concerned. However, a reduction in numbers I do not regard a problem for customers in that nowadays there are already fleets of service vans underway. The machines have become large and no longer drive to the workshop for repairs. These take place on the field, or in the farmyard. While the individual manufacturer has maybe a white spot here and there on the map, now in total the network of farm machinery support throughout Germany is pretty tight.*

**XtraBlatt:** Most of agricultural machinery dealerships are still family firms, medium sized businesses. How are they surviving? How are they doing economically?

**Boomgaarden:** *In the present decade, business has been good - and still is for these enterprises. The main problem now is the recruiting of employees and the establishment of a successor for the businesses. Here, politics should sup-*

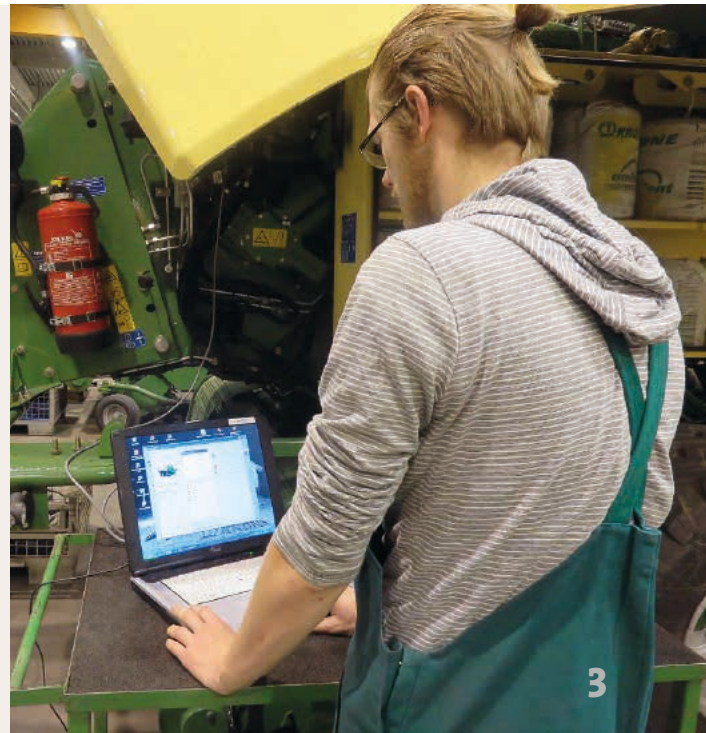


*port much more capable young employees along the way to starting up on their own. For instance, through more generous credit availability from KfW (Credit Institute for Reconstruction Assistance) reserves, and tax reductions in the first years after grounding a company, or taking over a business.*

**XtraBlatt:** Apropos profitability, can a mid-sized agricultural machinery trading business survive without a tractor in its range, in other words in avoiding the exclusivity of a long liner?

**Boomgaarden:** *I know only a few examples of this. But I certainly see a future for businesses that specialise in implements and do not put tractors and combines in the centre point and even avoid selling large self-propelled machinery. I see a chance for the specialists. For instance, in cultivation equipment and drilling, or also for forage harvesting equipment. Many dealerships bound to tractor manufacturers feel driven to first of all force the sales of tractors, although the margins for the implements are substantially more attractive for the dealer. However, the tractor is often the door-opener for customers coming into the business. And anyone who really wants to sell a tractor without an exclusive binding to a long liner can do business as a B-dealer or approach new suppliers on the scene. At Agritechnica there were a number of new manufacturers to be seen that want to get a foothold in the German market and seek independent dealers.*





**XtraBlatt:** The machines become more complicated with increased digitization. Can dealers still explain the technology, maintain it and repair it?

**Boomgaarden:** *The digitization advances in agricultural machinery actually require electronic specialists in the dealerships. Not so long ago, a dealer said to me that the digital technology was, in fact, increasingly too much for the normal mechanic. However, an electronic specialist would not be fully employed in a business like his. Actually, I believe the training producing mechatronics engineers for farm machinery is only to meet a passing requirement. In the future, I think the mechanic will service mechanical aspects of the machinery and in agricultural engineering, as in industry and other demanding service areas, there will be specialists in electronics. I do not see both specialties being united for any length of time in the form of a mechatronics engineer. A thought could be that those specialising in electronics within the agricultural machinery sector might be able to establish themselves either as employees or as self-employed agricultural machinery electricians working as partners with dealerships.*

**XtraBlatt:** Alongside knowledge of electronics, the employees in farm equipment dealerships must also have an intensive knowledge of the product range. This means continuous training and further education that is often required by the companies supplying machinery to the dealerships. Can every business still afford this?

- 1** Jürgen Boomgaarden reckons that the share of family firms in farm machinery trading is about 60%.
- 2** Krone fans in farm machinery trading. In this way, a fork life becomes a new member of the BiG line ...
- 3** Electronics increasingly influences the work of the agricultural and construction machinery mechatronics engineer.

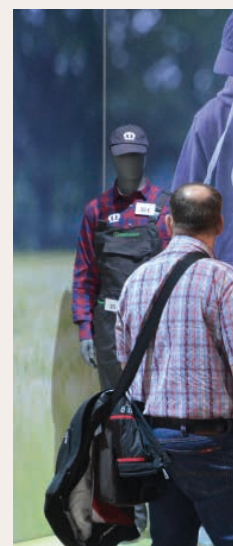
**Boomgaarden:** *Dealers must regularly allow their workshop staff to be schooled by agricultural machinery manufacturers. This represents several weeks per person and year. The costs are high. But the effort is indispensable in the light of today's demanding technology. The customer expects the best and fastest service. The customer is, however, only to a very limited extent prepared to pay for this appropriately. However, a question that is just as important is whether the employee in the trade is able to follow and understand these technical innovations, or if specialists such as the electrician are necessary here. A further question is: Can I guarantee this support for all the machinery in my range. Or should I reduce the size of my product portfolio? As already said: Some dealerships will specialise in certain areas. I see many niches and, with those, many possibilities for small and medium dealerships to establish their own business ideas. «*



AGRITECHNICA 2017

# INSPIRATIONAL!

The Krone stand in Hall 27 is definitely established as a real magnet for Agritechnica visitors. Guests of all age groups soon found themselves exhilarated by the machinery innovations and all the information on offer. The Krone team sincerely thank all guests for their great interest!







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info.ldm@krone.de  
www.krone.de

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