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**ROLLANT UNIWRAP
Provides Extra Nutritional Value**

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100 Years of Harvesting Excellence

A century ago, August Claas started a company that developed a revolutionary "bill hook" knotter, forever changing automated baler design. One hundred years and more than 1,000 patents later, that family business has grown into a world leader in harvesting technology, producing the most advanced forage harvesters and combines on the planet.

As we celebrate a century of CLAAS success, we reflect on what has made the past 100 years possible. You. Your loyalty and commitment to CLAAS innovation inspired "the next better." Better technology. Better haytools. Better forage harvesters. Better balers.

Under the guidance of second- and third-generation CLAAS family members, Helmut Claas and his daughter Cathrina Claas-Muhlhauser, the company has stayed true to its roots as a family-run business. They have seen CLAAS become the fourth-largest agricultural equipment manufacturer in the world and the global market leader in the production of self-propelled forage harvesters.

With steady progress, our products will continue to carry the ingenuity and advancement you've come to expect from CLAAS. So here's to the next generation of inspiration and innovation. It only get's better from here.

Bob Armstrong, Editorial Director

CLAAS PRODUCT FEATURE

JAGUAR AUTO FILL



The JAGUAR AUTO FILL camera system incorporates digital 3D image analysis to help minimize crop loss in the harvesting process.

This camera technology enables the JAGUAR spout to track the edges and available fill volume at every point in the receiving trailer. By determining these points, as well as the impact point of the forage being loaded, the AUTO FILL system is able to locate empty space in the trailer and load according to the loading program that is chosen.

Mounted on the spout of the JAGUAR forage harvester, the spout is first manually positioned in line with the trailer to the side before the AUTO FILL is engaged from the cab and the camera system begins calculating dimensions. The camera instantaneously measures length, width and depth of the trailer, and follows those dimensions to sufficiently load the forage.

Versatility is also enhanced in the updated AUTO FILL feature. The automated filling system can be used with a wide range of forage trailers and can even be used at night. Working lights for darker hours and ease of operation lead to reduced operator fatigue and ultimately reduced feed loss through efficient loading from the harvester.

After the trailer has been filled, the operator can quickly flip the AUTO FILL off or manually move the forage chute to disengage the system.



See JAGUAR AUTO FILL in Action!



Spring Time Is Prep Time

FORAGE EQUIPMENT CHECKLIST



The onset of spring is a welcomed sign to the farming community. The ability to move into the fields after months of machine hibernation is the first step toward a quality-growing season.

However, before being overtaken by the exuberance of a new planting or harvest season, every piece of the machinery should be thoroughly inspected to guarantee each is in peak working condition.

Hay and forage implements are among those items with a number of checkpoints to cross off the list before setting down wheels in the field. By going through this process, farmers can minimize time lost and ensure harvesting goes efficiently, even during the most uncertain field and weather conditions.

1. **Adhere to the owner's manual:** With the variables among different mower conditioners, balers and other forage equipment, the owner's manual is as valuable to the operator as any tool. The manual provides specific data and information on adjustments and settings that will best fit an implement.
2. **Check gear box and oil:** This is one of the most important quality control steps when checking forage equipment. Gear box oil should be checked regularly and changed as needed; depending on the machine, gear box oil should be changed before every harvest season and when the machine has reached specified operating intervals.
3. **Check all lubrication and greasing points:** CLAAS machines typically come with high quality shafts that require less frequent greasing intervals, but nonetheless keeping an eye on the greasing points is critical to preventing downtime. Among the main greasing points are the PTO shafts and u-joints.
4. **Maintain the cutterbar:** Monitor the cutterbar for damage and wear, particularly the protective wear skids. Also, if harvesting in drier conditions, alfalfa stems will have more sticky resin, which can create a sap that sticks to the cutterbar and can lock the disk in place; this can cause the clutch to burn when trying to turn over the PTO. Shut down the tractor then turn the disk by hand before starting the machine to check for any resistance and remove any substance causing interference.
5. **Check all springs:** Make sure all belts, chains, bale knotters and other various parts are properly adjusted and tensioned to ensure the smooth operation of equipment in the field.
6. **Vent friction clutch:** Equally important on both mowers and balers, the friction clutch should be vented at least once a year. Without venting, the clutch can rust together and fail to slip.
7. **Inspect baler and mower knives:** The knives should be routinely checked for damage like chips, wear, and for sharpness.
8. **Double check windrow settings:** Perhaps the most important aspect of baler settings, the rake and baler widths must match. In order to maximize baler capability, the proper windrow width must be achieved. If the baler is four feet wide, the rake should be leaving 48-to-54 inch windrows reducing the need to weave.
9. **Adjust bale density:** CLAAS is among the manufacturers that allow operators to adjust bale density from inside the cab. It is important to check the first few bales and adjust the settings accordingly to maximize density and efficiency.
10. **Match baler to crop:** Not all balers are built for all crops. Specifically, silage and cornstalks are hard on a machine and should only be harvested with a crop-specific baler.

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TIPS
PREPARING
FORAGE
HARVEST
EQUIPMENT

Oklahoma Cattle Growers Benefit from Providing Their Own Feed



ROLLANT UNIWRAP Provides Extra Nutritional Value

When it comes to raising healthy cattle, nutrition is key. From calves to yearlings to cows, daily nutritional requirements include protein, calcium and vitamin A.¹ Rising feed costs and fewer cattle in the US² are inciting cattle growers to look for more cost-effective ways to provide the nutrition their livestock require.

Forage that's harvested earlier in the spring has proven to have higher nutritional value and digestible nutrients.¹ However, cutting and drying hay and grasses with high moisture content early in the season can be challenging.

Phil Cantrell raises cattle on land between Kinta and Stigler, Oklahoma. "Last year I had about 300 mama cows, along with their calves," he says.

Last year, in an effort to find a solution to rising feed bills, Cantrell purchased his CLAAS DISCO 3050 Plus mower, LINER 2700 rake and ROLLANT 375 UNIWRAP baler from Stigler Milling, hoping to conquer his wet fields and provide his cattle with nutrient-dense forage.

Cantrell baled 250 acres that year, and he plans to bale 300 to 350 this year. "I started in March last spring, and I finished with 2,500 bales by June 1. That was my first experience using CLAAS equipment, and it worked real good. I can bale right after cutting, instead of having to wait for it to dry out for five days," says Cantrell. "I don't lose leaves, and I keep more of the moisture and nutritional value for the cattle."

Destry Harver is also a cattle grower and Stigler Milling customer. "Chris Sloan at Stigler talked me into trying CLAAS equipment a couple of years ago," he chuckles. "I've been tickled to death with it. I can cut earlier and not worry at all about moisture content. It can rain, and I can still go out, cut and bale right away. It has definitely made my life easier."

Harver has had his equipment for two years now. He has a front mounted 3100 mower with dual rear-mounted DISCO 9100. He also uses a LINER 2900 rake and a ROLLANT 355 UNIWRAP baler. He plans to add two more ROLLANT 455 UNIWRAP balers in the next couple of months.

"Before I got this equipment, I couldn't cut early on my bottom pastures," he says. "I had to graze it, and there was no spring cut. Now, no matter how wet it gets, I can bale."

The ROLLANT UNIWRAP is a round baler with a built-in wrapper and knives that cut forage into shorter lengths, allowing for efficient ration mixing. This baler allows growers to bale right after mowing, while the forage is still wet – even at full bloom in a wet spring – reducing the loss of nutrients.

According to an Ohio State University study, the amount of nutrient loss is directly proportional to the dry matter content of the forage when it is handled.³ In fact, it is ideal to have at least 40 percent moisture content to avoid breakage and shatter losses.



Higher value

Cantrell says he is also providing his cattle with highly nutritional forage. His ryegrass tested at 16 percent protein last spring, and he believes it would have been even better if he had harvested earlier in the season. He also cut clover early, resulting in 22 percent protein content.

"It was great for all of the cattle, but it was excellent for weaning calves," Cantrell explains. "They'd leave the shade to go and eat, even in the heat. They liked it, and they looked really good."



TIPS FOR PRODUCING HIGH QUALITY FORAGE

Forage quality is typically determined by six primary factors:

- Crop Species
- Variety
- Maturity
- Harvest/Storage Methods
- Environment and Weather
- Soil Fertility

Crop species and variety each play important roles in maintaining quality. The genetic makeup of a crop can influence a number of characteristics. In legumes species, protein content is high and easier to digest. With breeding techniques, varieties that deliver improved quality are being promoted.

The maturity and harvest date can have the greatest impact on the quality of the crop. As the plants mature, the forage quality alters and measurable losses can be seen in a matter of days. If a producer waits too long to harvest, the plant can develop an excess amount of lignin in the cell wall, which cannot be digested.

Using the correct practices when harvesting is a great way to prevent unnecessary damage. Knocking off leaves when harvesting, storing a crop at improper moisture level or failing to properly ensile forage can lead to crop loss.

While the weather may not be under the grower's control, certain aspects of the soil fertility and environment can be coordinated. Soil fertility has a greater impact on yield than quality, but soil on extremes of the spectrum, either too low or far too high, can limit quality; adding phosphorus and potassium can assist in soil fertility maintenance. In regards to weather conditions, rain delaying the harvest is not the only costly damage. Letting a crop grow extensively in high temperatures can decrease quality, as extreme heat can lead to greater lignin accumulation.

These six factors—along with insect and weed control—are keys to maximizing forage quality. For crops harvested as feed for ruminants, maximizing the digestible cellulose or hemicellulose and minimizing the lignin content is also important.

As a general rule based on plant morphology, the proportion of leaf to stem in a given forage plant relates directly to its forage quality.

Harver says that he's seeing advantages, too. "I'd say there's at least a 25 to 30 percent increase in the value of the silage," he says. "My cattle are even milking better."

Saving money

Nutrition isn't the only benefit of early forage cutting and baling. It is also less expensive. Harver has baled between 10- and 12-thousand bales over the last two years. "It's early April now, and I've already been raking hay, some wheat pasture and ryegrass," he says.

Harver says his feed bill has certainly dropped, but he's also saving money in his operational costs. "It's still some trial and error for me," explains Harver, "so I'm not able to easily compare costs from one year to the next. I fed more cows last year, but this year I have more yearlings. It changes all the time."

Cantrell says that providing his own forage cut his feed bills by a third last season. He anticipates that it will be a savings of nearly 50 percent this year.

Spreading the word

"I know another farmer who has a CLAAS mower and a LINER 2700 rake, and he loves it," says Harver. "It's just good equipment."

Cantrell agrees. "It's a big investment, but it's paying off. I've been recommending it, and people have been checking out my equipment. In fact, I have a neighbor considering buying a system right now."

1 *Nutrient Requirements of Beef Cattle*. Department of Animal Science, Oklahoma Cooperative Extension Service, Division of Agricultural Sciences and Natural Resources, Oklahoma State University. www.pods.dasnr.okstate.edu.

2 *Cattle Numbers Down, Feed Costs High*, Texas expert analyzes USDA Cattle Inventory report. Hay & Forage Grower. Feb 2, 2013. <http://m.hayandforage.com/livestock/cattle-number-down-feed-costs-high>.

3 *Round Bale Silage*. AGF-010-95. Ohio State University Extension, Department of Horticulture and Crop Science. <http://ohioline.osu.edu/agf-fact/0010.html>.

Minimize Forage Drying Time. Consider Using A Tedder.

One of the most important factors in the cutting and harvesting of forage is minimizing drying time. With the unpredictable weather patterns farmers experience, getting forage crops cut and quickly harvested must be done efficiently.

To accomplish this goal, incorporating a CLAAS tedder into the haying implement lineup is of utmost importance. Spreading out windrows helps evaporate moisture from the crop before a baler takes to the field. The technology designed in modern tedders aims to spread the material evenly with each pass, and prevent damage to the turf.

“The point of the tedder is that it spreads the crop evenly across the mowing width and gives it maximum exposure to the light and air to help it dry down faster,” says Matt Jaynes, CLAAS Product Coordinator.

“A tedder will also make forages more consistent. If it’s lumped in a windrow, it will be more wet on the bottom than on the top.”

Tedders aim to fluff the crop as much as possible without causing damage. This process is done by use of equal-length steel tines that toss the forage but put 25 percent less ash into the crop versus the competition’s unequal tine length design.

Equal-length, steel tines are just one advantage CLAAS tedders have over the competition. “Tine angle is another point of distinction. The CLAAS line of tedders allow the operator to rotate individual tines forward 7 degrees. The result is less fuel consumption, a wider, more consistent spread pattern and less leaf loss than any other tedder on the market. It is the number one reason why alfalfa growers, in particular, should buy CLAAS tedders.”

According to Jaynes, this is one of many variables farmers should compare when considering a tedder. Other components to



inspect include the number of wraps that are on a tine, as more wraps make it stronger but flexible. Also, attend to the rotor gear box, which takes the brunt of the workload.

One area that can be problematic when selecting tedders is not fully investigating the size of the shaft. While the tedder may appear large and high capacity, the shaft inside some competitive tedders could be small and more prone to breaks.

The pivot points in a drive line are another potential point of concern in a tedder. For maximum strength, CLAAS has developed an exclusive PERMALINK system of interlocking cast steel fingers with large contact areas that remain fully meshed even when folded 180 degrees.

While the end goal of a tedder is the same for all users, the path taken to achieve that goal can vary by operator and crop.

“Some people let the crop shrink after mowing, then ted the field the next morning when there’s light dew. Others will ted right after going through with the mower,” Jaynes says. “Typically I like to let it sit for a day and then go after it the next morning. That way you will often have maximum leaf retention and the crop will be a little fluffier.”

From a crop standpoint, production practices can vary from silage to dry hay. Those harvesting silage ted and then follow with a rake and baler shortly after, as they aim to spread out the crop and dry it down to a desirable level for silage. For those planning to harvest dry hay, it is more ideal to wait until baling day to take a rake through and compile the lower moisture tilled forage.



For more information on the full line of CLAAS tedders, see your CLAAS Dealer.

CLAAS VOLTO 1100 T Tedder Joins the Family

AN AE50 OUTSTANDING INNOVATION AWARD WINNER, THE VOLTO 1100 T OFFERS MAXIMUM WORKING WIDTH AND PERFORMANCE WITH MINIMUM TRANSPORT DIMENSIONS AND IS NOW NEW TO THE CLAAS FAMILY PRODUCT LINE.



BEST SPREADING QUALITY

This replacement for the VOLTO 1050 T, its eight-rotor predecessor, the 1100 T features 10 smaller (4.9 ft.) rotors with six arms per rotor for the best spreading quality in all conditions. Not only does it deliver more rotors, the working width of the VOLTO 1100 T is over three feet wider than the 1050 T – at an expansive 35' 1".

SPECIAL DESIGN ENHANCEMENTS

The VOLTO MAX SPREAD crop flow concept enables better pick-up of material for higher working speeds, better passing of material for gentler handling for crops like alfalfa, and wider and even more spreading of the crop for faster drying.

What's more, the VOLTO 1100 T features the patented hydraulic folding system for easy transport and maneuvering in the field. The low-maintenance design includes a 100-hour PTO greasing interval; air-tight, maintenance-free gearboxes; and easy-access grease points. Plus, the PERMA-LINK driveshaft connections add reliability, and a heavy-duty design makes it ideal for thick silage applications.

FFA AGRICULTURAL PROFICIENCY AWARDS



CLAAS Forage Production Winner Announced

At the 85th annual FFA convention, 49 members achieved national notoriety by picking up Agricultural Proficiency Awards.

In October 2012, the FFA honored this young fraternity of growers, engineers, scientist, salespeople and educators who competed for national recognition in several different proficiency award categories.

Sponsored by CLAAS of America Inc. and Animal Health International, Inc., the honor of the Proficiency Award for Forage Production – Entrepreneurship/Placement was one of 49 FFA categories offered at local, state and national levels. The Proficiency Awards program recognizes outstanding student achievement in agribusiness gained through establishment of a new business, working for an existing company, performing agriscience research or otherwise gaining hands-on career experience.

Top Honor Goes To Bryce Bulling

Mulhall-Orlando FFA Chapter, Oklahoma

Bryce Bulling of the Mulhall-Orlando FFA Chapter in Oklahoma works with his grandfather in his forage production enterprise. Working 2,800 acres of Bermuda grass and wheat, he has mastered the skills of safe equipment operation, soil sampling, hay conditioning and the identification of local pests. Bulling has also worked to understand the equipment used for forage production and how he can repair it when necessary. His parents April and Scott and also his FFA advisor Allen Miller support his endeavors.



Mr. David A. Miller, National FFA Alumni-past President congratulating Bryce Bulling

Bulling says he started out doing the simplest jobs of driving a tractor and bucking bales and he has now moved into the decision-making process in his family's operation. He decides when to cut and bale for maximum quality. He says FFA has been an instrumental part of his education, teaching him not only about forage production but welding skills, which he has, put to profitable use.

Are You On Our List?

Provide Your Email and You Could WIN!

If you are looking for the most up-to-date information regarding product, financing offers, promotions and just want to be in touch with CLAAS on our communications, we ask that you opt-in for our emails. It's easy to do and you could win one of five CLAAS power chargers (each, a \$50 value) – to help keep your cell phones, tablets and other electronic devices charged miles from the nearest outlet.

Detach and mail in the form below or enter online at www.claasclub.com.



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Enter the 2014 Forage Calendar Photo Contest

You could earn the cover shot spot and a digital camera package! Get ready to be the talk of the town and the center of attention. Give us your best JAGUAR shot – adventurous, spontaneous or out-of-this field – and we'll give you the chance to be one of our lucky winners. So get your camera ready and picture your JAGUAR in our 2014 calendar!

It's Time To Let Your JAGUAR Shine!

- One winning photo will be selected as the calendar cover image. If your image is selected or this premium position, you'll win a complete digital camera package (\$300 value).
- Plus, all 14 winners will receive a 20" x 24" gallery-wrapped canvas print of their submitted photo (a \$130 value).



Enter Early **WIN BIG!**

Don't wait until it's too late. Get geared up and start shooting today!

Entry deadline: September 30, 2013

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