

Preparing for Fall Corn Silage Harvest

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Earlier this year, we told you about considerations for preparing your equipment for spring hay harvest. As fall quickly approaches, we need to start thinking about preparing the equipment for corn silage harvest. Proper maintenance on equipment maximizes the efficiency of the equipment and reduces the probability of break-down during harvest. With quality feed being partly dependent on harvest timing, machine maintenance becomes imperative to optimizing the harvest process.

As always, check the maintenance manual and service intervals for your equipment. One area to pay close attention to is servicing of the engine. The harvesting of corn silage requires more horsepower compared to hay, and the lack of power will be more noticeable if equipment is not adequately serviced. Ensure oil changes have been completed on time, all fluids are full, and intake and exhaust are clear of debris. Cleaning air filters and radiators will ensure the engine can breathe properly and the cooling system will be operating as designed. Finally, checking or replacing the fuel filter before corn silage harvest will ensure the engine is not being starved of fuel during harvest.

Beyond the engine, we want to ensure the remainder of the machine is prepared for corn silage harvest. Starting at the header, check the knives on the head for wear and damage. Replacing worn knives on the head can reduce the power required to get the corn in the machine. Also pay attention to the gathering drums or auger. Replacing worn parts here can improve header performance, thus harvest efficiency. Ensure the driving components and connections are in good working order and hit all lubrication points.

The feed rollers and chopping knives are the next components to inspect. Ensure the feed rollers are not overly worn and are in working order. Inspect chopping knives to ensure they are not chipped, broken, or worn. This is also a good time to remove knives (if needed) to obtain the Theoretical Length of Cut desired of the harvested corn silage. From there, move to the kernel processing rollers to ensure they are in working order and not overly worn. Setting the kernel processing rollers at this point is a good idea as well. Settings between a 1 and 3 mm roller gap is recommended. Inspect the acceleration fan and spout to ensure they are in working order. On all of these machine components, check bearings and gearboxes to ensure they are functioning properly and filled with fluid. Replacing leaking seals before harvest starts will save time and money during harvest.

Inspect the driveline next. Check the hydraulic fluid level and fill if needed. Check hydraulic hoses and connections for leaks. Be careful when doing this as pin-hole leaks can pierce skin and cause a major health problem. Wear leather gloves and eye protection around high pressure hydraulic fluid leaks. Ensure the tires are inflated properly and are not leaking.

Once the machine is ready to go, we can start paying attention to harvest timing. Feed quality is greatly affected based on when the silage is harvested. As the corn matures, the quality of the feed declines. Recommendations for optimal harvest timing vary between 50-70% moisture content depending on the storage facility type. Checking the moisture content of the plant can be done with an oven or a microwave oven. Weigh 100 grams of plant material before drying. With a conventional oven, bake the silage at 140°F overnight and re-weigh the silage. The final weight will provide the percent moisture content. With a microwave oven, the procedure is similar in that a 100 grams sample is needed. Microwave on high for 1 minute and re-weigh the sample. Continue microwaving the sample in 1 minute intervals until the weight does not change. The final weight is the moisture content of the sample.

Maintaining harvest equipment for efficient harvest and optimizing harvest timing will allow for the highest quality feed to be produced. Higher quality feed leads to greater milk production. Have a safe harvest season!