



Dairy Pipeline

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Think Quality When Making Hay and Haylage

When it comes to getting milk out of cows and keeping cows healthy, there is no substitute for high quality forages and effective fiber in the ration. Now is the time to focus on the quality of forage you need. What you do this harvest season, starting with the first

cutting of hay and haylage, affects the quality of feed you have to live with for another year and how well your herd will react to it, as well as affecting farm profits.

Forage quality is partly in the eye of the beholder. What constitutes quality for one farmer may be different from that of another, because their needs may be differ-

ent.

For example, if a dairyman is feeding minimal amounts of forage and is attempting to support high levels of milk production with high levels of grain, and if his cows are experiencing appetite problems, low fat tests and displaced abomasums, he may need to feed forages of higher fiber content. In this case, it may be advisable to harvest alfalfa in the early bloom stage of maturity, sacrificing protein and energy for much needed fiber.

On the other hand, if the ration already contains adequate levels of fiber and purchased feed costs are too high, it may be beneficial to cut alfalfa in the early bud stage of maturity to increase the protein and energy content of the forage. This excellent quality forage should help support high levels of efficient milk production.

When thinking about your fiber needs, think in terms of effective fiber, the kind of fiber that encourages a cow to chew her cud and a kind that is also digestible, and that's an important point to re-

member. It is very important for the rumen to be properly buffered, and a cow's saliva is one of the best buffers that exists.

The more a cow chews her cud the more saliva she produces; and the longer, the dryer and the more mature the forage, the more a cow will chew her cud.

I mentioned earlier, that it is very important for the fiber to be digestible. If it is digestible, fiber is a major source of energy for the cow. However, if forages are too mature, the fiber is not very digestible. Consequently, it lingers too long in the rumen and reduces a cow's dry matter intake. A similar problem exists with weather-damaged forages. Their digestibility is less than what their maturity may lead you to think because some of the more digestible, water soluble nutrients have leached out of the plant; what remains is less digestible.

On the other hand, young-cut forages are lower in fiber, and what little fiber they do contain is

more digestible. This permits a more rapid passage of feed through the rumen and greater dry matter intake. The end result can be higher production. It may also result in less cud chewing activity and lower fat tests.

Before you run to the field with the mower or haybine it would be beneficial to look at your feed program and think about any problems you may have had with your herd, the feeds you have in inventory and the rest of the feeds you will be putting up this year. Focus upon putting up the kind of feeds that offer the best fit for your feeding program. This will help you determine the proper maturity, the proper moisture and the proper length of cut for your situation.

When you consider how variable weather conditions can be in the spring of the year and how rapidly crops mature and quality can drop, you suddenly realize that you usually get very few opportunities for harvesting a hay crop at the optimum maturity. Therefore it is beneficial to have equipment operational and to be ready to roll when the weather breaks so you can take full advantage of those few precious moments when they do occur — even if it means interrupting corn planting activities. When you get back to planting corn again you can do so with the comfort of knowing that you captured the quality of forage you were after and knowing that as you continue to plant you are also growing your next cutting of quality forage.

Good Fermentation Is Essential

Ensiling is one good way of "beating the weather" and preserving forage, but good preservation depends upon a good fermentation. Some of the things necessary for good fermentation and good preservation include:

1. An adequate supply of the right kind of microorganisms for conducting the fermentation.

2. An adequate supply of carbohydrates for the microorganisms to ferment so they can produce the acids desired.

3. A lack of oxygen and a rapid drop in pH to halt the fermentation with minimum heating and loss of energy and to stabilize the ensiled feed in a preserved state.

Grain crops such as corn contain an abundance of fermentable carbohydrates and ferment rather easily if properly ensiled. Grasses and legumes, on the other hand, have less carbohydrates and are less fermentable. In addition, they are higher in protein and minerals. This gives them a certain amount of buffering capacity which tends to retard the rapid drop in pH that we are seeking. Therefore, grasses and legumes are more apt to benefit from the addition of grains or from the use of silage additives and inoculants.

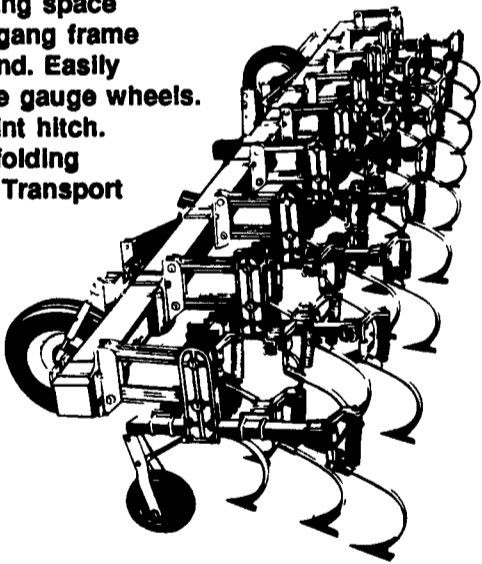
The microorganisms needed for fermentation are generally present on the crop when it is ensiled. The big question is, are they the right kind, are they present in sufficient numbers, and will conditions in the silo be favorable for them to function?

The number and kinds of organisms can vary for a number of reasons. Weather conditions at time of harvest can be too cool to support a rapid buildup of microorganisms. During the heat of summer, a sparse stand or thin swath can expose too many microorganisms to the killing effects of the sun's ultraviolet rays. The number of undesirable organisms could increase, perhaps from soil being splashed or raked onto plants or



NOT JUST ANOTHER CULTIVATOR

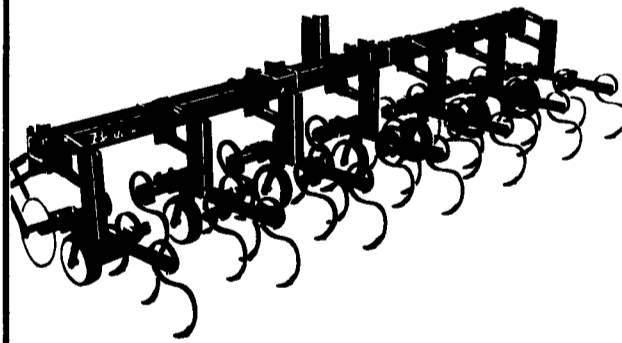
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