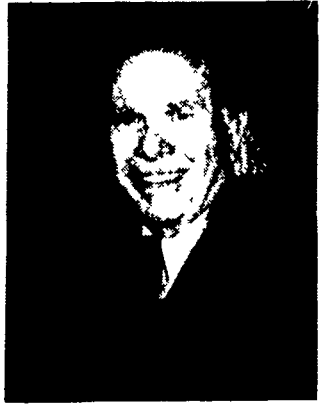


Foraging Around



By Dr. John E. Baylor
Director of Market Development
Beachley-Hardy Seed Company

Reducing Losses in Hay Making

In my last column I took a hard look at the losses that can and do occur in hay and silage making. In fact, results of a recent study by Penn State Ag Engineer, Dennis Buckmaster, suggest that for a 100 cow dairy, losses that occur in making alfalfa hay can result in a decrease in farm net return of nearly \$12,000 per year. "This could be interpreted to mean," Buckmaster says, "that a 10% reduction in alfalfa losses increases net return by \$1,200 per year. A 10% reduction in losses is not unreasonable and a 25 to 50% reduction could be possible with modified machinery and improved storage conditions."

Hay Additives

The use of hay additives is certainly one approach to reducing losses and preserving hay quality. Hay additives include drying agents which speed the drying process in the field, and organic acids which inhibit aerobic activity in hay and permit safe storage at moisture contents greater than 20 percent. Both have been shown, when used properly, to be profitable. Yet their use has been limited.

Drying agents for hay are water based solutions that are sprayed on the legume crop at mowing to hasten the drying rate. They usually consist of potassium carbonate and/or sodium carbonate and a surfactant to help spreading. They

are not corrosive and are relatively safe to handle. They act by disturbing or dissolving the waxy cuticle on the outside of the stem, allowing stems to dry at about the same rate as leaves. The process works best during second and third cutting harvests, but can improve drying rate during the first and fourth cuttings. And they are not effective on most grasses.

As with any management tool, drying agents must be used according to recommendations and with good judgment. And while the reduction in curing time depends upon drying conditions, you can expect to see reductions about as follows:

Alfalfa Cutting	Drying Time Reduction
1	0 - 1/2 day
2	1/2 - 1 day
3	1 1/2 - 2 days
4	0 - 1 day

Buckmaster's studies suggest that the consistent use of additives does improve farm net return. This, he says, is a result of increased hay quality and yield which can reduce feed costs by about \$6 for each ton of hay fed.

Organic acids such as propionic acid or propionic-acetic acid blends have also paid off for the producer who uses them properly. Their effectiveness is largely dependent on the uniform application rate of active ingredient and the moisture content of the hay. Recently available buffered acid products appear to be more effective.

These acids are dangerous to skin and eyes, and must be handled and stored carefully.

Today *aerobic bacterial inoculants*, not to be confused with anaerobic bacterial cultures, are receiving more attention and do show promise. Limited research has suggested that when applied to alfalfa hay at moisture levels of 20-25%, the aerobic bacteria allow for greater leaf retention, palatability and improved visual hay quality. But more studies are needed before their true value will be known.

But, hay making aids such as those listed above are not a substitute for other good management practices. And to sum up, here are a number of other management

practices that are considered essential for good hay making under our climatic conditions:

- 1) Maintain your hay making machinery in good adjustment.
- 2) Mow forage early in the day to allow for a full day's drying.
- 3) Lay the crop in as wide and uniform a swath as possible to increase drying at a uniform rate.
- 4) Rake or ted at 40-50% moisture to increase drying rate and minimize leaf losses.
- 5) Bale hay at 18-20% moisture.
- 6) Store hay, regardless of bale type, under cover and off the ground.

In my next column I'll look at some of the recent findings to reduce losses in silage making.

Wayne County Dairy Day Set

HONESDALE (Wayne Co.) — The 1991 Wayne County Dairy Day is to be held March 5 at the Wayne County Veterans Memorial Armory.

Jointly sponsored by Penn State Cooperative Extension and area farm businesses and organizations, it is held each year to provide educational programs and idea sharing in order to help area dairymen become more efficient and productive.

Scheduled from 9:30 a.m. to 3 p.m., the program features Dr. William McSweeney, agricultural eco-

nomist and Dr. Richard Adams, dairy nutrition specialist, both with PSU.

In the morning, McSweeney is to discuss the advantages and disadvantages to leasing equipment. In the afternoon Adam is talk about totally mixed rations (TMR).

Other presentations include an overview of the outlook for the dairy industry, alternative management, and an overview of a grassland resources and sustainable systems project currently being undertaken within the county.

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A sign on a bumper says "Only sick people use drugs." Likewise only sick soil or crops need sprays. The Creator sends scavengers to get rid of sick crops so that livestock, your family and you don't eat them and get sick. He wants to do you a favor. But farmers put poison on the crops and expect cows and precious souls to eat both that and the unhealthy vegetation.

THERE MUST BE A BETTER WAY, AND THERE IS.

An \$8.25 per acre soil bacteria spray would take the place of much fertilizer because you are helping nature make fertilizer and also release what is already in the soil. It would make the soil so healthy that in a year or two (probably first season) the crops would be so healthy that the creator would not need to send the scavengers any more to devour the crops. He rewards obedience to his natural law, as well as the moral law — Obey and live - disobey and die!

Our Nutri-Carb fertilizer is the best we know to detoxify your soil to make the crops fit to eat.

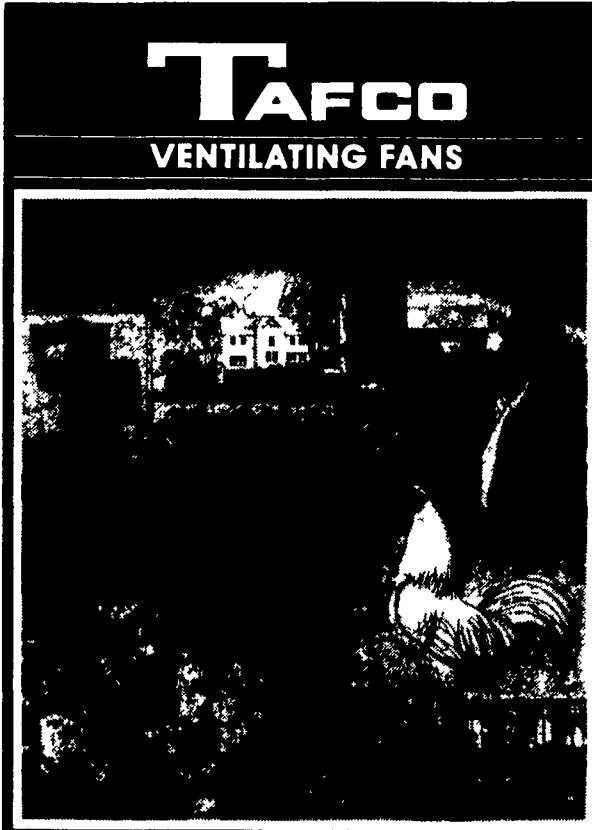
THEN YOUR WHITE SOYBEANS WOULD SELL TO NUMEROUS SOYFOOD FACTORIES FOR \$12.00 PER BUSHEL.

One in Florida, one in Mass., one in W. Va. and the Japs are building one in Indiana. Grow a crop that is coming in big demand at \$12.00 per bu. instead of \$5.50 last year. Big difference!

Our customer's yellow beans are 46% protein and sell for \$8.00 per bu. Why? because the buyer proved that Nutri-Carb grown beans are worth the difference for his cows. Would be for you too. We have that good seed to sell.

And our Nutri-Carb grown corn sells for \$3.00 per bu., for the same reason. Therefore grow it this way for your livestock, or to sell at \$3.00 per bushel. Or would you rather work cheap and take the embarrassment that the Creator does not bless you.

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BLADE - The fan blade is constructed of aluminum with zinc plated steel hub, balanced for smooth vibration-free operation. Pitch is designed to correlate with motor horsepower to deliver maximum efficiency. Convenient hinged grill allows easy blade cleaning and maintenance by simply removing two bolts ing two bolts.

SHUTTER - The 18 gauge galvanized steel butterfly shutter has an adjustable, positive draft-free closure. Opens fully for maximum CFM output Easy accessibility for maintenance permits removal of dirt buildup for maximum efficiency.

HOUSING - Heavy 18 gauge (047") tunnel design has a large venturi for maximum efficiency and air flow. Constructed of long-life, galvanized steel.

GUARD - Attractive heavy-duty combination motor mounted/safety guard with bright, easy-to-clean zinc-chromate finish. Conforms to OSHA safety requirements.

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20"	\$139.99	\$159.99

Size	Single Speed	Variable Speed
24"	\$189.99	\$219.99

- All Sizes Listed Can Be Sent UPS -

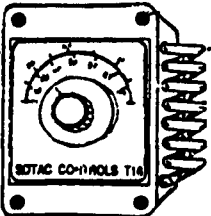
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