

Plan Forage Management

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A good supply of quality forage is one of the most important things in the feeding program of dairy-men, cattlemen, and sheep producers. Growers should now be planning what kind of forage crops they hope to produce this year.

Both hay and silage crops respond to good management. Growers who make a special effort to obtain maximum yields of quality forages usually produce more than the average.

Some of the top alfalfa growers produce double the tonnage per acre than the average. In fact, some of the top alfalfa growers in the state averaged more than 8 tons per acre. This did not just happen. They planned and made decisions on data from their farm records. Doing all the practices that have been successful, and

doing them on time will normally bring good results.

SERVICE FARM MACHINERY

This is the time of the year to be preparing your farm equipment for spring work. In the first place, this machinery should not be out in the weather. I know that buildings are expensive to construct, so if you are out of building space, cover the equipment with a tarp — this will reduce weather damage.

Preparing farm machinery for the coming spring and summer is necessary during this slower season. You can make use of the off-season labor supplies. Machinery is a high investment and should be kept in good condition at all times. A good policy on any farm is to always give a good grease job to all equipment going into storage for the winter to keep moisture out of the bearings. Rain and snow will soon develop rust on equip-

ment; this will shorten the life span and is a primary cause of many unnecessary breakdowns.

HOW TO TEST LEFTOVER SEED

Before you plant flower and vegetable seed held over for a year or two, test it for germination. A good way to test seed is to sow 25 to 50 seeds in an ordinary prepared flat filled with good soil. Place the flat in a greenhouse or window box and allow the seed to germinate under natural growing conditions. The test will show not only the germination of the seed but also if it will produce a healthy seedling.

Another method to test seed germination is to put 50 or more seeds between blotting paper and place in a shallow tray or on a large plate. Make sure you keep the blotting paper moist and warm.

Average seed life of tomatoes,

cucumbers, and celery is about four years. But if you have had the seed for about two years, you have no way of knowing how old the seed was before you bought it.

Other factors are the humidity and temperature at which the seed was stored. Storing seed in fairly warm temperature of 75 to 80 degrees with a high humidity of 85 to 95 percent reduces its germination and viability much faster than if it's stored at lower temperatures and lower humidity.

Remember to check the seeds you've been storing before you plant them in your garden this year.

TIPS ON BUYING SEEDS

At this time of the year, you're probably looking at seed catalogs in earnest. Buy good seeds whether you buy them by mail or from a neighborhood store.

The law requires that the seed

be fresh. Look for the date that must be on the packet. Seeds have a fairly long life — some as much as 5 to 7 years. But that's only if they're properly stored in cool, dry conditions.

Reputable seed companies guarantee that you will get what you buy and that there will be no chaff or weed seeds in the packet.

Look for a germination statement on the label. It tells the most seedlings you can expect under ideal laboratory conditions. Expect about half as many if you are seeding outdoors where seeds are at the mercy of the spring weather.

All seeds need moisture, fresh air, and some warmth to start germinating. Plant most seeds no more than 2 or 3 times the thickness of the seed. If the seed needs a difference depth, the seed packet will give the proper instructions. Read the label before planting.

Livestock Happenings Update

What's New?

For those who say there is nothing new in meat, take note. A new twist to hot dog packaging has been developed by the Viscase Corp., a company which makes cellulose hot dog casings. This product will allow names, logos, slogans and decorative patterns to be placed on individual "skinless" hot dog links.

This type of imprint could be used for brand identity to reinforce recognition. It will give processors identity for their products as used by the HRI trade. Another type of message is designed to appeal to children by printing messages to make hot dog consumption more fun.

One useful approach would be to imprint information such as "low salt", "hot" or some other information. One suggestion was to place grill marks on the hot dog to give a barbecue look. The ultimate use would probably be for selling advertising space to soft drink manufacturers!

Leaner Lamb Is The Name Of The Game

The consumer is telling us they want meat products with less fat, low sodium, less cholesterol, that are competitively priced and are safe. In other words, they want an all natural healthy food that fits their pocketbook and is free of any pathogen, pesticide, antibiotic and/or anabolic component. If the American sheep industry wants to maintain a place in the consumer market, producers, packers, and retailers must come to realize these perceptions do affect the acceptance of lamb, and to solve these problems all industry segments must begin to deal with them.

Tomorrow's red meat market will hinge on how an industry adjusts to consumer demands. Historically the U.S. sheep industry continues to respond to an antiquated USDA grading system that rewards solely on live market weight to the producer and carcass weight or dressing percentages to the packer. Many of today's retailers, who prefer purchasing a case-ready product, continue to receive an over finished lamb carcass that contains unwanted seam or intramuscular fat and must be trimmed of excess external fat before an acceptable retail cut is displayed in the meat case. Naturally, the extra labor and preparation costs are being passed on to the consumer. These added processing costs at \$15 to \$18/hr makes lamb

even less competitive.

Leaders within the American sheep industry and university researchers have recently introduced a certified lean lamb program, similar to the successful certified Angus beef program started in 1978. By implementing such a program, it has been estimated the fat quantity would be reduced at least 19 pounds per lamb. At this rate, with a total of 5.2 million lambs slaughtered in the U.S. last year we would eliminate some 101 million pounds of unwanted fat.

The production of this extra fat is very costly to the producer. In the normal physiological growth of any lamb, as they approach the latter stages of a given market weight, if held over, the feed requirement jumps to 7 pounds of feed for each pound of "fat" gain. Estimates for last year alone indicate the sheep industry could have saved 115 million pounds of processed feed and still produce the same amount of lamb.

The apparent bottleneck seems to be that while the consumer demands leaner lamb, the feeder/packer/processor finds no economic incentive to change or accommodate these demands. Subsequently, many producers customary to marketing through the auction or direct to a packer find themselves at their mercy and discounted for having lambs that are too thin yet satisfactory for the retail trade. Continued packer/processor rhetoric and resistance to making some needed changes is only lending further to the demise of a domestic sheep industry that already is struggling to maintain a niche in the market place. The continued competitive nature of tomorrow's red meat industries makes it ever more important for all such industries to listen, predict and respond to consumer demands. Any livestock industry unable to make those necessary adjustments will be absorbed and their respective commodity replaced by others who have listened and responded to the consumers' drum. The American sheep industry is no exception. The result might well be the increased presence of another logo in the meat counter; "Fresh Range-Fed Australian Lamb" in place of "Fresh American Lamb."

Malformed Newborn Lambs
A number of reports throughout Pennsylvania have been received concerning lambs being born mal-

formed. The associated conditions and gross appearances are lambs dead at birth, with curved and rigid spinal column, limbs stiff and in many instances this articular rigidity obstructs the normal birth process.

Confirmation of the exact disease problem is still pending, however PSU and Cornell veterinarians in their respective diagnostic centers are focusing on a disease known as Ovine Arthrogryposis Hydrocephalus more commonly called the AGH Syndrome.

Briefly, the disease is thought to be transmitted by biting insects and is a virus that infects the joint tendons and CNS and expresses itself in lambs born with a stiff-curved spinal column and most often show malformed and stiff limb joints. A necropsy of the CNS tissue also reveals extra fluids in the cerebellar area of the brain. There is no treatment or vaccine available at this time for immunizing non-infected animals.

To help pinpoint this acute problem, Dr. Drake and Clair Engle are asking producers with malformed newborn lambs to document them by 1) producer name, 2) approximate lambing dates when problem occurred, 3) number of lamb deaths, and 4) to freeze the fetus exhibiting the described symptoms for future necropsy. At your earliest convenience, have the frozen specimen delivered to the Animal Diagnostic Center at Penn State. The lamb will be used to confirm if AGH is the actual problem.

By-Pass Protein Vs. Urea In Feedlot Diets

A recent University of Nebraska study has shown by-pass or escape proteins were more desirable than urea-based supplements in diets in the early feeding phase. In addition, they found calves implanted at 53 days of age with a growth-promoting implant were 15 pounds heavier at weaning and maintained this weight advantage over non-implanted steers through the finishing phase.

The so-called by-pass proteins are those that escape degradation by the rumen bacteria and are absorbed directly in the lower gut of the steer. The purpose of using these proteins is that they are sometimes more efficient in providing protein from direct absorption, rather than being "eaten" by the bacteria and absorbed as bacterial protein. The proteins used were a combination of blood meal and feather meal which are known

to have high by-pass capabilities.

The steers in this study were fed dry rolled corn with one or the other of the protein sources and they were evaluated at 41 days, 136 days and at finish. The calves were put on feed at approximately 600 pounds and the trial was conducted over two years. The results were calves receiving escape proteins consumed a similar amount of feed, gained slightly faster and were slightly more efficient than those receiving urea-based supplements. This was particularly true for the first 136 days on feed where the calves with escape protein diets consumed more feed, gained .21 pounds per day more and ate .3 pounds less feed per lb. of gain. These steers did not show this response between 136 days on feed and finish.

This demonstrates that using escape proteins early in the feeding period will result in better performance than when using urea-based supplements. However, the cost per unit of the escape proteins is higher and it can be replaced with the urea supplements later in the feeding period.

Using Round Bale Silage

According to a recent report, some of the management advantages of using round bale silage when compared to conventional hay systems and fresh-chopped silages are:

- * Decrease in the time used to dry the forage compared to hay.
- * Reduced chances of rain damage to the forage.
- * Reduced field losses.
- * Increased harvesting flexibility to optimize forage quality.
- * Excellent dry matter recovery compared to chopped silage.
- * Decreased energy costs compared to chopped silage.
- * Lower initial capital costs

Animal Health Commission Tours New Bolton Center

KENNETT SQUARE (Chester Co.) — The Animal Health Commission met here February 8 to learn about animal diagnostic laboratory services conducted by the University of Pennsylvania's New Bolton Center.

Members of the commission were briefed on current projects and procedures, and were taken on a tour of facilities at New Bolton.

The tour included visual inspections of the Weidener Large Animal Hospital and New Bolton's Graham French Neonatal Section. The New Bolton visit completed

compared to chopped silage.

Disadvantages:

- * Increased capital costs compared to haying systems.
- * Annual costs for expendable supplies such as bags and plastic.
- * Susceptibility of the plastic to sunlight and rodent damage.

There is a sizeable difference in the cost per unit of dry matter in 3 systems under review. They reported the cost per unit of dry matter was \$29.00, \$15.80, and \$21.30 per ton, respectively, for bale bags, long tubes and stretch wraps. The costs included the cost of purchase for stuffers and bale wrapping machines which were depreciated over 3000 bales. There are several custom units available for rental or lease here in Pennsylvania which may change this cost in our area.

Some other conclusions are:

- * The primary advantage of the round bale silage system is the greater flexibility of harvest to optimize forage quality.
- * Dry matter recovery, cattle gains and consumption of forage was greater for forage that was wilted to about 50% dry matter before harvest.
- * Inoculating round bale silage with lactic-acid producing bacteria temporarily improved bale quality, but secondary spoilage was not prevented.
- * Treatment of round bale silage with a combination of enzymes containing cellulase (to break down indigestible plant cell wall material) and a microbial inoculant tended to increase consumption and dry matter recovery.
- * Ammonia treatment of grass silages improved consumption and recovery of wilted bale silage, but was detrimental to direct-cut, unwilted round bale silage.

the commission's review of Pennsylvania's animal health diagnostic system.

Previous field inspections included an October visit to the Department of Agriculture's Summerdale Laboratory in Cumberland County and a December visit to the Pennsylvania State University.

The Animal Health Commission has scheduled its next meeting for March 21, at which time commissioners will discuss funding of animal health research projects.