Antibiotics spoil milk for cheese making

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PLAN FOR QUALITY IN SILAGE

SILAGE making time is fast approaching in the South-West. Last minute preparations before harvesting will help avoid delays at the time of making this valuable fodder, thereby reducing the amount of costly spoilage caused by hold-ups.

Paddocks which have been closed up for silage should be looked over for stumps and rocks, and these marked; at the same time all wire, stones and other obstructions must be picked up so that they cannot cause breakdowns of valuable machinery during harvesting operations.

Before harvesting starts, check the tractor and other machinery to be used to make sure that all are in good working order and that any repairs or replacements are made before starting. Time lost while making silage means quality lost in the final product.

Selection of a suitable site for storing the silage is most important. The site should be well drained, convenient to the area being harvested, and suitable for getting machinery in for feeding out. Access for animals must be considered if self feeding is preferred.

Storage:
The overhead type of tub silo is not likely to be available on South-West dairy farms, and pit, clamp or stack storage sites must be selected.

To make high quality silage many requirements must be met. Therefore:
- Always select the best fields, as high quality material is required to produce high quality silage.
- Always cut the green material at the correct stage—that is, the early flowering stage of the main component.
- Don't close paddocks for too long before cutting, in an effort to get high yields. Early cutting and a high ratio of leaf to stem is required for the best results. Early cutting gives high quality silage, as well as good regrowth of pasture which can be kept for early summer dry feed or green grazing when most other fields have dried. If a paddock is protected from grazing for too long before cutting the result may be a heavy yield of stemmy, low quality material.
- To obtain best results, most material should be wilted before storage. The moisture content of good silage should not exceed 70 to 75 per cent. High moisture content is the rule rather than exception with silage made by modern equipment; it often has a moisture content above 80 per cent.

High moisture content silages often lose much of their soluble nutrient content as a result of drainage from the pit, clamp.
or stack. Apart from this, wet green material is difficult to heat up in the early stages of silage making. Offensive smelling poor quality silage is often the result of storing such moist green material without prior wilting.

Where silage is to be held over the winter or stored for any great length of time, it is more than ever essential that the storage site should be well drained and the material covered to prevent rain damage.

With final sealing of the silage, good compaction is necessary and for best results sand or sawdust should be spread over the surface. This covering reduces external losses, which are often very high in poorly stored silage.

When making silage, see that all air pockets in the green material are excluded. When this material is finally rolled uniform packing is desirable; this can be efficiently done by tractor rolling.

ANTIBIOTICS SPOIL MILK FOR CHEESE MAKING

By K. NEEDHAM, B.Sc. (Agric.)

When penicillin is used for the treatment of mastitis, or is injected into the dairy cow for the treatment of any other form of disease, some of it finds its way into the milk supply. This residual penicillin in the milk is quite capable of destroying the bacteria added to milk in the process of manufacture of cheese.

If the rate of development of these organisms is retarded, the process of cheese manufacture is slowed down and the quality of the final product is likely to be impaired.

Both of these effects are harmful to the cheese industry as a whole, and if the condition was allowed to become widespread, could cause serious economic loss to the dairy industry.

Recent examinations by the Department of Agriculture's Dairy Laboratory have indicated that farmers are still sending milk to cheese factories containing levels of penicillin which are deleterious to good cheese manufacture.

It is in the interests of dairy farmers generally that when it is necessary to administer penicillin, either as an intra mammary infusion or as an injection, milk from treated animals should be withheld from the factory until 72 hours after the last administration.

A recent examination of cows injected with penicillin for control of footrot showed harmful levels of penicillin. It is possible that other antibiotics could have similar effects and it seems reasonable to suggest that similar restriction could be exercised as a general rule wherever antibiotics are used on dairy cattle.

The average dairy farmer is a busy man and it is possible that he might forget that certain cows have recently been treated. A dye has now been perfected which, when incorporated with penicillin used as an intra-mammary infusion, is secreted into the milk and gives it a distinctive colour. This colour is visible at levels of concentration of the antibiotic which are likely to be harmful to cheese manufacture.

This dye is not yet in general use, but it is hoped that it will be in the near future. It serves a very useful purpose, acting as a reminder to the dairy farmer, and alerting factory personnel to the presence of harmful antibiotics in the milk.
BREWERS' GRAIN CAN BE A USEFUL FODDER

CitY milk suppliers who are reasonably close to the brewery can make good use of brewers' grain as supplementary feed for their cows—but the grain needs to be handled and fed with care if it is to be really valuable.

Brewers' grain is the remains of the barley after malting, one of the first steps in beer making. Although it is a waste-product of brewing it retains considerable quantities of protein and carbohydrate. These make it valuable cattle fodder, particularly in times of feed shortage.

It is relatively cheap, but because of its high moisture content it does not pay to cart it long distances; furthermore, prolonged storage can cause spoilage when acid content rises and moulds form in the material.

Brewers' grain should be drained of excess moisture some hours before feeding. It may be fed at the rate of 20 to 30 lb. per head of the moist material with relative safety, provided that hay, silage or some pasture is included in the diet. With concentrates, a mixture of 4 lb. of the grain plus 1 lb. of concentrates can provide a reasonable diet.

As the material dries, palatability falls; some people mix in molasses to overcome this, but usually the effort is barely worth the added feeding value.

Here are two rations worked out for dried brewers' grain, each providing requirements sufficient for one cow's body maintenance plus production of two gallons of milk.

1. 20 lb. oaten hay.
   6 lb. dried brewers' grain.
   1 lb. meatmeal.

2. 40 lb. mixed silage.
   12 lb. meadow hay.
   8 lb. dried brewers' grain.
   4 lb. bran.

If milk tainting occurs at any time through feeding brewers' grain the best policy is to feed only after milking, if this can be arranged.

USE YOUR TRACTOR SAFELY

In your own interests and for the sake of those dependent on you, observe at all times these simple rules drawn up by the National Safety Council of Australia in conjunction with the Tractor Trade Association of Australia:

Read and act on maker's operating instructions.
Before starting, put all controls in neutral.
Never run engine in a closed building.
Stop engine to service and fuel machine.
Keep naked light or flame away from fuel.
Wear close-fitting clothes.
Keep steering and brakes in good order.
Drive at safe speeds always.
Don't snatch at loads—tractors can be overturned.
Be careful on hillsides—tractors can be rolled over.
Fit attachments correctly—avoid makeshift methods.
Don't carry "joyriders"—especially children.
Apply brakes and lower attachments before leaving.