

## SEASONAL NOTES

### Silage

**W**ITH the advent of spring every opportunity should be taken to conserve as silage or hay any surplus pasture growth. The carrying capacity of any farm is governed by winter carrying, and the foundation of high production of dairy products, meat, and wool is largely based on the provision that can be made over this period. Hay is a general requirement for supplementing low pasture production and for balancing rations of such fodders as roots and greenfeed cereals. However, silage has become a feature of intensive grassland management on many North Island dairy farms, as is indicated by the fact that of 53,000 acres of pasture ensiled in the Dominion in 1943-44, 96 per cent. was in the North Island.

**The making of hay and silage is essentially associated with pasture management, efficiency in control of spring growth of pasture, and also in levelling out pasture production to coincide more closely with the requirements of stock. Saving the earlier surplus growth of pastures as silage avoids what may become an embarrassing and wasteful surfeit as the season advances, because in a humid climate, under damp soil conditions, with weather often unsettled, early haymaking may be a very risky proposition.**

On the dairy farm ensiling is easily carried out between morning and afternoon milking periods as part of the farm routine. Extra labour is not generally required, except on one-man farms, while the work is not laborious if modern methods are used and suitable equipment is available.

Ensiling should be commenced shortly with growth from earliest-closed pastures, and work should be carried on steadily in order not only to conserve available material correctly and before it becomes too mature, but also as a measure of pasture control and to promote a strong aftermath growth for summer grazing. If pasture is allowed to become rank over summer, the sward tends to open up and growth later in the season is greatly reduced.

#### Time to Cut

The time for cutting pasture for silage is during that period when the majority of grasses are coming into flower. After flowering decline in quality is rapid. Because pastures are frequently cut at too late a stage of

maturity, the resultant silage is often not of sufficiently good quality as a producing fodder and cannot maintain milk production in late summer, being more suited for winter maintenance.

The first cut of lucerne, which is usually weedy, is very suitable for converting into silage, along with surplus pasture growth. The first cut with established stands is usually ready during November, when the young shoots of the next growth appear on the lucerne crowns. Oats sown when cultivating old lucerne stands in the autumn improve the silage by balancing the high protein content of the lucerne.

#### Ensiling Process

Curing of the material will depend on the type of herbage utilised, maturity at cutting, the amount of wilting allowed after cutting, satisfactory building with regard to even consolidation and regular additions of material, with finally sufficient earth for weighting and sealing. The aim is to produce fruity green-yellow silage with a minimum change from the original material. However, fermentation and subsequent rises in temperature must occur, and are dependent on the presence of air remaining with the material. Added pressure excludes air in the bottom layers of material and lowers the

temperature. Silage will be sour unless the temperature is allowed to rise first in the bottom layer, before controlling the temperature by the additional weight of fresh material. After building the first layer to a height of about 8ft., about 24 hours should be allowed with normal herbage for a suitable temperature to be reached. Subsequently building should be continued daily with an equal or greater amount of material to completion, an average stack taking about four days to build. Consideration should be given to the moisture content of the material, a wise policy being to avoid building the bottom layer with very succulent herbage, at least without wilting, as the rise in temperature will be retarded and soluble nutrients oozing out of the silage will be lost.

If possible more mature herbage should be used for the bottom layer. It should be borne in mind in building later layers that mature herbage packs less tightly than young growth. Having more air but less moisture, such material will readily overheat, with formation of dark brown or sweet silage of inferior feeding value and palatability, unless building is rapid.

Daily building tends to maintain chemical change of soluble carbohydrate at the lactic acid stage without further breaking down. Molasses at about 1 to 2 gallons per ton mixed with an equal volume of water aids lactic acid formation, and may be used to advantage.

#### Storage

Silage is made in trenches, pits, silos, and stacks. Convenience for



The round stack is a very convenient way of conserving material, using an elevating mast with boom and grab.