

can be stripped from the stalk when the thumb and forefinger are run up the stalk. If the seed head will not come away, leaving a bare stalk, the crop is not ready for cutting. The crop is usually ripe when the seed has disappeared from the tip of the seed head.

As with most other seed crops the trend in the harvesting of timothy seed is to use the binder in conjunction with the header harvester. When the crop is ready it is cut with the binder, a fairly long stubble being left and the cut material being run through untied, so that it forms a windrow. If the crop is heavy, it is an advantage to use a 6ft. rather than an 8ft. binder, as there is less bulk in the windrow, which consequently dries out more rapidly.

The cut material should be left undisturbed in the windrow until it is thoroughly dry; this will take anything from 10 days to 3 weeks or even longer according to the weather. When thoroughly dry the windrows are picked up and threshed with the header harvester; care is necessary to ensure that this is done at the correct time. It is also necessary that a careful watch be kept on the setting of the concaves, as too close setting and hard driving will result in a large proportion of shelled seed.

In the past the method of dealing with the timothy seed crop was to cut with the binder and stook, leaving the stooks to weather for 2 to 4 weeks. The crop is then threshed out of the stook. In these days stooking of any crop is the exception rather than the rule, labour being difficult to procure for this work. However, the old method is still probably the best for timothy seed.

For threshing, the old-type large wooden English mill with a clover huller attachment, in the hands of a skilled operator, was and still is the best mill for threshing timothy seed. (When this type of mill was used the sheaves were held in the drum to ensure clean stripping.) Alternatively, the "tin mill" with a peg drum may be used. It is necessary to have the concaves carefully set or there will be an excessive quantity of shelled seed.

In Southland yields of nearly 1000lb. per acre have been harvested, but a good yield is up to 250lb. per acre of machine-dressed seed.

About 1200 acres of timothy are being harvested annually for seed in New Zealand at present. Formerly Southland was the main producing province, but with the increase in production of Certified seed of improved strains Otago and Canterbury Provinces, particularly Ashburton County, are coming into prominence.

On one farm in the Eifelton district of Ashburton County 100 acres were sown out immediately after the



A timothy seed crop.

release of seed of superior strain. This area averaged 222lb. of machine dressed seed per acre in the 1946 harvest and 349lb. in the 1947 harvest. In 1948 only half the area was saved for seed and yielded 263lb. per acre. The land was used previously for cocksfoot seed harvesting and is of a soil type typical of the large area in this locality used for the production of cocksfoot seed. The timothy was sown with Montgomery red clover, which it quickly smothered over most of the area, resulting in a strong timothy stand.

On this farm different methods of harvesting have been tried, and cutting with a binder, stacking, and threshing is considered a better method of saving the seed than threshing with a header harvester from the windrow because of the long time required to condition timothy seed.

The seed is easily dressed, the chief impurities being Yorkshire fog and goosegrass, both of which are easily removed from timothy with modern seed-cleaning machines. In the past white clover was a troublesome impurity in timothy seed, but now, with better management of seed-producing areas, timothy practically excludes low-growing plant life and consequently white clover is not as troublesome.

### Use in Pastures

Timothy seed is used in pasture seed mixtures in all localities of New Zealand where the grass thrives. Though it is sown in many pastures, consumption of the seed is not high, as the seed is very small, and generally not more than 2lb. per acre is sown with a perennial ryegrass-cocksfoot-clover mixture; 6lb. per acre is about the maximum seeding when timothy replaces cocksfoot in the mixture.

Timothy withstands heavy winter poaching; in fact, such treatment is beneficial to seed-producing areas. Stock grazed on such an area during winter are allowed free access to the stacks of threshed straw, and thus much of the nutriment from this roughage is returned to the soil in the form of dung.

Timothy is not much troubled by fungi or insect pests, but attacks of some consequence have been made by an army worm, *Persectania ewingi*. This caterpillar climbs the stalk and feeds on the seed head, thus reducing the yield.

**The production of timothy seed of superior strain to meet New Zealand requirements is worth while. Whether or not an export market can also be developed remains to be seen.**