

Conservator (Last) 4/11.

I don't know if you will be able to give this to but of course I will be glad to see it.

No Thanks as I am not a member of the H.Q. Machinery Development Committee. 13/1.

H.Q. Machinery Development Committee

Report No. 19 on

The Hayter Grass Cutter

Origin

Forest rides which provide both access to the forest and fire breaks require frequent maintenance to remove growth which will die back and become a fire risk. The method used to remove this growth varies in different parts of the country as conditions and available machinery dictate, but it follows some form of grass cutting (to remove) or cultivation (to dig in) the growth. All the operations involve considerable expense so the Hayter Cutter, claiming an ability to cut growth at high speed in conditions that could not be met by any other cutter appeared to be worthy of trial.

Description

The machine consists of three rotating square plates with detachable cutters on each corner. These plates are mounted on a four wheel carriage and driven from the power take-off of the Ferguson tractor. They rotate just above the ground, cutting off all growth at the height at which they are set over a swathe width of 6'-6". The height setting is adjustable to vary the closeness of the cut. A multiple belt drive from the power take-off on the tractor drives a countershaft on the Hayter machine which in turn drives each of the three cutter plates by single belt. The machine is attached to the tractor through the normal implement linkage. A model is also available for front mounting on the Fordson Major. Photographs showing the layout of the machine and the type of work that it can do are attached to this report. The Manufacturers are:- Hayter (Sales) Ltd., - Spellbrook, Bishops Stortford, Herts. The price of the current model is £110.

Trial

Trials have been undertaken to test the ability of the machine to cut grass and other growth and also to establish some comparison with cutting by the existing alternative methods i.e. gang mowers, tractor mowers and autoscythes.

Observations

1. The trials quickly showed that cutting with the Hayter was fast but ground conditions must be reasonably good.
2. The output in acres per hour is not as great as can be cut with a gang mower under perfect conditions.

Output tests under gang mowing conditions gave the following results:-

- (a) The Hayter - 0.75 acres per hour
- (b) Gang Mower - 1.2 " " "

Greater outputs would have been achieved in each case had long runs been possible.

3. Ground conditions entirely dominate the choice between the various cutting machines. Whilst nothing will beat gang mowers under golf course conditions the Hayter comes into its own as soon as conditions begin to deteriorate due to uneven ground saplings, long grass, and presence of stones.

Wherever there are wheel ruts, stumps, rock or hummocks the Hayter also becomes unsuitable and then the Autoscythe is the only solution. The Hayter is particularly suited to a policy now being followed in Southern England under which fire breaks previously ploughed to suppress growth are now being rotavated and rolled. Under these conditions subsequent maintenance with the Hayter is likely to be the cheapest available method.

The conditions required for tractor side mowing are rather better than for the Hayter. Side mowing is not so fast nor will it deal with quite the same amount of rough growth but on long uninfested grass the results are generally better.

4. Brambles, bracken and seedlings up to $\frac{1}{2}$ " diameter can be dealt with by the Hayter but well established heather can not be satisfactorily cut.

5. A great advantage of the Hayter is that where damage does occur owing to hitting an obstruction the damage is comparatively easily repaired. New cutters are cheap and can be fitted in the field in a few minutes and even the replacement of a complete rotating plate is simple whereas if so much as a stone is caught in a gang mower the repair of a cylinder is a comparatively expensive operation.

6. It has been observed that under some conditions of long lush grass the tractor wheels and the front wheels of the Hayter press the grass down and this leaves uncut strips in the swathe.

7. No cost figures for cutting with the different machines are mentioned in this report as they vary so much with different conditions.

Conclusion

1. The Hayter is probably the best available machine for cutting forest rides if the ground is reasonably smooth, owing to the high rate of cutting, low first cost and easy maintenance.
2. The rate of cutting with the Hayter is not as fast as with gang mowers but conditions on forest rides are seldom good enough for the use of the latter.
3. The Hayter cuts faster and deals with heavier growth than tractor side mowers.
4. Where conditions are really bad owing to rough ground, stumps, rock or ruts the Hayter is unsuitable and the Autoscythe is preferred.

Further Action

It is known that Hayter (Sales) Ltd., are producing a new model designed to stand up to more arduous conditions.

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December 1952.

