

Miss O'Neally.

No doubt this will
be considered by our M.D.C. on
Friday next.

You will see that the Director
wants to have comparable figures
for similar hostile powers.
Have we got them for the
Soviet & Turkey yet please?

2 11/2.

* No news of this trial has yet
been rec'd from S.W.K. 14/2

See M.D.C. (5) 56.

P.A.

The Bark-Lasse Peeling MachineFORESTRY COMMISSION
(ENGLAND)
15 FEB 1957
RECEIVEDOrigin

The Bark Lasse bark peeling machine is manufactured in Sweden and the agents for the United Kingdom offered a machine to the Forestry Commission for a field trial.

Description

See Photograph 1.

The machine is mounted on a two wheel trailer towed by a standard agricultural wheeled tractor. Power (15 H.P.) is taken from the tractor power take-off running at 540 R.P.M. through a propeller shaft (universal joints at both ends) to a transfer box. Here the drive goes separately by belts to the cutter head running at 6000 - R.P.M. and by shaft to the feed rollers which revolve the log to be peeled and feed it under the cutter. The rate of feed can be varied to suit the size of log being peeled by altering the angle of the two feed rollers.

A hydraulic pump is driven from the transfer box to provide power for raising and lowering the arm carrying the cutter which has four helical rubbing strips. There are no knives.

Pressure of the cutter on the prop being peeled can be varied by altering the arm spring pressure.

Total weight of the machine is 1100 lbs. The price is £635 (without power unit). The manufacturers agents in the United Kingdom are:

Sterners of Tiverton Ltd.,
Lowman Works,
Tiverton,
Devon.

Conditions of the Trial

1. The trial was carried out in late November on timber which had been felled less than a month. The props peeled were generally of good quality being straight and well snedded.
2. The operators were ordinary forest workers who had only a few hours practice on the machine before the start of the trial.
3. The trial included 7 hours actual running time.

4. The machine can be operated by two men but a team of three was found to be the optimum number, the extra man being employed to hand the props to the man feeding them into the machine. The man receiving the finished props did his own stacking.

Observations

1. One of the main attractions of this machine is its light weight and the ease with which it can be moved about. It remains attached to a tractor and can be moved from place to place along a rack at a moments notice. The 14" diameter wheels are perfectly satisfactory for road or depot use but much larger wheels and/or skids would be needed on soft ground. Some criticism may be levelled at the need to tie up an expensive tractor to a machine of this type which is stationary for the greater part of the time.
2. Details of the nature and the results of each of the fifteen individual tests are given as an appendix to this report. It will be seen that the trial covered six different sizes and three species.
3. Operating costs can be assessed as follows:-

Depreciation on £635 over 5,000 hours = 2/6d. per hour

Tractor cost (Fordson diesel) = 4/- "

Repairs and maintenance (estimated) = 1/- "

TOTAL MACHINE COSTS = 7/6d. " "

Wages of 3 men at 3/6d. per hour

+ 40% for overheads = 14/8d. " "

Therefore, total operating cost = 22/2d. " "

The cost of peeling per H. ft. varied between 2d. on $5\frac{1}{2} \times 5\frac{1}{2}$ Corsican Pine and 8.6d. on 3×3 Douglas fir as shown in the appendix.

It was very noticeable that the lowest cost figures were obtained on the largest diameter props with the cost gradually increasing on the smaller diameters. All these figures were recorded on short runs at maximum output rates. On normal full day running it is reasonable to expect that costs would be about 25% higher. It will be noted in the appendix that where trials were repeated, the output rate for the shorter period always exceeded that for the longer.

*The same
as the
Kingslaw
OSS?*

*Much higher
than the
Kingslaw
OSS*

4. The standard of peeling was very high. Very little bark was left round the knots and there was no loss of diameter on the peeled props. The best peeling was done on straight props but changes in direction up to 5° can be dealt with by the machine. Long props can be peeled if they are reasonably straight, the longest pole peeled during the trial was 25 feet. The maximum diameter that can conveniently be peeled is about 9 inches though the machine can actually handle larger diameters. The minimum diameter that can be peeled is 2 inches and the minimum length is 1 foot 6 inches.
5. Daily maintenance takes about 20 minutes and includes attention to 3 lubrication nipples. The cutters received no attention during the trial and they are said by the makers to require none until they are replaced after several months operations.

Conclusions

The Bark Lasse is a very effective peeling machine in the small and portable class. On the larger sizes of straight and well trimmed props it is capable of peeling at a rate of 131 H.ft. per hour giving a cost of 2d. per H. ft. but on the smaller props the price goes up to 3.6d. These costs would be about 25% higher on continuous work.

R. G. SHAW
Machinery Research Officer

January, 1957.

- 1.) This machine is obviously worth considering for forests where the mode of extraction and landing is such as to require frequent movement of the poles from pile to pile.
- 2.) Conservators should be told to consider in that light and to make a case if they want one.
- 3.) To help us to judge '2', we need to compare observed data for other Peeling Machines. On what makers, in all, have we to date comparable reports on performance?

OT.S
5-2

Appendix to H.Q.M.D.C. Report No. 61

Details recorded during the trial of the Bark Lasse Peeling Machine

Trial No.	Species	Size	No. props peeled	Time	Lineal ft.	Lineal ft. per hour	Cu. ft.	Cu. ft. per hour	Cost per Cu. ft. pence
1	Corsican Pine	3 x 3	52	7½ mins.	156	1291	6.76	55.94	4.8
2	Corsican Pine	5½ x 5½	40	15 "	220	580	32.80	131.2	2.0
3	Scots Pine	4½ x 4½	65	20 "	292.5	626.6	29.25	62.65	4.2
4	Scots Pine	3 x 3	274	60 "	322.0	322.0	35.62	35.62	7.5
5	Corsican Pine	3 x 3	157	30 "	471.	942	20.41	40.82	6.5
6	Corsican Pine	3½ x 3½	62	15 "	217	368	13.02	52.00	5.1
7	Corsican Pine	3 x 4	154	30 "	462	924	35.42	70.84	3.7
8	Corsican Pine	5 x 5	102	30 "	510	1020	62.22	124.44	2.1
9	Douglas fir	3 x 3	147	37 "	441	715	19.11	30.90	3.6
10	Corsican Pine	4½ x 4½	69	30 "	310.5	621	31.05	62.10	4.5
11	Scots Pine	3½ x 3½	191	45 "	668.5	391.3	40.11	53.48	5.0
12	Douglas fir	3½ x 3½	41	12 "	143.5	717.5	8.61	43.05	6.1
*13	Scots Pine	3 x 3	84	15 "	252.0	1008.0	10.92	43.68	6.1
*14	Corsican Pine	5½ x 5½	41	22 "	225.5	615	33.62	91.70	2.9
15	Douglas fir	4½ x 4½	20	6 "	90.0	900	9.00	90.00	3.0

* Repeat

X = same as Kingscan
all other considerably better



1. Showing a long pole passing through the machine.



2. A crooked prop after passing through the machine. It was reasonably well peeled but a few patches of bark will be seen to have been left behind.