

Reynier

1 Dean

1 E

2 N.W

3 N.E

6

W. 10/2 P.A.

185.

N.B.

for arena

this report see

J45.

2/8.

Cunder.

6

N.W.

4

S.W.

281.

10.

if possible
next MDC meeting
early Sept.

Mr. Brown. Please

circulate Director's observations
all commentators, & say we would
be grateful for any ^{prompt} information
based on trials however short,
which will help to pin down
the relative effectiveness of these
two pills

Received
from
Mr. Packwood

11/7/57

W.B.

This is a most important
report, please see my
comments & comparative
cost in Appendix X.

Cons. attention should be
drawn to the position
and ^{own} position guided by
my comments

Mr. Packwood

295

Food Restriction. Please
study & discuss with
me Ref 20/5

Comparative trial of the Cundey and Bezner Peeling MachinesOrigin

Bark peeling machines recently tested include the Kingslaw (Report No. 47) and the Bark Lasse (Report No. 61). The British made Cundey and the German Bezner are two smaller machines and a similar report was required on both of them.

Description

Both machines use the principle of the revolving disc carrying a number of cutters. The log to be peeled is held close to the revolving disc whilst the cutters remove the bark and any rough spots. The machines are both mounted on wheels and can be reasonably easily man handled. Both are self contained with their own power units the Cundey having a 5 H.P. air cooled Petter diesel engine and the Bezner, in this case, was powered by a 420 c.c. air cooled B.S.A. engine converted to use T.V.O. An essential difference is that the Cundey is fitted with a feed roller to turn the log and keep it held up against the cutting disc whilst the Bezner requires this to be done by hand.

Conditions of the trial

- (a) The trial took place at Brandon on the 2nd of April 1957.
- (b) All the timber used on this trial had been felled for over two months. It was all pit prop material, straight and well anedded.
- (c) Various sizes of Norway spruce, Sitka spruce, Corsican pine and European larch were included.
- (d) The two machines were run side by side and, to ensure equal conditions, the teams of two operators each were exchanged half way through each test.

Observations

1.

The detailed figures recorded on each test are given in the appendices to this report. It will be seen that in every case the

Cundey gave a better output than the Bezner and in some cases more than double the output. *On this showing (a) I am not prepared to buy any more Bezners except for some very good reason.*

The Bezner are averaging something like 5% per. Cu. ft. more than Cundey's. Probably this turning profit

cut losses some cases.

9.5 - 1 - (b) We should replace our Bezners with Cundey's at earliest justifiable date (savings on operating cost and offset some considerable capital loss)

4/1 [unclear] CB 24/7
 (ii) In [unclear]
 (iii) In [unclear]
 (iv) In [unclear]
 (v) In [unclear]
 (vi) In [unclear]
 (vii) In [unclear]
 (viii) Miss O'Shaughnessy

A summary is as follows:-

	<u>Cu. ft. per hour</u>	
	<u>Cundey</u>	<u>Bezner</u>
N.S. $5\frac{1}{2} \times 5$	56.2	26.6
" 3×3	23.4	11.7
C.P. 4×4	37.2	15.0
" $5\frac{1}{2} \times 5$	41.4	15.1
" 3×3	23.8	10.14
E.L. 3×3	16.3	11.34
S.S. 3×3	19.11	10.14
" $5\frac{1}{2} \times 5$	41.4	24.8
" 4×4	23.25	15.81

These figures give the actual machine output rate over a short period. A much lower rate is to be expected over a full day's work where allowance must be made for moving the machine etc. as well as working at lower intensity. The operators could not maintain these rates for hours on end.

Whilst the Cundey appeared to be giving its maximum performance the Bezner was penalised not only by the fact that it was driven by a smaller engine but, this engine had been converted from petrol to T.V.O.

2. The feed roller on the Cundey appeared to be responsible for a great deal of the superior performance of this machine. Not only does this roller rotate the prop but it also helps to keep it hard up against the cutting disc. It was mainly for this reason that operation of the Cundey was found to be faster and far less exhausting than the Bezner.

3. Both machines gave a very high standard of finish to the product. In fact, the general opinion was that the standard was higher than is really necessary to ensure saleability.

Both machines use cutters to remove the bark as distinct from the rubbing action used by such machines as the Kingslaw and Gorwood.

There is some criticism that cutters cause timber wastage and can so reduce pit prop diameter as to bring the prop into a lower size classification. This is true but the actual loss with skilled operators does not exceed a few thousandths of an inch.

4. The team required to operate both machines is two men, one does the peeling whilst the other picks up the props and does the stacking after peeling.
5. Costs The operating cost of these two machines is calculated as follows:-

Cundey

Depreciation on £281 over 5,000 hours	=	1/3d. per hour
Repairs and Maintenance (estimated)	=	1/- " "
Fuel and lubricants	=	6d. " "
Total machine costs	=	2/9d. " "

Wages of 2 men at 3/6d. per hour

+ 40% overheads = 9/10d. " "

Total CUNDEY cost = 12/7d. " "

Bezner

Depreciation on £185 over 5,000 hours	=	9d. per hour
Repairs and Maintenance (estimated)	=	1/- " "
Fuel and lubricants	=	6d. " "
Total machine costs	=	2/3d. " "

Wages of 2 men at 3/6d. per hour

+ 40% overheads = 9/10d. " "

Total BEZNER cost = 12/1d. " "

Conclusions

During this trial the Cundey machine showed itself to be consistently better than the Bezner. As the operating costs of both machines are very similar the much higher output of the Cundey gives a substantially lower cost per unit of output.

(About 5% per cu. ft. cheaper on the average)

R. G. SHAW
Machinery Research Officer
May, 1957.

Appendix to H.Q.M.D.G. Report No. 65

Details recorded during the trial of the Cundey peeling machine

Trial No.	Species	Size	No. of props peeled	Time	Lineal ft.	Lineal ft. per hour	Cu. ft.	Cu. ft. per hour	Cost per cu. ft.
1.	Norway Spruce	5½ x 5	19	14 mins.	104	445	13.11	56.2	2.7d.
2.	Norway Spruce	3 x 3	60	20 mins.	180	540	7.8	23.4	6.5d.
3.	Corsican Pine	4 x 4	40	20 mins.	160	480	12.4	37.2	4.1d.
4.	Corsican Pine	5½ x 5	11	10 mins.	60	360	7.6	41.4	3.6d.
5.	Corsican Pine	3 x 3	61	20 mins.	183	549	7.9	23.8	6.3d.
6.	European Larch	3 x 3	23	11 mins.	69	376	3.0	16.3	9.2d.
7.	Sitka Spruce	3 x 3	49	20 mins.	147	441	6.37	19.1	7.9d.
8.	Sitka Spruce	5½ x 5	20	20 mins.	110	330	13.8	41.4	3.6d.
9.	Sitka Spruce	4 x 4	25	20 mins.	100	300	7.75	23.2	6.5d.
9 150.4 mean 56.2									93.5 10.4

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Appendix to H.Q.M.D.O. Report No. 65

Details recorded during the trial of the Bessler peeling machine

Trial No.	Species	Size	No. of props peeled	Time	Lineal ft.	Lineal ft. per hour	Cu. ft.	Cu. ft. per hour	Cost per cu. ft.
1.	Norway Spruce	5½ x 5	9	14 mins.	49	210	6.2	26.6	5.5d.
2.	Norway Spruce	3 x 3	30	20 mins.	90	270	3.9	11.7	12.4d.
3.	Corsican Pine	4 x 4	16	20 mins.	64	192	5.0	15.0	9.6d.
4.	Corsican Pine	5½ x 5	4	10 mins.	22	132	2.76	15.1	9.6d.
5.	Corsican Pine	3 x 3	26	20 mins.	78	234	3.38	10.14	14.3d.
6.	European Larch	3 x 3	16	11 mins.	48	262	2.08	11.34	12.8d.
7.	Sitka Spruce	3 x 3	26	20 mins.	78	234	3.38	10.14	14.3d.
8.	Sitka Spruce	5½ x 5	12	20 mins.	36	108	8.25	24.8	5.8d.
9.	Sitka Spruce	4 x 4	17	20 mins.	51	153	5.27	15.81	9.2d.