MECHANICAL BOXTHORN HEDGE CUTTER

Winch and guard: A small hand winch operates a light wire rope which extends over wooden uprights to the top of the cutter bar arm for raising or lowering the cutter bar. To protect the operator from flying splinters and hedge cuttings, a strong cage, covered with close-mesh, heavy wire netting has been built over the driver's seat and steering wheel.

Cost of unit: All the materials for the cutter, including the separate engine, framework, shafts and pulleys, and a special heavy duty belt of the best quality, cost about £100.

Cutting Operations

No two boxthorn hedges are alike, varying considerably in height, width and density according to age, soil fertility, aspect, and control methods used in the past. To handle efficiently all the conditions met with a machine must be versatile. That made by Mr. Luscombe can tackle any type of hedge cutting likely to be met with.

The main variations in method are in the number of cuts required, the number and type of cutting blades which can be used with advantage, and the speed at which the tractor can be driven. In the case of an average strong boxthorn hedge of 6 to 8 years growth, with a height and width of 10 to 12ft., about five cuts would be required for a thorough job. The procedure would be:

First cut with the blades clearing the ground by 1 to 2ft. The tractor is driven somewhat wide of the hedge and the heavy overlap toward the bottom of the hedge is cut away.

Second cut at about the centre of the hedge above the first. This cut would be closer than the first and would clear from about 2ft. from the ground up to 6 or 7ft. high.

Third cut with the blades striking right down to the ground, clearing the base of the hedge.

Fourth cut with the tractor driven slightly closer now that the bottom of the hedge is cleared. This cut is taken above the centre cuts.

Fifth cut right to the top on a slight bevel or with the arm set to cut the top off fairly squarely, whichever is desired. Where hedges are also main shelter belts the top cut is kept vertical so that the full height of the shelter remains.

At each cut a man follows the machine forking the cut material about 10ft. back from the hedge. In contrast to the tangled mass of material which has to be moved when such a hedge is cut by hand, the short cuts by the machine leave the material loose and relatively easily handled. The cuttings are pushed into heaps by a tractor sweep, ready for burning.

Great Reduction of Cost

Local experience indicates that costs can be estimated on the basis of the number of cuts required, these being as follows:

Hedge growth.	No. of cuts. (one side)
1 to 3 years	2
3 to 6 years	3
6 to 8 years	4 or 5
Over 8 years	Up to 10

Working on a hedge 10 to 12ft. high, which had not been cut for 6 or 8 years, the machine cut to a clean, straight side an average distance of 6 chains an hour. Hired at a cost of £2 an hour, such a machine would do for approximately 7s. a chain work which has been costing at least 25s. a chain in the district. Moreover, labour for this type of work is becoming more and more difficult to secure.

Cutting Finished Early

This mechanical cutter has proved so effective on this farm that the 300 chains of boxthorn hedges of all types (mainly well overgrown because of lack of labour during the war) were cut this season immediately after harvesting the hay. All the work was completed early in the autumn, when good clean burns of the rubbish were possible.

Hedges cut at that time of the year make sufficient fresh growth to give good wind-proof shelter for the stock in the winter. Late-cut hedges, on the other hand, are still open and draughty when the cold weather comes. Most farmers realise this, but they have had to continue cutting much too late; even then on few farms has the work been kept up to date by hand cutting.

This season the machine has had to tackle many very heavy hedges to catch up with arrears of work. Now that this heavy work has been done and hedges are cut to a straight line again, the work will be comparatively light and the machine is expected to complete the hedge cutting on the farm each year in about 50 hours.

Use of Tractor Sweep

With the introduction of the mechanical cutter, another operation which has absorbed many man- and horse-hours on Taranaki farms in the past has also been mechanised. The 17-horsepower tractor is fitted with an all-steel hay sweep, and the boxthorn, after being forked back from the hedge during cutting, is easily swept out into the paddock on to the fires. Using the tractor sweep for this operation has a considerable advantage over forking and dragging the material with horses, not only in saving time but because the sweeping compresses the material into tight heaps which burn much more readily and cleanly than the loose material which results from shifting the cuttings by hand. Further, the material can be pushed right into the fire with the sweep, reducing the area of ground burnt over each season.

The tractor has thus been very effectively harnessed to the work of boxthorn hedge cutting and clearing of the debris on this farm and many others in Taranaki. The more general use of such machines in this district will undoubtedly reduce the cost of this work and permit hedge cutting to be done in season.

Front view showing steel drive shaft and cutter bar attachment.