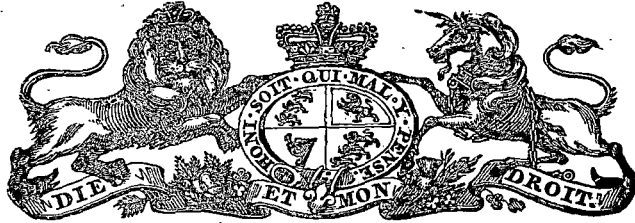


(No. 33.)



1891.

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PARLIAMENT OF TASMANIA.

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CALIFORNIAN THISTLE:

REPORT FOR 1890.

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Presented to both Houses of Parliament by His Excellency's Command.



Office of Inspector of Stock, Hobart, 1st July, 1891.

SIR

I HAVE the honor to forward my Report under "The Californian Thistle Act," for the year ending 30th June.

I have always expressed an opinion that this pest could be successfully dealt with if owners and occupiers of Agricultural land would assist and encourage the extermination of this noxious weed. It is apparent to a close observer that no good work towards the reduction of any pest will be attained unless compelled by legislation. I still hold that if "The Californian Thistle Act" were amended, as suggested in my Reports for the years 1889 and 1890, there would be a hope of seeing much of the agricultural land in the Districts of Clarence, Sorell, Brighton, Richmond, and Glenorchy increase at least from 25 to 50 per cent. on the present value.

In furnishing this Report I think I cannot give more valuable information than that published in the *Australasian* of December 6, 1890, which clearly demonstrates that the mode of eradication I have always advocated is the correct one. This has been clearly shown, not only in Tasmania, but in the Bungaree District, near Ballarat, Victoria, by practical trials carried out under Professor Brown.

#### THE CANADIAN THISTLE.

(*Australasian*, December 6, 1890.)

##### SUCCESSFUL ERADICATION.

*The most troublesome Weed.*

For many years a very troublesome thistle had been spreading in the rich volcanic soil of the Bungaree district, near Ballarat, and about three years ago public attention was called to the subject by the Member for the district, Mr. E. Murphy, who urged in Parliament that some remedial measures should be taken by the Government. It was soon afterwards discovered that the thistle was one well known in Canada and the United States as the most troublesome of all weeds, and the importance of checking a noxious growth which threatened to spread over much of the most fertile lands of the Colony became generally recognised. Under the name of the Canadian thistle, this specially troublesome weed was identified, and its presence was discovered in several other fertile districts of the colony. Happily the dangerous character of the thistle was recognised before it had spread to any alarming extent. Even in the Bungaree district it had not appeared on the majority of farms, and in the worst cases it had not spread over all the land, while in other localities it was confined to small patches. As the result of Mr. Murphy's action a select committee was appointed to assist the Minister of Agriculture in devising means for eradicating the thistle, and the efforts of the committee have been highly successful.

##### *Unsuccessful Methods.*

Some careless farmers who had allowed their land to become covered with the thistles, and thus endanger the valuable property of their neighbours and threaten to spread a pest throughout the Colony, consider that it was the duty of the Government to destroy the thistles. It was urged by these men that as the land was worth £40 or £50 per acre, it would be a laudable national work for the Government to eradicate the thistles. The Government did not see the matter in this light, but they went so far as to assist in finding out an effective remedy which the farmers might apply themselves. To find such a remedy has been the work of the Agricultural Department assisted by the committee. At first chemicals were applied, but the result was not satisfactory. The thistle takes entire possession of the ground, sending out lateral roots at different depths, vertical shoots being sent up from these laterals. The chemicals would kill the vertical roots, but they could not be expected to follow the laterals, and the smallest piece of remaining root was sufficient to produce a new plant. To so charge the soil with chemicals as to kill the mass of roots would destroy its fertility, so this method was abandoned. At this juncture Professor Brown, now of the Longrenong Agricultural College, had recently arrived from Canada, the home of the thistle, and his advice was asked. Bare fallowing, with frequent cultivation, was the method he recommended, and that, he pointed out, was the practical means employed in Canada. Accordingly, Professor Brown was entrusted two years ago with an experiment in this method. Last week the experimental ground was visited by the Minister of Agriculture, the Secretary of the Agricultural Department, Professor Brown, and a large number of farmers of the Ballarat District, and the result was a unanimous acknowledgment that an effectual and practicable method of eradicating the thistle had been demonstrated.

*The successful Method.*

Those who sought a method of eradicating the thistle without work will be disappointed. It has been found that the land cannot be cleared of the thistle by passing resolutions or sprinkling a magic lotion, but it has been shown that no practical farmer who deserves to possess rich land need be permanently troubled with the much-talked-of Canadian thistle. Constant cultivation by cutting off the upper part of the plant kills the roots. This is precisely what practical men pointed out from the first, but the department's experiments, carried out in the midst of the farmers most directly interested, have fully proved the conclusion and brought the lesson home. Ten acres of land, selected as being the worst for thistles in the district, were taken in hand two years ago, the area being leased by the department for the purposes of the experiments. On a portion a crop was sown the first year after two or three workings, but the remainder was bare fallowed. The crop was a poor one, and the results on the whole were not satisfactory. Where the crop was not sown the land missed a crop, and consequently more than a year was allowed for keeping the thistles down. Directing our attention to the successful part of the experiment, we find that the land was ploughed in the winter about 5in. deep with a double-furrow German plough, and afterwards a lighter ploughing, about 3in. deep, was given as frequently as the thistles showed 3in. or 4in. above ground. Professor Brown calls the treatment scarifying, but it is well to note that the implement used was really a light plough, which with its short mouldboard turned over the sod. Keeping down the thistles effectually in this way involved cultivating 10 times in the first year, and nine times in the second, and at last sowing time the results justified the putting in of a crop. A portion was sown with wheat and a portion with oats. It was the 10 acres of land thus sown with wheat and oats that was inspected last week.

*The Result.*

Professor Brown, who made an examination previously to the official visit, claims that 95 per cent. of the thistles have been killed, and that all the farmer has to do is to put in a cleaning crop next year, and the land will be completely free from the thistles. The visitors looked carefully into the crop for thistles, and so few were to be found that several farmers declared that Professor Brown had not done himself justice in owing to 5 per cent. All around, in the ground not treated, the thistles formed a matting upon the surface, and the success of the experiment was forcibly impressed upon the visitors. Mr. Forbes, a neighbouring farmer, who has been carrying out a similar system, spoke strongly in favour of the course adopted, but counselled continued watchfulness until the last remaining thistle should be destroyed.

*Cost of the Treatment.*

The cost of the treatment, of which an account has been kept, is stated to be £5 per acre, but Professor Brown points out that the work can be done by the farmer himself, and, as it consists entirely of cultivation, part of it would be necessary in preparing for the crop without reference to the thistles. Those who consider the cost heavy should remember that the land of the district sells at from £40 to £50 per acre, and that when taken possession of by the thistle it is worth nothing. A year's crop is lost in the treatment, but no crop at all can be obtained when the thistle gets fully established. And then it is to be remembered that in no case is the whole farm infested. A patch of an acre or two is in most cases to be dealt with, so that for an expenditure of £5, £10, £20, or so, according to the size of the patch, 100 or 200 acres, worth £40 or £50 per acre, are saved from being rendered valueless. I know of extensive districts of very rich land in which the patches are only a few square yards in extent, so that nothing but folly can allow the thistle to spread. Ordinary cultivation tends to spread the thistle, for each piece of root carried by the harrows produces a fresh plant. The danger and the remedy are now known, so that careful farmers will be able to act in self-defence; careless ones should be promptly dealt with by the law.

I respectfully suggest that the Government will seriously consider the accruing benefit that would arise both to the Colony and landowners from amended legislation, by the eradication of Californian Thistle being enforced.

The above interesting experiments prove the success of this method, and shows the cost of treatment, which, it must be patent to agriculturists, is a reproductive work.

The area of thistles has not been decreased during the past year, and the objectionable practice of ploughing and harrowing through patches of thistles still continues, thus increasing the infested area.

The Inspecting Staff have been zealous in the performance of their duties, compelling occupiers of infested land to keep their thistles cut, and thus prevent the seed from spreading; where persons have failed or neglected to take this necessary precaution prosecutions have followed, with more or less success.

I have the honor to be,

Sir,

Your obedient Servant,

THOMAS A. TABART, *Chief Inspector.*

*The Honorable the Chief Secretary.*