EXPERIENCE IN CONTROLLING BARLEY GRASS

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Dannevirke

Mr McKenna farms at Tiratu, 8 miles east of Dannevirke, on the lower terraces of the Manawatu River. Half of the 248 acre area is light country, the rest a medium heavy silt loam.

*The annual rainfall average is 42 in. The farm is a well managed sheep and cattle fattening unit, with a winter carrying capacity of some six ewe equivalents per acre. The author describes how he has controlled barley grass (*Hordeum murinum*) in practice.*

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FIFTEEN years ago, I began a programme of eradicating barley grass (*Hordeum murinum*) from my farm. Barley grass then was a serious problem, thick under every plantation, large solid areas through most of the paddocks.

Now most of the farm is virtually free of the weed; though plants established from seed blown or washed in from outside must periodically be treated. At present the remaining infested slopes and gully at the back of the farm are being tackled.

To control barley grass successfully a definite programme of operation must be drawn up. The following suggestions are based on my experience, trials and tribulations over the years.

WHERE TO START

I would suggest that, on most barley grass infested farms, the start should be made at the gate to the farm dwelling, working from there to the back of the farm. To work in the opposite direction is to fight a losing battle.

The most important thing of all is to be able to recognize the enemy. Young cocksfoot and other grasses can look like barley grass at times, particularly when viewed from the tractor seat, but the clasping ears around the base of the sheath give barley grass a clear identity tag.

CLEAR THE GROUND

Remove any plantation that is of no use and thoroughly clean up before attempting a spray programme. Any trees that have not been removed and require spraying under should be cleared of broken branches, wood or any object that could be covering dormant seeds, that will germinate at the first sign of moisture. I have known this to happen after a lapse of at least five years. I suggest harrowing the area around the trees before spraying so as to disturb dormant seed.

WHAT TO USE

My results have come mainly from 2,2-DPA with a combination of 40% w/w simazine, 12.5% w/w amitrole and 25.7% w/w 2,2-DPA and paraquat.

QUANTITIES TO USE

2,2-DPA 5 lb to 40 gal of water has given the best results. A pressure of at least 80 lb/sq. in. should be used if spraying by gun, and 35 lb/sq. in. with 32M nozzles at 4 mph with boom cross spraying. Cross spraying gives a better coverage at the lighter rate of application. I suggest, too, that where the barley grass is very thick a bruising by roller might be an advantage as I have noticed the best results are achieved where the tractor wheels have done this.

WHEN TO SPRAY

2,2-DPA

Under my conditions, the critical time is late September/early October. However, on early or late country under different climatic and soil conditions, these times could be different. Management plays an important part, as the maturing of the barley grass differs whether paddocks are leniently or hard grazed.

Sterilants

These can be left till early November, when the barley grass is most conspicuous. Sterilants are best used on solid patches under trees, and on patches which for one reason or another have been missed with earlier spraying with 2,2-DPA.

Paraquat

On no account should this be used before the green head stage and then even under the best of conditions it has proved to me only 50% effective. Paraquat has advantages, but in my opinion its use is limited to spot treating barley grass in the green head stage that was missed in earlier spraying.

HOW OFTEN TO SPRAY

Treatment with 2,2-DPA in September and again in October followed by paraquat application to any surviving seed-heads can break the back of the problem in two years. However, it depends on how long the area has been infested as to how many more years of spot treatment will be required. I have in fact, cleared up bad areas in the open in two years, but have still had to spot treat plants under trees after 15 years.

MANAGEMENT

By fencing off parts of a paddock liable to barley grass, it is easier to manage and organize a control programme. Hard grazing heavily infested areas has helped reduce infestations.

The last thing to do is make hay from infested paddocks. Bought-in hay is, to my mind, the worst offender in spreading barley grass, especially if it is fed on lighter, drier country.

I buy in stock only from a clean farm, although I breed most of my replacements.

A source of reinfestation is transport trucks, seed being carried not only on the wheels but in the tray itself; especially under dry conditions, bumping the tray or loading race can cause contaminated soil to drop

off. A hay press can also be a danger — how often are bales left in the press from the last job — baled from a barley grass infested headland — popped into the shed?

Sources of reinfestation are innumerable — a stock agent's boots, a sparrow's nest, a traveller's car, posts from a contaminated yard, so that trying to keep a farm free of barley grass is an exacting and demanding job.

COSTS AND EFFORT

In 15 years I have used, on average, 60 lb of 2,2-DPA which at the old prices amounted to some \$900, not a large sum really. The biggest cost is in time and effort. I generally spend 50 to 60 hours a year in solid spraying, as well as many odd hours in spot treatment and pulling isolated plants.

ENCOURAGING OTHERS

To my mind control of barley grass on a district or national basis will not succeed until it is declared a noxious weed in all counties.

Stock and station agencies would then automatically have to clear all saleyards of this unwanted grass; stock carrying seed would be returned to the vendor; and all public centres, such as show grounds and sports areas, would also need to be sprayed clean to stop the spread.

Going this far would then give the farmer the confidence he needs to tackle his barley grass problem with the determination and effort it demands.