Linuron: a new herbicide for cereal crops

Geoffrey A. Pearce
DURING two years of trials on both pastures and cereals Linuron has proved itself to be a valuable addition to the range of chemicals for the control of weeds in cereals. It has a good crop tolerance safety factor and controls a wider range of weeds than most other herbicides.

Rate of Application

Linuron is a wettable powder containing 50 per cent. active ingredient, and should be applied at the rate of 6 oz. of the product (3 oz. active ingredient) per acre. Continuous and thorough agitation is required to prevent the chemical from settling out.

Wetting agents must not be added to the spray solution.

Time to Spray

One of the main advantages of Linuron is that it is applied when the cereal crop is in the two leaf stage. At this time the weeds are very small and therefore easily
Linuron can be used in wheat, oats and barley to control radish, turnip, mustard, doublegeee and capeweed.

The rate of application is 6 oz. of the commercial product per acre applied when the cereal is in the two to four leaf stage.

Linuron is a wettable powder so that constant agitation is required to keep the material in suspension.

The cost of the treatment is $1.42 per acre for the chemical.

Weed competition has its greatest effect during the early growth stages of the crop so that increased yields should automatically follow.

Another advantage is that the length of the spraying season for cereals is increased by about four weeks.

Although Linuron has no effect on the cereal when it is in the stooling stage, there is then no advantage in using it as against other herbicides which would control the weeds.

Crops will gain most when Linuron is applied during the period from the two leaf stage until two tillers are produced.

Weeds Controlled

At the recommended rate of application Linuron will kill radish, turnip, mustard, capeweed and doublegeee. It is not recommended for annual grasses and wild oats but these will be affected to some extent.

Tolerance of Cereals

Rates of application of 32 oz. per acre or more are required before there will be any reduction in yield. This means that cereals (wheat, oats and barley) are more tolerant to Linuron than to 2,4-D. There is no need to use more than the 6 oz. per acre rate.

Effect on Clovers and Medics

The results of trials to test the tolerance of clovers and medics to Linuron have been variable. In many instances damage has been caused while on other occasions the legumes have not been affected in any way. Further trials are needed to sort out the effect of variations in growing conditions.

Linuron is not recommended for use on pastures where it is desired to avoid damage to the legume component. In the case of a cereal undersown with clovers some damage may occur.

Method of Application

Most of our experience has been with ground application through boom equipment; a minimum of 8 gallons of water per acre should be used for this.

Special attention should be given to agitation. The present by-pass method fitted to most spray units is not sufficient to keep the powder in suspension. The manufacturer's recommendations for modifying spray equipment should be carefully followed.

Aerial Application

Aerial spraying with a wettable powder is something new and operators will have to make some changes to their equipment.

A minimum of 2 gallons of water per acre should be used, and effective agitation is again required.
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The effect of Linuron on pasture species is unpredictable. These plots at Chapman Research Station show one result of application of 12 oz. per acre applied one week after germination. However, at other sites, little damage to pasture species resulted.

The normal spray swathe appears to be effective although there may be some advantages in flying closer to the ground.

**Caution Needed**
Because of the need to adapt practically all spray equipment for handling wettable powders, users should be most careful in their first season's operations. However, provided the herbicide is applied evenly over the area at the rate recommended, excellent weed control will be obtained.

**Cost**
The current price of Linuron is $3.80 (38/-) per pound. At the rate of 6 oz. per acre the cost will be $1.42 (14/3) per acre. Yield increases that can be expected will easily recoup this cost and more.

**Distributors**
The distributors in this State for Linuron are David Gray and Co. Ltd., Lanes (W.A.) Pty. Ltd., and Shell Chemical Co.

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**BACONER CARCASE COMPETITION, 1966**

The 1966 Baconer Carcase Competition will be conducted by the Australian Pig Society.

Judging of the Competition will be done on the Western Australian modified Hammond System, on the same lines as last year. Pigs should be despatched to Watsons, Spearwood and will be received at the works from May 23 to September 7, inclusive.

A schedule of Prizes and Conditions will be available shortly; interested growers should apply early for a copy if they do not receive one within a reasonable time.

Any further information required by prospective competitors can be obtained by application to the Society's office, 239 Adelaide Terrace, Perth. Phone 23 2951.
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- APPLY EARLY — weeds are killed BEFORE they compete with crop. Linuron 50 may be applied from 2-leaf to tillering.
- LONG LASTING — weeds continue to be killed for several weeks after ONE application.
- EFFECTIVE — most annual weeds are controlled by Linuron 50, including:
  * DOUBLE-GEE (3 CORNER JACK)
  * AMSINCKIA
  * RADISH
  * MUSTARD
  * DEADNETTLE
  * CAPEWEED
  * TURNIP
  * FUMITORY
  * SAFFRON THISTLE
  * SHEEPWEED
  * FATHEN
- SAFE TO CROP — three times the recommended rates have not hurt yields.
- SAFE TO HUMANS AND LIVESTOCK — extremely low in toxicity — non-inflammable and non-corrosive.
- SAFE TO OTHER CROPS — no harmful vapours to damage nearby pastures or horticultural crops.
- SAFE TO EQUIPMENT — just plain water washes all traces of Linuron 50 from spray equipment.
- EASY TO APPLY — by ground or by air — even during light showers there's no need to miss spraying weeds.
- PLANNED PLANTING — crop can be sown in dry soil. When rains germinate wheat and weeds, the weeds can be killed with Linuron 50.
- OATS AND BARLEY — Linuron 50 may be used in these crops.

For supplies of Linuron 50 see your local agent or write to:
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To increase the chance of ewe survival following an assisted birth, Department of Agriculture veterinary surgeons recommend that a small first-aid kit be carried when inspecting lambing ewes:

- A 26 oz. bottle containing disinfectant (2 tablespoonfuls of Dettol to 25 oz. clean tap water).
- Three 4 ft. lengths of thin window cord.
- Box of pessaries.
- Towel.
- Disinfectant soap such as "Gamophen".

Place all in a plastic bucket (or small box). In addition, the following may be added:

- Rubber gloves.
- Raddle (in plastic bag) for identification of treated ewes.
- Calcium borogluconate (in case of hypocalcaemia or "milk fever").
- Syringe.

Hands should be washed in Dettol solution before and after assistance.
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