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00/R/CS/511 Management of Herbicide Resistant Crops - W. Wheat

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00/R/CS/511

MANAGEMENT OF HERBICIDE RESISTANT CROPS

Object: To identify possible benefits and potential management problems that may arise in farm rotations that include herbicide resistant rape and beet - Black Horse.

Sponsors: P.J.W. Lutman.

The second year, w. wheat.

Design: 2 replicates of 2 plots split into 4 sub-plots.

Sub-plot dimensions: 24.0 x 120.0.

Treatments: All combinations of:-

1. **CROP ROT** Crop rotations in 1999, 2000, 2001 and 2002:

R1	Rape, cereal, cereal, rape
R2	Rape, cereal, beet, cereal

2. **RESIST** Type of rape grown in 1999:

(RR)	Glyphosate resistant
(LL)	Glufosinate resistant
(IME)	Imazamox resistant
(CON)	Conventional

Experimental diary:

24-Jul-99	: T	: R2	: Ploughed.
18-Aug-99	: B	:	: Triple superphosphate at 580 kg.
25-Aug-99	: T	: R1	: Ploughed.
06-Sep-99	: T	: R2	: tm)PDQ at 3.0 l in 200 l.
	: T	: R2	: tm)Enhance Low Foam at 100 ml in 200 l.
09-Sep-99	: B	:	: Combination drilled, Riband, at 250 seeds/m ² with the Accord drill.
	: B	:	: Rolled.
14-Sep-99	: B	:	: PBI Slug Pellets at 8.0 kg.
15-Oct-99	: B	:	: Cyperkill 10 at 250 ml in 200 l.
03-Nov-99	: B	:	: tm)Duplosan at 0.5 l in 200 l.
	: B	:	: tm)Tolkan Turbo at 2.0 l in 200 l.
	: B	:	: tm)Cyperkill 10 at 250 ml in 200 l.
14-Dec-99	: B	:	: tm)Hawk at 2.5 l in 200 l.
	: B	:	: tm)Cropoil at 1.0 l in 200 l.
01-Apr-00	: B	:	: tm)BASF 3C Chlormequat 720 at 2.0 l in 200 l.
	: B	:	: tm)Moddus at 0.2 l in 200 l.
24-Apr-00	: B	:	: Landmark at 0.5 l in 100 l.
27-Apr-00	: B	:	: Sulphur Gold (30.0% N, 7.6% S), at 500 kg.
16-Aug-00	: B	:	: Combine harvested.

Previous crops: W. oats 1998, w. rape 1999.

- NOTES:** (1) Estimates of seed loss from combine harvesting were made in July and August 1999. Weed populations were assessed in October and March. Rape seed in soil samples were counted in January and weed biomass was measured in June.
- (2) Because of contractual reasons the yields are not published in this edition.

00/R/CS/512

MANAGEMENT OF RESISTANT VOLUNTEER RAPE

Object: To identify possible benefits and potential management problems that may arise in farm rotations that include herbicide resistant rape -Black Horse.

Sponsors: P.J.W. Lutman.

The second year, w. rape.

Design: 3 randomised blocks of 4 plots split into 4 sub-plots.

Whole plot dimensions: 12.0 x 48.0.

Sub-plot dimensions: 12.0 x 12.0.

Treatments:

Whole plots

RES 1999 Type of rape undersown into w. wheat in 1999:

(RR)	Glyphosate resistant
(LL)	Glufosinate resistant
(IME)	Imazamox resistant
(CON)	Conventional

Sub-plots

RES 2000 Rape; conventional or herbicide resistant sown in 2000 (seed dressing in brackets):

RR	Glyphosate resistant (tr. Rovral Liquid FS)
LL	Glufosinate resistant (tr. Rovral Liquid FS)
IME	Imazamox resistant (tr. Rovral Liquid FS)
CON	Conventional; Apex (tr. Lindex-Plus FS Seed Treatment)

Experimental diary:

18-Aug-99	: B :	: Triple superphosphate at 580 kg.
26-Aug-99	: B :	: Ploughing started.
27-Aug-99	: B :	: Ploughing completed.
09-Sep-99	: B :	: Cleaver seed broadcast.
10-Sep-99	: T :	: Combination drilled, varieties at 120 seeds/m ² with the Accord drill. Rolled.
11-Sep-99	: T : CON :	tm)Katamaran at 2.0 l in 220 l.
	: T : CON :	tm)Alpha Trifluralin 48 EC at 2.0 l in 220 l.
14-Sep-99	: B :	: PBI Slug Pellets at 8.0 kg.
14-Oct-99	: B :	: tm)Punch C at 0.4 l in 200 l.
	: B :	: tm)Hallmark at 100 ml in 200 l.
20-Oct-99	: B :	: 34.5% N at 87 kg.
27-Oct-99	: T : IME :	Imazamox at 1.75 l in 220 l.
28-Oct-99	: T : RR :	Roundup Biactive at 2.0 l in 220 l.
29-Oct-99	: T : LL :	Liberty at 3.0 l in 220 l.
16-Dec-99	: B :	: Punch C at 0.4 l in 200 l.
09-Feb-00	: B :	: Sulphan (30% N, 7.6% S) at 166 kg.
06-Mar-00	: B :	: Sulphan (30% N, 7.6% S) at 433 kg.
09-May-00	: B :	: tm)Bavistin DF at 1.0 kg in 50:50 mix with Bavistin FL at 1.0 l in 200 l.

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Experimental diary:

09-May-00 : B : : tm)Hallmark with Zeon Technology at 75 ml in 200 l.
12-Jul-00 : B : : tm)Enhance Low Foam at 400 ml in 400 l.
 : B : : tm)Reglone at 3.0 l in 400 l.
25-Jul-00 : B : : Combine harvested.

Previous crops: W. oats 1998, w. wheat 1999.

- NOTES:** (1) Estimates of seed loss from combine harvesting were made in July and August 1999. Weed populations were assessed in October, November and January. Percentage flowering was assessed in April and May and weed biomass was measured in June.
- (2) Because of contractual reasons the yields are not published in this edition.