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88/R/WW/12 Control of Volunteers - W. Wheat

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88/R/WW/12

WINTER WHEAT

CONTROL OF VOLUNTEERS

Object: To compare methods of volunteer control in cereal crops - Summerdells II.

Sponsors: R. Moffitt, D.G. Christian.

Design: 3 replicates of 6 x 3 criss-cross.

Column plot dimensions: 6.0 x 23.0.

Treatments: All combinations of:-

- | | |
|-------------|--|
| 1. PRIMCULT | Primary cultivations: |
| NONE | None until just before sowing |
| DYNDRIVE | 'Bomford Dynadrive' |
| DISC | Disc |
| PLOUGH | Plough |
| ROTAVATE | Rotary cultivate |
| TINE | Tine |
| 2. PRSOWCON | Pre-sowing volunteer control: |
| GLYPHOS | Glyphosate at 0.27 kg in 200 l on 24 Oct, 1987 |
| PARAQUAT | Paraquat at 0.60 kg ion in 200 l on 24 Oct |
| ROT HARR | Rotary harrow on 7 Nov |

- NOTES:** (1) Primary cultivation treatments were carried out on 18 Aug, 1987, disc and tine treatments were cultivated twice, the others once.
- (2) All plots were disced twice and rotary harrowed on 7 Nov.
- (3) The 'Bomford Dynadrive' has a frame similar to a rotary cultivator but it has two rotating shafts containing flat, slightly twisted, spade shape tines. The front shaft drives the rear, it is fitted with twice the number of blades and rotates at about one third the speed of the rear shaft.

Basal applications: Manures: (0:18:36) at 690 kg. 'Nitram' at 120 kg and later at 480 kg. Weedkillers: Fluroxypyr at 0.20 kg with clopyralid at 0.07 kg and bromoxynil at 0.34 kg in 200 l.

Seed: Mercia, sown at 180 kg.

Cultivations, etc.:- PK applied: 24 Aug, 1987. Seed sown: 7 Nov. First N applied: 2 Mar, 1988. Second N applied: 22 Apr. Weedkillers applied: 26 Apr. Combine harvested: 5 Sept. Previous crops: W. barley 1986 and 1987.

NOTE: Volunteer plants were counted in autumn 1987, before the new crop emerged and at anthesis. Numbers of barley grains in harvested produce were counted.

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GRAIN TONNES/HECTARE

***** Tables of means *****

PRIMCULT PRSOWCON	NONE DYNDRIE	DISC	PLOUGH	ROTAVATE	TINE	Mean
GLYPHOS	6.08	5.87	5.47	6.37	5.61	5.87
PARAQUAT	6.36	6.23	6.04	6.36	6.16	6.21
ROT HARR	5.86	5.95	5.71	6.56	5.69	5.94
Mean	6.10	6.02	5.74	6.43	5.82	6.01

*** Standard errors of differences of means ***

PRIMCULT PRSOWCON	PRIMCULT PRSOWCON	PRIMCULT PRSOWCON
0.317	0.072	0.347
Except when comparing means with the same level(s) of		
PRIMCULT		0.171
PRSOWCON		0.346

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP1	10	0.389	6.5
BLOCK.WP2	4	0.088	1.5
BLOCK.WP1.WP2	20	0.208	3.5

GRAIN MEAN DM% 84.2

SUB PLOT AREA HARVESTED 0.00217