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98/R/CS/457 Set-aside, Cultivations and Crops - W. Wheat

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98/R/CS/457

SET-ASIDE, CULTIVATIONS AND CROPS

Object: To measure the establishment, growth and yield of w. wheat and w. rape following a range of cultivations and herbicide applications after natural regeneration set-aside. To assess soil nitrogen and weeds in the two crops and diseases in the wheat - Scout.

Sponsors: J.F. Jenkyn, R.G. Gutteridge.

The third year, w. wheat.

Design: 3 randomised blocks of 5 x 2 split into 2 sub-plots.

Whole plot dimensions: 12.0 x 26.0.

Sub-plot dimensions: 10.0 x 12.0.

Treatments: All combinations of:-

1. **SETDESTR** Method and time of destruction of set-aside in 1996:

(PG)	Ploughed in May, glyphosate pre-drilling
(PC)	Ploughed in May, cultivated in June and July
(MP)	Minimally cultivated in May, ploughed in August
(HP)	Herbicide in May, ploughed in August
(-P)	Ploughed in August

2. **CROP** Crop in 1997

(R)	Winter rape
(W)	Winter wheat

Sub-plots

3. **NITROGEN** Fertilizer nitrogen in 1997 (kg N):

(-)	None
(N)	160

Experimental diary:

- 22-Sep-97 : B : Ploughed.
- 25-Sep-97 : B : Rotary harrowed, Genesis, dressed Sibutol, drilled at 380 seeds per m².
- 26-Sep-97 : B : Rolled.
- 12-Nov-97 : B : Stefes IPU 500 at 2.0 l with Stomp 400 SC at 2.0 l and Cyperkill 10 at 250 ml in 200 l.
- 17-Feb-98 : B : 34.5% N at 120 kg.
- 17-Apr-98 : B : 34.5% N at 460 kg.
- 08-May-98 : B : Ally at 20 g with Pointer at 0.5 l in 200 l.
- 28-May-98 : B : Opus at 0.7 l in 200 l.
- 20-Aug-98 : B : Combine harvested.

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NOTE: Plant samples were taken in July to assess root and stem base diseases.

GRAIN TONNES/HECTARE

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

CROP	(R)	(W)	Mean
SETDESTR			
(PG)	9.62	5.19	7.40
(PC)	9.59	5.75	7.67
(MP)	7.74	5.52	6.63
(HP)	9.32	5.36	7.34
(-P)	8.95	4.94	6.95
Mean	9.04	5.35	7.20

N	(-)	(N)	Mean
SETDESTR			
(PG)	7.18	7.63	7.40
(PC)	8.08	7.25	7.67
(MP)	6.66	6.59	6.63
(HP)	7.64	7.04	7.34
(-P)	6.81	7.08	6.95
Mean	7.27	7.12	7.20

N	(-)	(N)	Mean
CROP			
(R)	8.95	9.13	9.04
(W)	5.60	5.10	5.35
Mean	7.27	7.12	7.20

SETDESTR	CROP	(R)	(W)	(N)	(N)
	N	(-)	(N)	(-)	(N)
(PG)		9.54	9.69	4.81	5.56
(PC)		9.64	9.54	6.53	4.97
(MP)		7.24	8.24	6.09	4.95
(HP)		9.57	9.06	5.70	5.02
(-P)		8.77	9.14	4.86	5.01

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GRAIN TONNES/HECTARE

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

	SETDESTR	CROP	N	SETDESTR
				CROP
	0.542	0.343	0.186	0.766
	SETDESTR	CROP	SETDESTR	
	N	N	CROP	N
	0.616	0.390	0.872	
Except when comparing means with the same level(s) of	SETDESTR			
	0.415			
CROP		0.263		
SETDESTR.CROP			0.587	

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	18	0.939	13.0
BLOCK.WP.SP	20	0.719	10.0

GRAIN MEAN DM% 86.8

SUB-PLOT AREA HARVESTED 0.00230