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## Yields of the Field Experiments 1998

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

#### Rothamsted Research

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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 m<sup>2</sup>.
- 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 \*\*\*\*\*

<b>CROP</b>	(R)	(W)	Mean
<b>SETDESTR</b>			
(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

<b>N</b>	(-)	(N)	Mean
<b>SETDESTR</b>			
(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

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

<b>SETDESTR</b>	<b>CROP</b>	(R)	(W)	(N)	(N)
	<b>N</b>	(-)	(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 \*\*\*

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