This work is licensed under a Creative Commons Attribution 4.0 International License.

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readible, or you suspect there are some problems, please let us know and we will correct that.

ROTHAMSTED RESEARCH

Yields of the Field Experiments 1987

Full Table of Content

87/W/M/2 Comparison of Combines - W. Wheat, Rye - Mixed Crops

Rothamsted Research

Rothamsted Research (1988) *87/W/M/2 Comparison of Combines - W. Wheat, Rye - Mixed Crops ;* Yields Of The Field Experiments 1987, pp 276 - 278 **- DOI: https://doi.org/10.23637/ERADOC-1-37**

This work is licensed under a Creative Commons Attribution 4.0 International License.

87/W/M/2

MIXED 2

COMPARISON OF COMBINES

Object: To evaluate the suitability of two combines for plot work in respect of purity of sample and accuracy when working on slopes - Great Hill III.

Sponsor: R. Moffitt.

Design: A systematic split-plot design, 56 whole plots arranged as shown below:

R	W	R	W	R	W	R	W	Top of slope
W	W	W	W	W	W	W	W	
W	W	W	W	W	W	W	W	
R	R	R	R	R	R	R	R	
W	W	W	W	W	W	W	W	
W	W	W	W	W	W	W	W	
R*	W	R	W	R	W	R	W	Bottom of slope

* Combines started here (after harvesting a dummy wheat plot downhill), worked up the column of plots then down the next column etc.

R = Rye W = wheat

NOTES: (1) Each whole plot was systematically divided to compare the two combine harvesters.
(2) There were 10 m headlands between contiguous rye and wheat plots. These were removed before combining the plots. There were 1 m paths between contiguous wheat plots.

Whole plot dimensions: 8.0 x 11.0.

Treatments:

Whole plots

1. CROP — Crop and variety:

WHEAT	W. wheat, Avalon
RYE	W. rye, Dominant

2. DIRECTN — Combine direction in relation to slope:

UP	Up slope
DOWN	Down slope

3. ORDER — Order of combining:

BEGIN	First plot in column
STRAIGHT	Central plots in column
END	Last plot in column

https://doi.org/10.23637/ERADOC-1-37

This work is licensed under a Creative Commons Attribution 4.0 International License.

87/W/M/2

Sub plots

4. COMBINE Combine type:

CLAYSON	Clayson 1530
DEUTZ-F	Deutz-Fahr 660

Basal applications: Manures: FYM at 100 t. (0:18:36) at 700 kg, 'Nitram' at 470 kg. Weedkillers: Bromoxynil and ioxynil (as 'Deloxil' at 2.0 l) in 240 l. Fungicide: Triadimenol at 0.062 kg in 200 l.

Seed: W. rye: Dominant, sown at 170 kg.
W. wheat: Avalon, sown at 160 kg.

Cultivations, etc.:- FYM applied: 3 July, 1986. Ploughed: 9-11, July. Rolled: 22 July. PK applied: 16 Sept. Rotary harrowed with crumbler attached, sown: 7 Oct. Rolled: 8 Oct. N applied: 15 Apr, 1987. Weedkillers applied: 17 June. Fungicide applied: 1 July. Combine harvested: 15 Sept. Previous crops: Lucerne 1985 and 1986.

https://doi.org/10.23637/ERADOC-1-37

This work is licensed under a Creative Commons Attribution 4.0 International License.

87/W/M/2

GRAIN TONNES/HECTARE

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

COMBINE	CLAYSON	DEUTZ-F
	5.63	5.78

	DIRECTN	UP			DOWN		
CROP	ORDER	BEGIN	STRAIGHT	END	BEGIN	STRAIGHT	END
WHEAT			6.40		5.49	6.58	6.67
RYE		3.94	3.65	4.25		3.93	

CROP	DIRECTN	ORDER	COMBINE	CLAYSON	DEUTZ-F
WHEAT	UP	STRAIGHT		6.24	6.55
	DOWN	BEGIN		5.57	5.41
		STRAIGHT		6.46	6.70
		END		6.55	6.78
RYE	UP	BEGIN		4.49	3.39
		STRAIGHT		3.76	3.54
		END		3.80	4.70
	DOWN	STRAIGHT		3.78	4.09

Grand mean 5.70

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

Table	COMBINE	CROP DIRECTN ORDER	CROP DIRECTN ORDER COMBINE	
s.e.d.	0.066	0.242	0.299	min.rep
		0.191	0.236	max-min
		0.121	0.149	max.rep
Except when comparing means with the same level(s) of CROP.DIRECTN.ORDER			0.249	min.rep
			0.197	max-min
			0.124	max.rep

max.rep CROP WHEAT and ORDER STRAIGHT
min.rep any of the remainder
max-min CROP WHEAT and ORDER STRAIGHT v any of the remainder

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

Stratum	d.f.	s.e.	cv%
WP	48	0.342	6.0
WP.SP	48	0.352	6.2

GRAIN MEAN DM% 82.0

PLOT AREA HARVESTED	CLAYSON	0.00302
	DEUTZ-F	0.00220

https://doi.org/10.23637/ERADOC-1-37