

AGRICULTURAL DEVELOPMENT AND ADVISORY SERVICE

**REPORT ON GLASSHOUSE
WINTER LETTUCE TRIAL 1994
PRESTON CONSULTANCY CENTRE**

JANUARY 1994

Report prepared by:

**J Bantoft
ADAS Preston
1 Cop Lane
Penwortham
Preston
Lancs
PE1 0SP**

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Horticultural Development Council
and the National Lettuce Trials Group

Breeders' Seeds Ltd
Elsoms Seeds Ltd
Enza Zaden UK Ltd
Pinetree De Ruiter Seeds Ltd
Rijk Zwaan UK Ltd
Samuel Yates Ltd

PROJECT LEADER : Mr David Stokes, ADAS Huntingdon, Chequers
Court, Huntingdon, Cambs, PE18 6LT
Tel: (0480) 52161
Fax: (0840) 412049

SITE MANAGER : Mr J Bantoft, ADAS Preston, 1 Cop Lane
Penwortham, Preston, Lancs PR1 0SP
Tel: (0772) 744123
Fax: (0772) 745311

STATUS OF WORK : Experimental trial, harvested January 1994

PERIOD COVERED : Financial Year 1993/4

SITE : Provided by courtesy of Messrs L & K Ball, Lovania
Salads, 188 Blackgate Lane, Tarleton, Preston
Lancs, PR4 6UU

OBJECTIVE

To assess the performance of 13 varieties of protected butterhead lettuce for cutting in January and grown under commercial conditions in Lancashire

VARIETIES

<u>Supplier</u>	<u>Variety</u>	<u>Claimed resistance to Bremia races</u>
Breeders' Seeds Ltd	Becky	NL 1-15
	Kylie	NL 1-15
	S3156	NL 1-16
Elsoms Seeds Ltd	Ricardo	NL 1-7, 10, 11, 13-15
	Roald	NL 1-7, 10, 11, 13-15
	William	NL 1-7, 10, 11, 13-15
Enza Zaden UK Ltd	Rachel	NL 1-7, 10, 11, 13 & 15
	E 7798	NL 1-7, 10-16
Rijk Zwaan UK Ltd	Elmo	NL 1-7, 10, 11, 13-15
	42-53	NL 1-16
Samuel Yates Ltd	Impala	NL 1-15
	Polana	NL 1-15
	378/93	NL 1-7, 10-15

EXPERIMENTAL DESIGN

Randomised Block with 4 replicates

CULTURAL DETAILS

- Sown : 10 September 1993 into peat blocks
- Planted : 13 October 1993
- Spacing : 200mm x 225 mm (8.0" x 8.5")
- Glasshouse : 6.4m span Venlo glasshouse
N-S orientation
- Nutrition : To ADAS recommendations
- Pesticides : Thiram Dust during propagation

Basilex spray to soil surface before planting

Ambush)
Favour)
Pirimor) Applications post-planting
Rovral)
Thiram Dust)
- Temperatures : Positive ventilation at 10°C. Frost protection with indirect fired paraffin burners.
- Culture : Crop grown "dry" with maximum ventilation at all times.
- Harvested : 26 January 1994

RESULTS

The crop was grown to an excellent commercial standard. The trial was harvested on 26 January 1994. Twenty heads were cut from the centre of each plot, trimmed to a commercial standard and individually weighed.

Visitors attending on Open Day on 27 January were asked to score each variety for "overall usefulness" on a 1-5 scale (1 = poor, unsuitable; 5 = excellent, no obvious failings) and provide comments.

TABLE 1 - Headweights and Usefulness Assessments

Variety	Mean headweight		% Trimmings (by weight)	Assessment of Overall Usefulness 1 = poor 5 = excellent
	(g)	(oz)		
Rachel	<u>182</u>	6.4	12.74	4.7
William	177	6.2	10.18	3.6
Ricardo	176	6.2	10.93	3.8
Roald	172	6.0	14.64	3.7
Becky	170	5.9	13.37	2.9
Elmo	170	5.9	10.50	3.3
Impala	170	5.9	14.92	2.5
E 7798	168	5.9	12.37	3.0
42-53	166	5.8	11.71	2.7
Polana	165	5.8	13.72	2.5
Kylie	163	5.7	13.72	2.7
S 3156	154	5.4	17.75	2.0

378/93	149	5.2	8.36	1.4

Trial mean 168

LSD (var. mean) 9.42

P = 0.05

_____ denotes significantly higher than the trial mean

----- denotes significantly lower than the trial mean

COMMENTS ON VARIETIES

BECKY (BREEDERS SEEDS)

Mid green, thin, smooth, upright leaves. Head not hearted and open. Base flat, broad, closed and white. Difficult to cut and pack, the stem tending to have flopped on its side. Produced an untidy and pointed market pack.

ELMO (RIJK ZWANN)

Light green, thin, smooth, recumbent leaves. Head hearted, closed and rather pointed. The base broad, flat, closed and white. Easy to cut and pack and produced a very attractive

market pack. This variety showed some variation including "off-types" (average 4/plot) with crinkled leaf edges reminiscent of outdoor butterhead lettuce.

IMPALA (YATES)

Medium green, thin, smooth recumbent leaves. A lot of yellow leaf was present at the base. Head hearted and open. Base, broad, flat, closed greenish white. Easy to cut and pack and gave a very attractive market pack.

KYLIE (BREEDERS SEEDS)

Medium green, thin, smooth, upright leaves. Head hearted and open. Base broad, flat, slightly open and white. An easy variety to cut and pack. This variety gave an unattractive market pack showing open and pointed bases.

POLANA (YATES)

Medium green, thin, smooth recumbent leaves. The foliage was very soft and quite brittle. Head not hearted and open. The base broad, slightly pointed closed and white. Easy to cut and pack. This variety did not fill the market pack due to a small frame. The market pack was also not very attractive due to the lettuce heads having pointed bases.

RACHEL (ENZA ZADEN)

Light to medium green, thin, smooth, recumbent leaves. Head hearted and open. The base broad, flat, closed and white. Easy to cut, trim and pack. This variety gave a rather unattractive market pack due to variability of the individual heads of lettuce.

RICARDO (ELSOMS SEEDS)

Medium green, thin, smooth, recumbent leaves. Head hearted and open. The base broad, flat closed and greenish white. Easy to cut, trim and pack. This variety gave a rather greenish market pack.

ROALD (ELSOMS SEEDS)

Medium green, thin, smooth, recumbent leaves. Head hearted and open. The base broad, flat closed and white. Easy to cut, trim and pack. This variety produced a rather untidy market pack. The cut lettuce stems ("butts") went brown very quickly, further detracting from the appearance of the pack.

WILLIAM (ELSOMS SEEDS)

Light green, thin, smooth, recumbent leaves. Head hearted and slightly open and very close to the ground. The base broad, flat (slightly concave), closed and white. This variety had a tough stem which made it difficult to cut, but was easy to pack and gave an attractive market pack.

E7798 (ENZA ZADEN)

Light green, thin, slightly blistered, recumbent leaves. Head hearted, closed and slightly pointed. The base broad, flat, closed and white. This variety was easy to cut and trim due to its tall upright shape, however this gave problems when packing into boxes, producing a rather untidy market pack with pointed bases. This variety had originally produced a broad, flat base giving a good frame, then a new upright head had been produced, reminiscent of Karlo or Berlo grown under cool conditions.

S3156 (BREEDERS SEEDS)

Light to medium green, very thin, smooth, upright leaves. Head not hearted and closed. Base medium broad, pointed, open and white. Difficult to cut due to an elongated stem and basal rotting. This variety gave an untidy market pack due to its length and pointed bases. A lot of yellow leaf was present at the base. A poor performer in this trial.

42-53 (RIJK ZWANN)

Light to medium green, thin, smooth, recumbent leaves. The basal leaves had a distinct "twist" on them. Head hearted and closed. The base broad, flat, closed and white. Easy to cut and pack, and produced an attractive, well-filled market pack.

378/93 (YATES)

Dark green, thin, smooth very upright leaves with narrow leaf blades. Head not hearted and open. The base narrow, pointed, closed and green. Easy to cut and trim, but not easy to pack due to its tall upright growth. The market pack produced by this variety was not attractive due to its pointed bases. This market pack was rather green.

CONCLUSIONS

All of the varieties were of an acceptable weight, Rachel was significantly heavier than the trial mean. S3156 and 378/93 were significantly lower in weight than the trial mean.

S3156 performed very poorly with low weight, much yellowing of the basal leaves and produced an untidy market pack due to pointed bases. 378/93 was also low yielding again with pointed bases and gave a rather poor market pack. The market pack was also very green in appearance.

In overall assessments (ie growth, habit, ease of harvesting, market appearance, etc) William was considered the best in the trial closely followed by Rachel, Ricardo and Roald, these latter three varieties not being in any particular order.

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