

CO-ORDINATION OF STAGE 2 SOFT FRUIT VARIETY TRIALS (SF 18)

Report for 1991 -Everbearing strawberry selection SBJ2

Objective.

To evaluate and compare a new everbearing strawberry selection, SBJ2 with Rapella under commercial conditions, at 9 locations in the major strawberry growing areas of England.

Sites.

Site	Location	Grower
1	Faversham	P. Vinson
2	Canterbury 1	P. Vinson
3	Canterbury 2	R.J. Rickards
4	Maidstone	D. Pascoe
5	Colchester	W. Hudson
6	Wisbech	H. Duncalfe
7	Ledbury	A.J. Davison
8	Fareham	D. Chase

A site at Cranbrook (M. Alley) had to be abandoned because of severe *Verticillium* wilt throughout the trial.

Establishment and plant characteristics.

Sites 1 and 2 had approximately 2,000 SBJ2 plants; sites 3-7 had 3,000; site 8 had 1,500. Planting was into black polythene on raised beds except site 8 which had flat beds. All were trickle irrigated and all sites except 3,5 and 7 were fumigated. All SBJ2 plants were cold stored runners, potted in February while on some sites the Rapella originated as tips potted in December. Site 8 had bare-rooted runners of both varieties planted directly and then covered with low polythene tunnels initially. The SBJ2 plants were variable in size so all sites had a proportion of small ones (between 20 and 30%).

SBJ2 was consistently more compact and less dense than Rapella but produced a lot more runners which flowered and fruited freely if not removed. Most growers derunnered twice, some three times but thought they did not start early or frequently enough and this probably had an effect on yield as well as fruit size later in the season.

Site	Planting Date	Vigour	Runners*
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1	25/4	-	++
2	25/4	-	++
3	25/4	-	++
4	25/4	-	++
5	5/5	-	++
6	6/5	-	++
7	8/5	-	++
8	19/5	-	++

*All comparisons with Rapella were assessed on the following scale:

-- much less

-

o no difference

+

++ much more

+/- better initially, worse later

o/- the same initially, worse later

Yield and Season

Site	Yield (grams/plant)		Date	
	SBJ2	Rapella	First Pick	Last Pick
1	585	767	23/7 (16/7)	9/10
2	380	554	18/7	18/10
3	489	957	29/7	24/9 (5/10)
4	167	423	21/8 (31/7)	24/9
5	156	151	23/7	9/10
6	304	388	22/7	19/10
7	352	718	5/8	20/9 (26/9)
8	92	107	8/8	14/9

Dates for Rapella in brackets where different from SBJ2

To convert to tons/acre \div 100 (assuming 10,000 plants/acre)

Although SBJ2 has cropped less than Rapella on most sites the following points should be remembered:

- 1 - different origin of planting material makes direct comparison difficult.
- 2 - SBJ2 is more compact so it would normally be planted at closer spacing.
- 3 - SBJ2 runners prolifically and they were not removed often or early enough.
- 4 - severe mildew on SBJ2 led to poor leaf quality which affected yield and fruit size later in the season.

SBJ2 was a little later to start cropping on some sites but overall had a very similar season. The earlier finish on some sites was due to poor leaf quality, caused by the mildew, affecting fruit quality, particularly size.

It was noted that if commercial quantities of SBJ2 had been available then picking would have continued later in the season than Rapella because of its better fruit quality.

Fruit Quality

Site	Fruit Size	Firmness	Flavour/ Texture	Appearance	Shape	Ease of Picking
1	-	++	+/-	0	+/-	0
2	+/-	++	-	+	+	0
3	-	++	-	-	0	+
4	+	++	0	+	+	+
5	+/-	++	0	+	-	+
6	++	++	0	+	0	+
7	0/-	++	+	+	0/+	+
8	+	++	0	0	+/-	0

+/- = better initially, worse later, 0/- = the same initially worse later

None of the fruit quality characters were measured so the comparisons between the two varieties are subjective estimates only.

fruit size - This was similar but SBJ2 seemed to be slightly larger with one site estimating it 30% bigger. Size deteriorated towards the end of the season because of mildew.

Grading of SBJ2 was easier as there were less medium-sized berries.

SBJ2 had fewer very large fruit; size was more regular.

firmness - SBJ2 had consistently firmer skin and flesh on all sites and this was particularly noticed during hot weather.

flavour/texture - Opinions varied from acceptable to good. Some thought it lacked flavour others could taste Selva coming through. Texture was considered firmer than Rapella and on one site it was chewy. Nobody said it was unpleasant.

shape - Similar to Rapella but early fruit less ribbed. SBJ2 had more white tips (which eventually ripen). On one site both varieties remained seedy throughout the season.

appearance - SBJ2 was better overall, partly through shape and partly through firmness.

ease of picking - 5 sites thought SBJ2 was easier to pick. This is probably because it has a longer peduncle and has less flowers per truss. It might be necessary to plant SBJ2 nearer the centre of the bed to prevent the fruit hanging too near the edge. SBJ2 needed to be picked more frequently than Rapella because it seems to ripen more quickly and darkens if left.

Market Reaction

6 sites supply the supermarkets and SBJ2 was sent as Rapella because quantities were so small. Where supermarket representatives were sent samples of SBJ2 they were happy with it and are likely to remain so as long as Rapella is acceptable. If Rapella becomes unacceptable to the supermarkets in the future (and some people think it will) then SBJ2 may be in the same situation because it is so similar. However its firmness (which is strongly linked to shelf-life) could make it a replacement instead.

% fruit sent to Supermarkets

Site	SBJ2	Rapella
Canterbury 2	51	32.5
Faversham	52	61
Canterbury 1	62	61

Pests and Diseases

Mildew- It was a very bad year for this disease and most sites had problems controlling it. SBJ2 had severe symptoms on the leaves and this affected yield and fruit size later in the season. The fruit was largely unaffected. However, Rapella had mildew on the fruit which reduced marketable yield while the plant remained healthy.

Botrytis- One or two sites thought SBJ2 might be less susceptible than Rapella but this observation needs to be assessed in a year when the disease is more of a problem.

Two-spotted mite- There was one report of this pest affecting SBJ2 more than Rapella but this will have to be assessed in a year of heavy infestation.

Conclusions

1. Although SBJ2 appears to have lower yields, possible reasons for this have been listed earlier in the report. Further plantings incorporating changes based on the lessons learnt from this years trials will more accurately reflect its full yield potential.
2. Fruit quality is equal to or better than Rapella in most respects, particularly firmness which is very important for post-harvest handling, shelf-life and extended picking season.
3. At least 6 sites will continue the trials for a second year. If fruit size is maintained and yields are acceptable this could be an important factor in the future success of SBJ2.
4. Most growers involved with the trials have said they would grow SBJ2 again

but on a limited scale initially.

5. The trials have been very successful and much information has been gained on the cultural methods needed to get the best from SBJ2. All participants have realised the importance of this stage in the testing of a potential new variety and have co-operated willingly with both David Simpson, the breeder and the co-ordinator, Richard Jones. With minor modifications to the procedures followed this year, a good system has been established for future stage 2 trials of strawberry and other fruit crops.

R. P. Jones

5/11/91