



# Grower Summary

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**SF 096a**

East Malling Strawberry  
Breeding Club

Annual 2016

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**Project title:** East Malling Strawberry Breeding Club

**Project number:** SF 96a

**Project leader:** Adam Whitehouse, East Malling Research

**Report:** Annual report, May 2016

**Previous report:** SF 96a Annual Report 2015

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**Location of project:** East Malling Research

**Industry Representative:** Dr Louise Sutherland

**Date project commenced:** 1 June 2013

**Date project completed** 31 May 2018  
**(or expected completion date):**

# GROWER SUMMARY

## Headline

- Nine new selections, four June-bearers and five everbearers, were selected from the 2015 East Malling Strawberry Breeding (EMSBC) preliminary trials to go forward to UK growers' trials.

## Background

The main objective of the East Malling Strawberry Breeding Club (EMSBC) is to develop improved strawberry varieties, both June-and everbearing, with increased yield, larger fruit size, an extended season of production and greater resistance to fungal diseases. Funding for the programme was renewed in 2013 to follow on from the first tranche of the EMSBC breeding programme which had started in 2008 and has delivered the June-bearer variety Malling™ Centenary. AHDB continues to contribute to the EMSBC via project SF 96a.

This report covers three trials (June-bearer main crop, 60-day and everbearer trials) of EMSBC material assessed in 2015 as part of the preliminary trials held at East Malling Research.

## Results of variety trials

This section provides a precis of the results. The full set of results can be found in the Full Trial Report (Science Section).

The following information provides descriptions and results from the most promising selections in each of the 2015 trials, accompanied by tables of results for each trial:

### June-bearer (main crop) trial

Four selections performed well enough to be chosen for assessment in growers' trials in 2017:

**EM2199**; an early-mid season type, noted for its excellent appearance, high % of Class 1 fruit and excellent fruit size (Tables 1 & 2).

**EM2379**; has potential as an early season variety (50% pick date close to that of Vibrant), producing a high % Class 1 yield for early production (Tables 1 & 2).

**EM2380**; an early-mid season type with excellent fruit size, very high percentage of Class 1 fruit (95%) and sensory flavour scores similar to Malling™ Centenary (Tables 1 & 2).

**EM2421**; a mid-season type, producing very attractive fruit with good mean Brix scores (8.6°). Yield was moderately high but with excellent fruit size and a high percentage Class 1 (96%).

**Table 1.** June-bearer selections - Main crop yield, fruit size and season

<b>Selection</b>	<b>Class 1 yield (g/plant)</b>	<b>% Class 1</b>	<b>% large fruit (&gt;35mm)</b>	<b>50% pick date</b>
EM2379	862	90	85	15 Jun
EM2199	739	98	85	18 Jun
EM2380	838	95	65	18 Jun
EM2421	843	96	60	22 Jun
<i>Elsanta</i> <sup>1</sup>	1324	87	49	23 Jun

<sup>1</sup>Mean of three plots

**Table 2.** June-bearer selections - Main crop fruit quality scores

<b>Selection</b>	<b>Appearance (1-9)</b>	<b>Skin firmness (1-9)</b>	<b>Flesh firmness (1-9)</b>	<b>Flavour (1-9)</b>	<b>Shelf life (1-5)</b>	<b>Mean Brix</b>
EM2379	5.4	5.6	5.6	5.1	3.2	6.5
EM2199	6.4	6.8	6.9	5.4	4.0	7.2
EM2380	5.6	5.8	6.4	5.9	3.7	7.4
EM2421	5.6	6.3	5.8	5.5	4.3	8.6
<i>Elsanta</i> <sup>1</sup>	4.5	5.4	5.3	5.3	3.0	7.4

<sup>1</sup>Mean of two plots

Full descriptions of the fruit quality scoring system can be found in Appendix I of the main report, but as a guide 1=poor, 9=excellent, shelf life comparison 1=worse, 3=same, 5=better than standard

### **June-bearer (60-day) trial**

This trial included selections that have progressed for assessment in growers' trials in 2016. Two selections stood out as having potential for commercial use:

**EM2157**; a late-season selection with excellent fruit quality, including very high average Brix, with comparable yield to Elsanta (when comparing yield per mm of crown diameter - Table 3).

**EM2192**; an early-season selection with very attractive fruit, very low mark out, and the highest yield in the trial (Table 3).

**Table 3.** June-bearer selections - 60-day yield, crown size and season

<b>Selection</b>	<b>Marketable yield<sup>1</sup> (g/plant)</b>	<b>% marketable yield</b>	<b>Mean crown diameter (mm)</b>	<b>Marketable (g/plant) yield per mm crown diameter</b>	<b>50% pick date</b>
EM2192	218.2	97.4	10.1	21.6	9 July
EM2206	204.5	90.2	12.2	16.8	9 July
EM2358	136.4	90.0	12.1	11.3	16 July
EM2157	164.2	89.3	10.6	15.5	20 July
<b>EM2315</b>	173.0	90.4	12.5	13.8	9 July
<b>EM2298</b>	152.2	90.8	9.5	16.0	9 July
<b>EM2299</b>	38.8	100.0	10.2	3.8	9 July
<b>EM2290</b>	198.2	93.7	12.0	16.5	13 July
<b>EM2301</b>	166.3	86.3	9.2	15.8	13 July
<b>EM2320</b>	177.2	88.3	11.7	15.1	13 July
Elsanta <sup>2</sup>	201.3	87.7	12.5	15.9	11 July
M Centenary	178.3	87.8	8.2	21.7	7 July
Sonata <sup>2</sup>	200.6	93.7	9.4	21.4	13 July

<sup>1</sup> >25 mm, <sup>2</sup> mean of two plots

**BOLD** are advanced selections that are currently in growers' trials (2015-16)

Full descriptions of the fruit quality scoring system can be found in Appendix I of the main report, but as a guide 1=poor, 9=excellent

### **Everbearer trial**

Five new selections were considered for assessment in growers' trials in 2017:

**EMR688**; gave a very high percentage of Class 1 fruit. Berries were glossy, sometimes a little dark, but with a pleasant flavour and Brix scores higher than the standards (Tables 4 & 5).

**EMR693**; had a moderately-high yield of good fruit size and very low mark out (Table 4) but stood out for its excellent fruit quality (Tables 4 & 5).

**EMR701**; an early everbearer with high yield and excellent fruit size. Fruit was sweet with a relatively high mean Brix score (Tables 4 & 5).

**EMR704**; another high-yielding selection with excellent % Class 1 fruit and fruit size (Table 4) but slightly later than Finesse. Berries were very glossy with sweet flavour and good shelf life (Table 5).

**EMR710**; an early-season everbearer which showed good tolerance to mildew. Yield, fruit size and % Class 1 were all good (Table 4). Fruit was attractive and noted as being sweet throughout the season.

**Table 4.** Everbearer selections - Yield, fruit size and season

<b>Selection</b>	<b>Class 1 yield (g/plant)</b>	<b>% Class 1</b>	<b>% large fruit (&gt;35mm)</b>	<b>50% pick date</b>
EMR710	1193	88	62	6 Aug
EMR701	1216	90	72	10 Aug
EMR693	1184	93	65	13 Aug
EMR704	1207	92	72	17 Aug
EMR688	1126	95	55	17 Aug
<b>EMR564</b>	1240	93	62	7 Aug
<b>EMR590</b>	1327	90	68	15 Aug
<i>Evie 2<sup>1</sup></i>	1249	88	72	10 Aug
<i>Finesse<sup>1</sup></i>	1063	89	52	14 Aug

<sup>1</sup>Mean of two plots **BOLD** are advanced selections that are currently in growers' trials (2016)

**Table 5.** Everbearer selections - Fruit quality scores

<b>Selection</b>	<b>Appearance</b>	<b>Skin firmness (1-9)</b>	<b>Flesh firmness (1-9)</b>	<b>Flavour (1-9)</b>	<b>Shelf life (1-5)</b>	<b>Mean Brix</b>
EMR710	5.6	5.9	5.6	5.8	3.1	7.2
EMR701	5.6	6.4	6.2	6.0	3.7	8.2
EMR693	5.9	6.0	6.2	5.6	4.0	7.5
EMR704	5.6	6.0	6.3	5.6	3.8	8.0
EMR688	5.5	6.2	6.5	5.5	3.7	7.8
<b>EMR564</b>	5.9	6.6	6.8	5.2	3.3	7.3
<b>EMR590</b>	5.6	6.3	6.6	5.7	3.5	7.8
<i>Evie 2<sup>1</sup></i>	5.4	5.4	5.5	5.0	2.1	5.9
<i>Finesse<sup>1</sup></i>	5.3	5.7	5.9	5.2	-	6.6

<sup>1</sup>Mean of two plots

**BOLD** are advanced selections that are currently in growers' trials (2016)

Full descriptions of the fruit quality scoring system can be found in Appendix I of the main report, but as a guide 1=poor, 9=excellent, shelf life comparison 1=worse, 3=same,5 better than standard