

Planting Date Recommendations for Pearl® ‘66’, Encore® and Ember®

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Summary

We evaluated three planting dates (Oct 10, 18, and 24) for three new cultivars, Pearl® ‘FL18.52-66’ (Pearl ‘66’), Encore®, and Ember®, during the 2023-2024 season. Yield reductions by delaying planting date were most significant in Nov–Dec, followed by Feb and Jan. In Nov–Dec, yield loss reached 66%, 44%, and 44% for Pearl ‘66’, Encore®, and Ember®, respectively. Across the entire season, yield loss was 45%, 28%, and 30% for Pearl ‘66’, Encore®, and Ember®, respectively. These yield reductions were primarily attributed to delayed canopy establishment. Compared to yield, planting date showed relatively minor effects on fruit size and Brix. The results suggest that all three cultivars are well-adapted to early planting and should be planted by Oct 10 to avoid potential yield loss.

Pearl® ‘FL18.52-66’

‘FL18.52-66’ is a new white strawberry cultivar selection. It has similar appearance to Pearl® but produces berries slightly earlier than Pearl® with fewer small non-marketable berries.

Encore®

Encore® (FL20.34-183) is similar to ‘Florida Brilliance’ in plant structure but slightly more vigorous. It has high early yield and steady fruit production thereafter. It produces red berries that are larger than ‘Florida Brilliance’.

Ember®

Ember® (FL20.80-4) is another red strawberry selection. It has a very similar plant structure to Medallion® but its canopy has slightly higher volume and slightly lower density. It is expected that this new

selection is more adaptable to early planting than the other selections.

Methods

A replicated field experiment was conducted during the 2023-2024 season at the UF/IFAS GCREC in Balm, FL. We tested three planting dates, October 10, 18, and 24, for three strawberry cultivars, Pearl® ‘FL18.52-66’ (Pearl ‘66’), Encore®, and Ember®. Bare-root transplants were obtained from Crown Nursery (Red Bluff, CA). Plant spacing was 16” (16,335 plants/acre). Each treatment had four replicated plots with 16 plants per plot. Harvests were performed 15 times between November 21, 2023 and February 29, 2024.

Results

Canopy growth (Table 1)

Among the three tested cultivars, Encore® produced the largest canopy, followed by Ember® and Pearl ‘66’. Delaying the planting date reduced delayed canopy establishment, reducing canopy area by 68% to 84% at 28 days after transplanting (DAT), 35% to 54% at 49 DAT, 20% to 35% at 92 DAT, and 21% to 25% at 140 DAT.

Table 1. Monthly and total-season marketable yields of three strawberry cultivars as affected by planting dates.

Cultivar	Planting date	Canopy projected area (cm ² /plant)			
		28 DAT	49 DAT	92 DAT	140 DAT
Pearl '66'	Oct 10	135	368	756	1,024
	Oct 18	51	257	591	835
	Oct 24	22	170	493	733
		84%↓	54%↓	35%↓	28%↓
Encore	Oct 10	213	541	971	1,311
	Oct 18	108	391	776	1,034
	Oct 24	61	342	800	1,091
		71%↓	37%↓	20%↓	21%↓
Ember	Oct 10	208	485	923	1,132
	Oct 18	74	316	730	930
	Oct 24	67	316	781	1,007
		68%↓	35%↓	25%↓	NS

Yield: Cultivar trends (Table 2)

Among the three tested cultivars, Encore[®] produced the highest yield, followed by Ember[®] and Pearl '66'. Encore[®] and Ember[®] showed a similar yield distribution pattern with a greater early season yield than Pearl. Nov–Dec yield accounted for 14% of the total season yield for Encore[®] and Ember[®], compared to 9% for Pearl '66'.

Yield: Planting date effects (Table 2)

Delaying the planting date reduced yields for all three cultivars, with Pearl '66' experiencing the most significant yield loss. Nov–Dec yield reductions were up to 66% for Pearl '66' and 44% for the other two cultivars. Total-season yield reductions were up to 45% for Pearl '66' and 28% to 30% for the other two cultivars. The results suggest that all three cultivars should be planted by Oct 10 to avoid potential yield loss.

Table 2. Monthly and total-season marketable yields of three strawberry cultivars as affected by planting dates.

Cultivar	Planting date	Marketable yield (8-lb flat #/acre)			
		Nov-Dec	Jan	Feb	Total
Pearl '66'	Oct 10	238	481	1,635	2,354
	Oct 18	146	360	1,274	1,781
	Oct 24	81	204	999	1,284
		66%↓	58%↓	39%↓	45%↓
Encore	Oct 10	555	1,024	2,128	3,707
	Oct 18	434	826	1,792	3,052
	Oct 24	313	754	1,613	2,681
		44%↓	28%↓	24%↓	28%↓
Ember	Oct 10	454	1,077	1,220	2,751
	Oct 18	282	654	985	1,921
	Oct 24	252	624	1,276	2,152
		44%↓	42%↓	NS	30%↓

Fruit size (Table 3)

On average, over the entire season, Encore[®] produced the largest berries, followed by Ember[®] and Pearl '66'. From Nov to Jan, the average berry size was similar for Encore[®] and Ember[®]. Although delaying the planting date showed some positive effects on berry size for Pearl '66' and Ember[®], it was due to reductions in berry number.

Table 3. Average fruit size of 'FL16.78-109' and 'FL18.52-66' pineberry cultivars as affected by planting dates.

Cultivar	Planting date	Fruit size (g/berry)			
		Nov-Dec	Jan	Feb	Total
Pearl '66'	Oct 10	14.7	22.1	25.7	23.2
	Oct 18	14.0	26.4	27.5	25.3
	Oct 24	14.2	27.5	27.3	25.8
		NS	24%↑	NS	NS
Encore	Oct 10	22.4	33.4	41.6	34.8
	Oct 18	19.2	34.5	39.9	33.4
	Oct 24	21.0	33.1	45.1	36.5
		NS	NS	NS	NS
Ember	Oct 10	20.1	35.0	33.4	30.6
	Oct 18	24.3	30.2	36.6	31.9
	Oct 24	25.3	26.8	38.7	32.5
		26%↑	24%↓	15%↑	NS

Fruit Brix – Cultivar effects (Table 4)

Based on quality assessment performed on Jan 24, 2024, Pearl '66' had the highest fruit Brix values (8.60–9.08 °Brix), followed Ember[®] (8.58–8.80 °Brix)

and Encore® (8.00–8.48 °Brix). Delaying the planting date had no significant effect on fruit Brix.

Table 4. Total soluble solids content (Brix) of three strawberry cultivars as affected by planting dates.

Cultivar	Planting date	Soluble solids content (°Brix)
Pearl '66'	Oct 10	8.60
	Oct 18	9.05
	Oct 24	9.08
		NS
Encore	Oct 10	8.48
	Oct 18	8.20
	Oct 24	8.00
		NS
Ember	Oct 10	8.58
	Oct 18	8.63
	Oct 24	8.80
		NS

*Measurements were performed on Jan 24, 2024.

Takeaways

- In Nov–Dec, yield loss was 66%, 44%, and 44% for Pearl '66', Encore®, and Ember®, respectively.
- Across the entire season, yield loss was 45%, 28%, and 30% for Pearl '66', Encore®, and Ember®, respectively.
- All three new cultivars, Pearl® 'FL18.52-66' (Pearl '66'), Encore®, and Ember®, are well-adapted to early planting and should be planted by Oct 10 to avoid potential yield loss. Yield loss

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