Strawberry Production at Joe's Brook Farm

A work in progress. . .

Farm Overview

- Certified organic operation in Barnet founded in 2009.

- 60% of sales direct to consumer. 40% wholesale.

- Own 2 acres tillage, a home and a barn on Joe's Brook. Lease 20 acres of loamy sand along the Passumpsic River 3 miles away.

- Around 10 acres total veg/berry production. 1.5 acres of berries for 2017 harvest.

- Employee 2-3 full timers from April-November. 2-3 additional full timers from June-August.

First Berries. 1/8 acre. Yielded 96 quarts.

We have experimented with different production models.

- **Spring planted on bare ground.** SPRING PLANTED ON PLASTIC. **Hand planted.** Machine planted. **Runners set.** **Runners removed.** *Fall plugs on plastic.* Drip irrigation. Overhead frost protection. Row cover frost protection. Row cover over the winter. Row cover in Spring. STRAW OVER THE WINTER. **Straw by hand.** *Straw by machine.* *Traditional renovation.* Fall Plug Renovation. **Bird netting.**

- Generated a lot of enthusiasm, but not a lot of profit.

An Enterprise Analysis of Four Organic Strawberry Production Systems in Northeastern Vermont.

5, 500’ bed trials of Jewel all with drip

- Traditional matted row
- 16” Spring planted bare root on plastic, runners removed
- 24” Spring Planted bare root on plastic, runners set
- 36” Spring planted bare root on plastic, runners set
- Fall planted plugs on plastic

Primary Study Goal:

Help first time organic strawberry growers pick a production system. Experienced growers may be too good at their current system to benefit.

2016 Establishment Details

- Weed problems (of course)
- May have been late in removing some blooms/ setting runners(may not have mattered)
- Some plant mortality that thinned beds
- Only began fertigation and consistent irrigation in Mid August

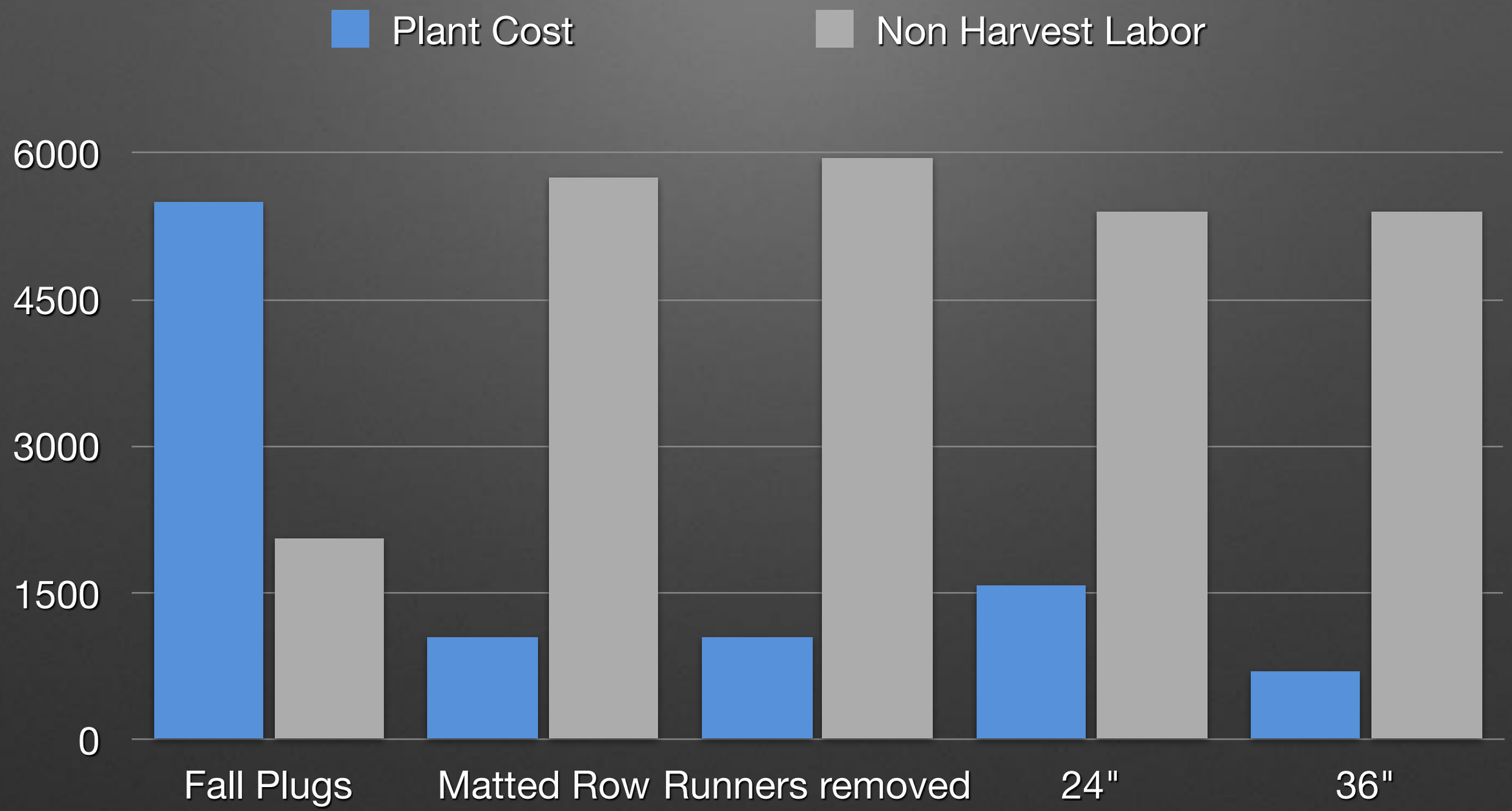
2016 Establishment Details

- Crew Production Rates
- Not every one works at the same speed
- Caused us to remove the time element from the study
- Particularly became a problem during harvest

Total establishment cost/acre

	PLUG PRODUCTION	MATTED ROW	16” BAREROOT RUNNERS REMOVED	24’ BARE ROOT RUNNERS SET	36” BARE ROOT RUNNERS SET
NON LABOR INPUTS	2216.85	2144.25	2216.85	2306.85	2216.85
PLANT COST	5505	1050	1575	1050	699.3
LABOR INPUTS	2062.5	5752.5	5392.5	5947.5	5392.5
TOTAL/ ACRE	9784.35	8946.75	9184.35	9304.35	8308.65

Plant cost vs. non harvest labor cost



Establishment cost

2017 Winter Details

- Mulched with straw at about 150 bales to the acre.
- Had a pretty good winter for weather, but a terrible winter for Deer Damage

Deer Damage Visible After Straw Removal

2017 Spring Details

- Uncovered on time, as soon as we could get out there, which research has shown is very important to maximize yields.
- Removed all the winter kill leaves
- Began to fertigate with Neptunes Harvest at about 5 lb. nitrogen/ acre/week as soon as the river settled.
- Cold/wet spring but we only frost protected with irrigation twice.
- No row covers were used in the spring.

2017 Spring Details

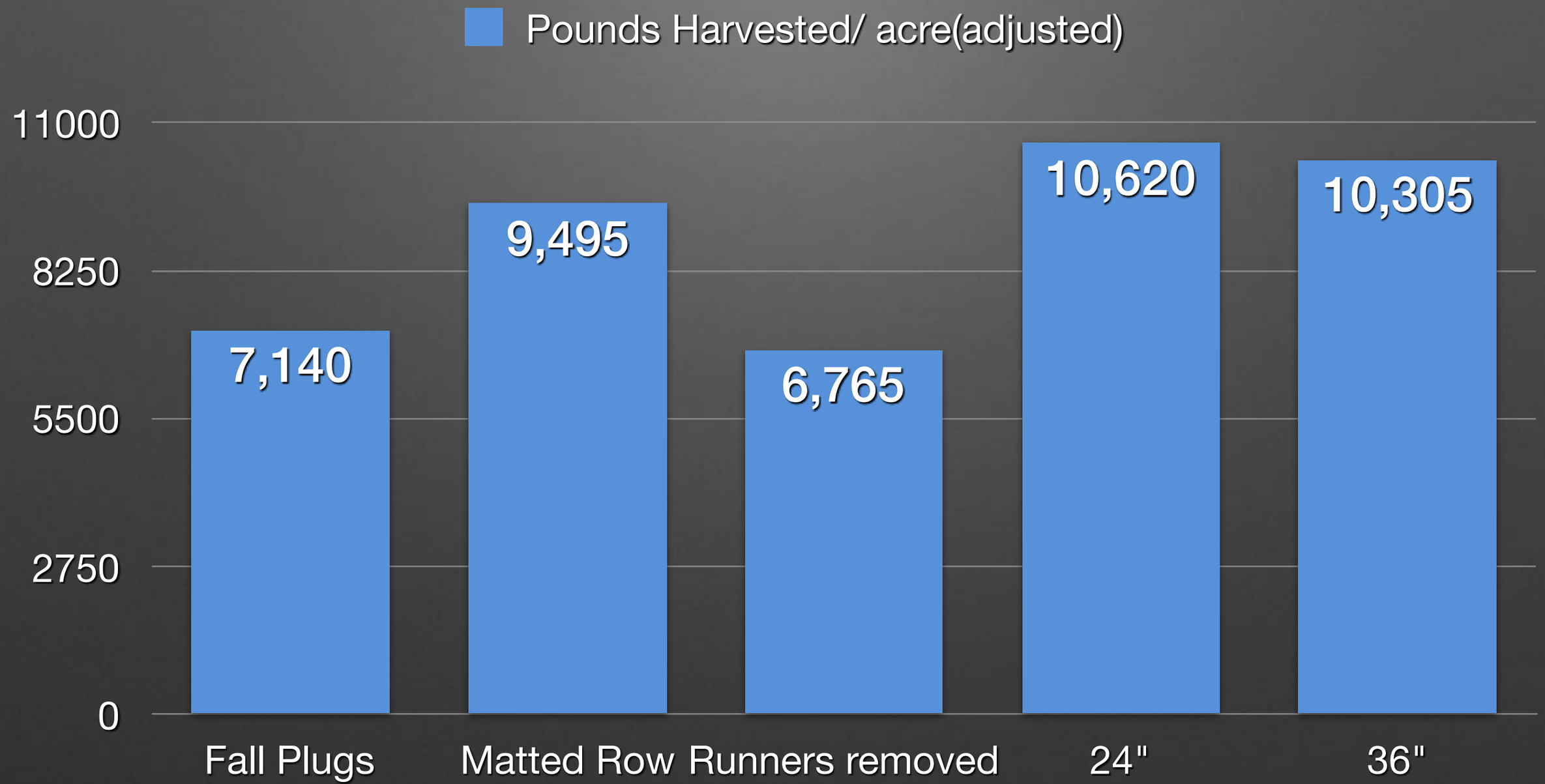
- Sprayed Pyganic effectively for tarnish plant bug
- Berries formed and ripened about 2 weeks later than an average year.
- Began picking the grant berries on 6/19.
- Plugs 3 days before bare root.
- Matted row about a week behind the rest

Harvest Notes

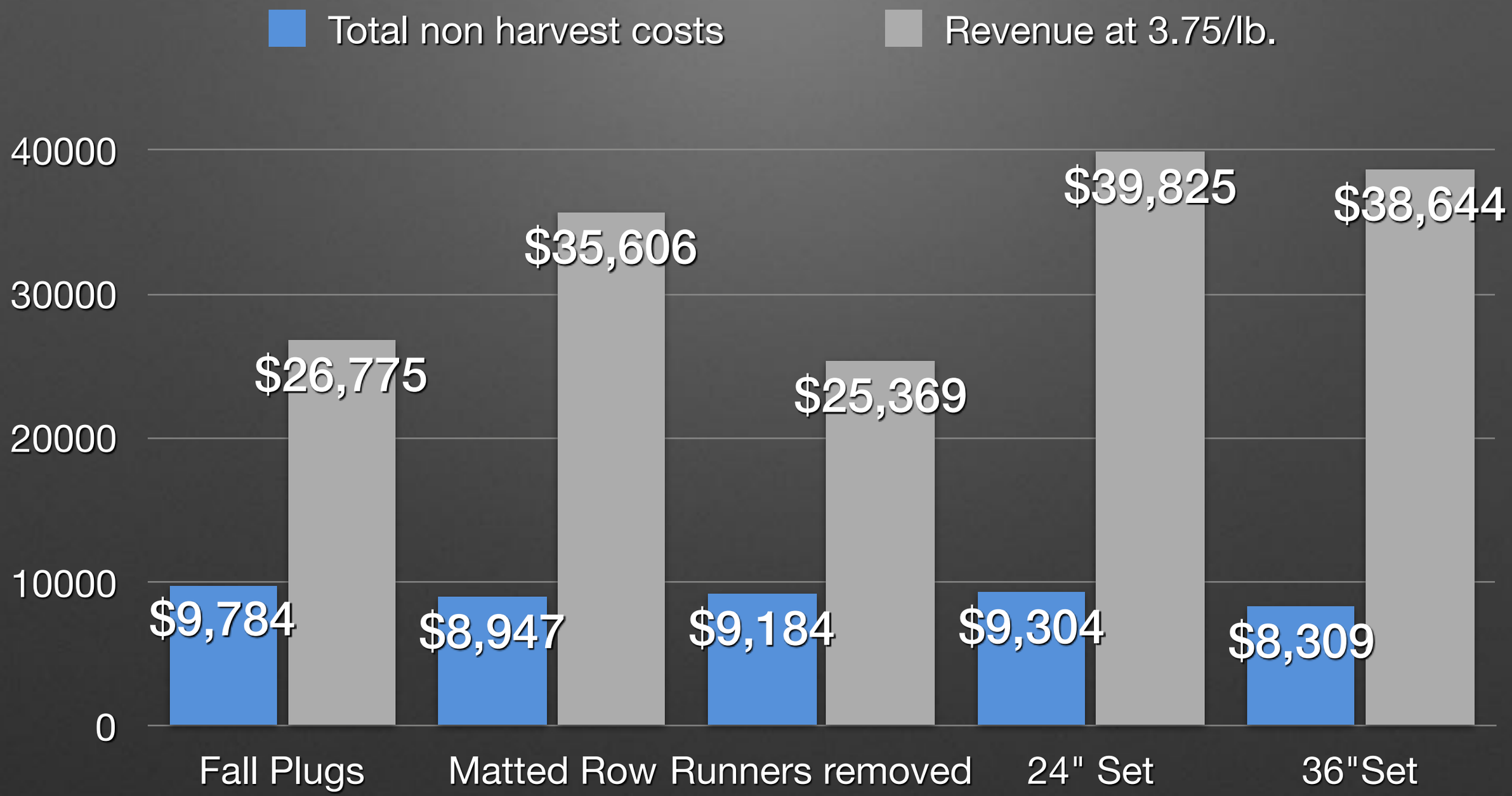
- Season saw a lot of rain and some torrential downpours.
- Jewel held up better in the rain then Cabot, AC Valley, and Record
- Kept track of culls at first, but then gave it up once it really started raining.
- Used bird netting effectively for birds and U-pickers.
- Lot of extra work keeping track of the grant berries.
- Picked grant berries from 6/19 to 7/8 every 2 to 4 days. About 3 weeks.


Farm Fresh Berries

POUNDS HARVESTED
Adjusted from the 500’ trial beds to a per/acre rate.



Total non harvest cost vs. production



Total Costs and Revenue/Acre

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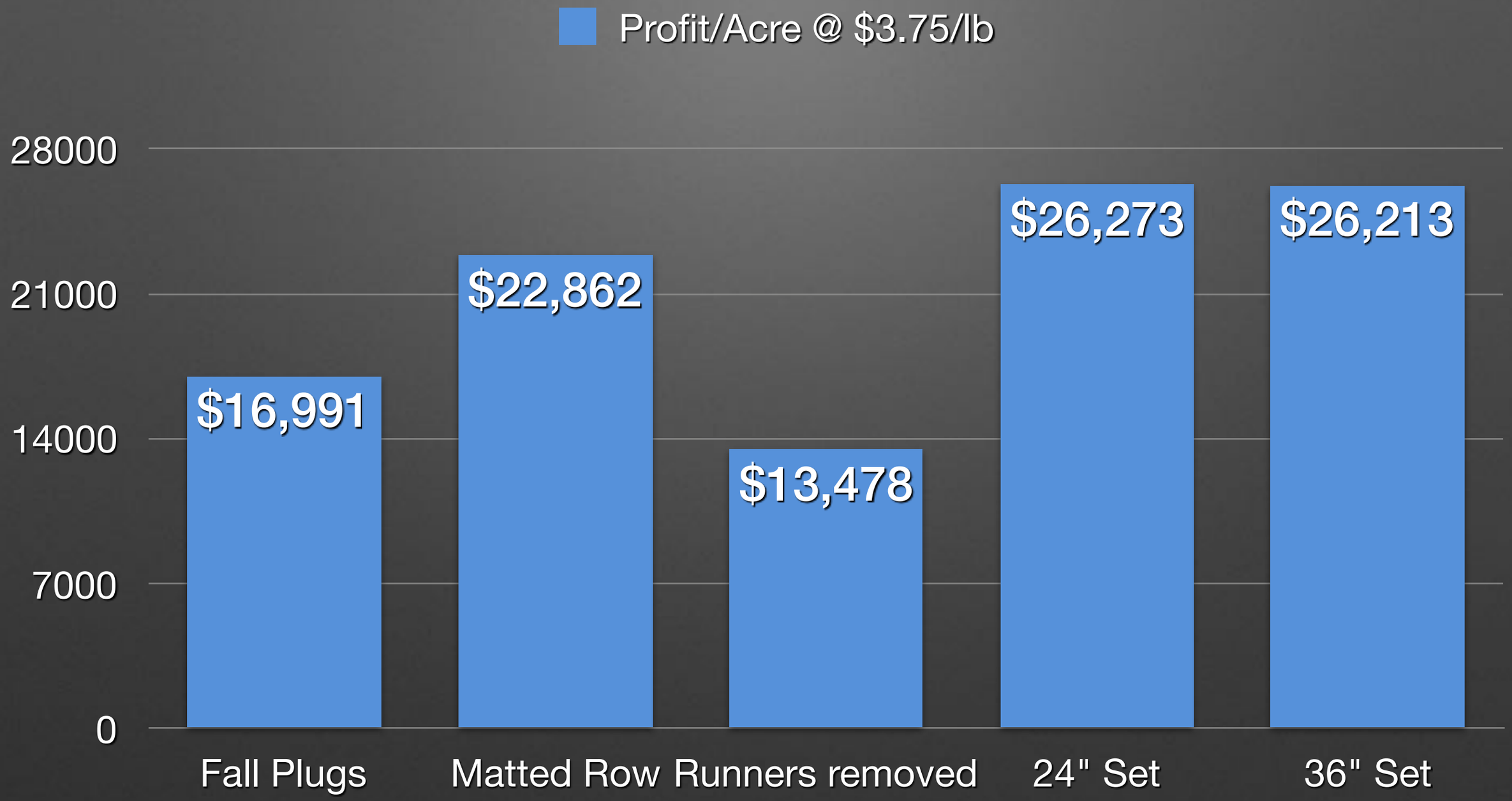
PLANT COST	5505	1050	1575	1050	699.3
LABOR INPUTS	2062.5	5752.5	5392.5	5947.5	5392.5
HARVEST LABOR	2856	3798	2706	4248	4122
TOTAL COSTS/ACRE	12640.35	12744.75	11890.35	13552.35	12430.65
SALES/ACRE (LB. X $3.75)	**26775**	**35606.25**	**25368.75**	**39825**	**38643.75**

Profit/Acre


Profit/Acre @ $3.75/lb
28000
21000
14000
7000
0
$16,991
$22,862
$13,478
$26,273
$26,213
Fall Plugs
Matted Row Runners removed
24" Set
36" Set

Profit/acre at different pick rates

A word of caution/Need for more Research

Not all varieties behave the same. Some will favor a certain system. The study needs to be repeated across multiple varieties.


MORADA
Fresh California
Cherries

Getting back to our original question: what system should a beginning strawberry farmer pick?

- Use Drip Tape and fertigation
- Better yields will come from spring planted dormant crown plants rather than plugs
- Set or remove runners based on variety and crew availability.
- Have a zero tolerance weed policy.
- Keep them for one fruiting year.

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