



# Nickels Soil Lab Projects\_2015.2

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## Project 4. Organic demonstration

**Objective:** To demonstrate certified organic almond production practices and materials in the Sacramento Valley and compare with conventionally managed trees.

**Methods:** Trees planted in 2006. 75% Nonpareil; 25% Fritz; every 4<sup>th</sup> tree in every row is a Fritz. 124 trees per acre. Buried drip is irrigation delivery. Eight rows conventional, 24 rows organic.

With leaf rust controlled in 7<sup>th</sup> leaf, yields are solid. Challenges include: weeds and N nutrition.

Year	Conventional (lbs./acre)	Organic (lbs./acre)
4 <sup>th</sup> leaf	1076	926
5 <sup>th</sup> leaf	1725	859
6 <sup>th</sup> leaf	2358	894
7 <sup>th</sup> leaf	2438	957
8 <sup>th</sup> leaf	2971	2113
9 <sup>th</sup> leaf	2450	1528
10 <sup>th</sup> leaf	2630	2079



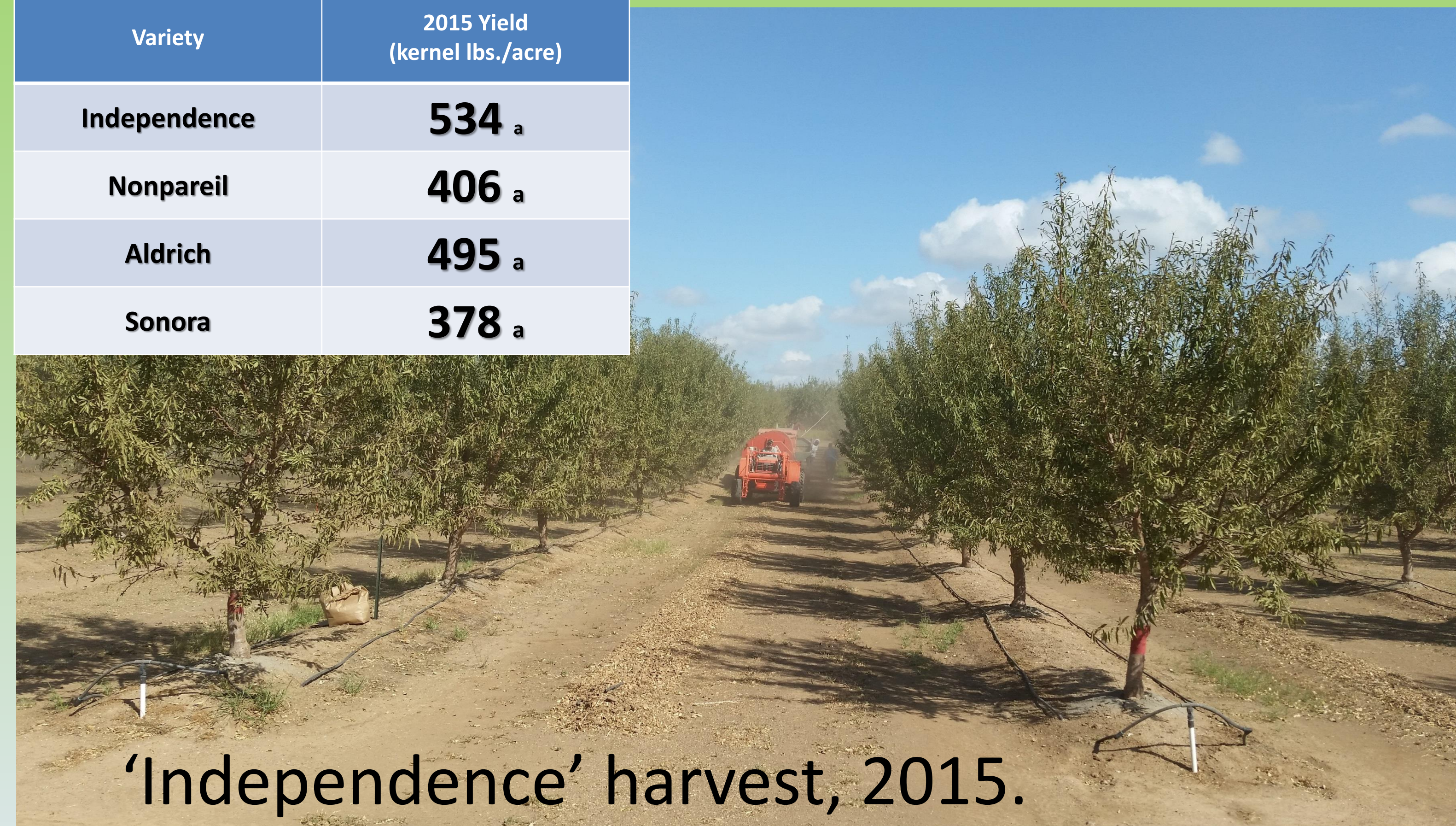
## Project 5 Self-fertile vs pollinizers + Nonpareil

**Objective:** To compare the economic production potential of a self-fertile variety (Independence) to that of a high value Nonpareil + pollinizer combination over the life of the orchard.

**Methods:** Trees planted in 2013. 100% Independence compared to Nonpareil (50%) with 25% Aldrich and 25% Sonora. 145 trees per acre (20' x 15'). All plots replicated 3x. Compost included in berms on half of the orchard. First harvest in 2015.

**Results:** No significant yield difference between all four varieties. Average yields ranged from 400 to 500 lbs/acre (see table below). Compost did not influence yield of any variety.

Variety	2015 Yield (kernel lbs./acre)
Independence	534 <sup>a</sup>
Nonpareil	406 <sup>a</sup>
Aldrich	495 <sup>a</sup>
Sonora	378 <sup>a</sup>



'Independence' harvest, 2015.

## Project 6. Almond Production on Raised Beds

**Objective:** Evaluate the feasibility and possible advantages of a large raised bed planting system for Nonpareil (NP) almonds

**Methods:** Three large bed rows were build and planted to NP in 2006 and compared to production by NP on smaller beds. Beginning in 2013 and again in 2014, NP production on the large berms was statistically more than yield from trees on smaller berms. Questions about shading and increased tree height on large berms make this a project to repeat on a larger scale.



Standard berm vs. raised bed trees. Monterey trees on smaller beds (L) compared to a Nonpareil trees on larger beds (R). All trees are on Lovell peach seedling rootstock.