

**Experiment Info:**

Experiment: C13-103

Planted: 1997

Variety: Pink Lady

Population: 445

Plot Size 15680 ft2

½ acre

Replications: Four

Harvest: Oct 21st

**Soil Test Values (ppm):**

pH: 7.9

CEC: 24.4

OM: 2.0

P1: 47

K: 318

S: 67

% K: 4.0

% Mg: 29.4

% Ca: 64.3

% H: -

% Na: 3.2

Zn: 1.6

Mn: 1.3

Fe: 4.5

Cu: 2.0

B: 0.6

**Objective:**

Determine if AgroLiquid fertilizer based fertilizer programs compare with local standards for producing quality yields of Pink Lady apples.

**Materials & Methods:**

- This research conducted by Ron Britt and Associates, Yakima, WA
- On April 22nd the initial fertilizer application in the orchard were made as dry fertilizer or AgroLiquid products banded under the respective trees. These application were applied when the trees exhibited bud swell. The same applications were made again on May 20th as the trees were actively growing.
- Over the course of the growing season, seven additional foliar applications of pesticides and plant nutrition were made in this orchard. These were made with a Rears air-blast sprayer set to apply a total of 100 GPA. All nutrient applications are listed in Table A1 on the following page.
- On the date of harvest, several limbs exhibiting similar development and fruit load from four trees in each plot area were selected and all fruit on these limbs was harvested and placed in individual bins. The following day, 100 apples were randomly selected and weighted. Additionally, evaluations of fruit color, fruit size. Twenty five apples were also randomly selected and sliced to determine Brix, bitter pit, water core, and fruit pressure measurements. Additionally, samples were evaluated for nutrient content.
- This was the second year that these same treatments were applied on the same trees to determine if fertility effects may be additive.

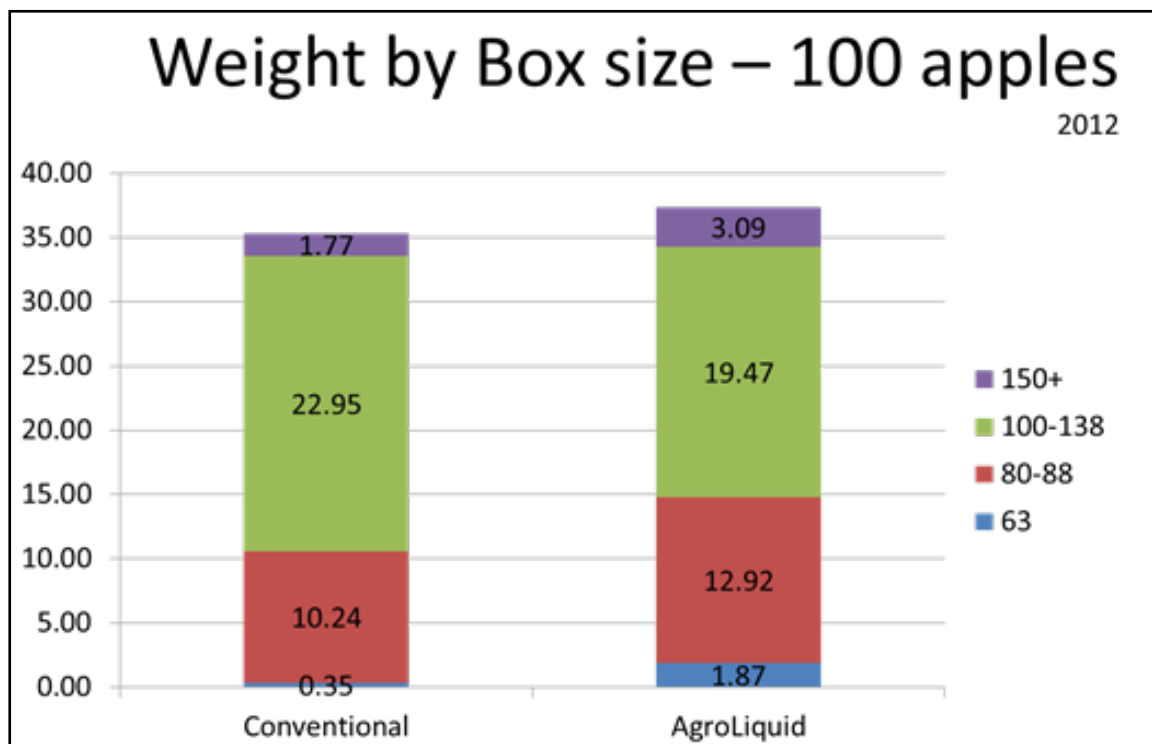
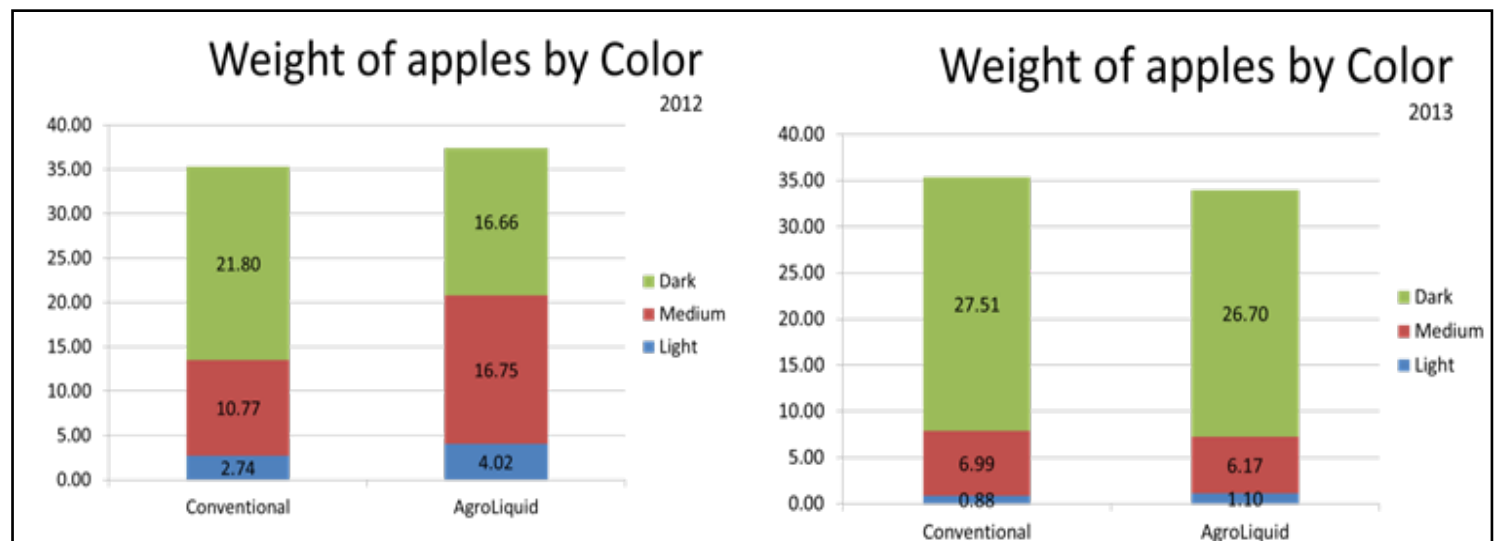


Figure A1. Yield of Pink Lady apples (Lbs.) by box size, Yakima Valley WA. 2012

Table A1. Fertilizer application rate and timing schedule for Pink Lady Apples. Yakima Valley WA. 2013

Product		April 22 & May 20 (rate per date)	5/8, 5/18, 6/9, 6/22, 7/7, 7/28, & 8/17
1.	Conventional	Urea @ 100 lb./A 11-52-0 @ 100 lb./A 0-0-50-17 @ 100 lb./A	10-10-10 @ 2 lbs.
2.	AgroLiquid	High NRG-N @ 5 GPA Pro-Germ. @ 5 GPA Sure-K @ 5 GPA	Sure-K @ 2 qt./A Pro-Germinator @ 2 qt./A Liberate Ca @ 1 qt./A



### Conclusions:

- In 2012, the grower standard had more 6% less fruit weight per 100 apples, but in 2013 there was 3% increase. However, the entire amount of fruit produced within each treatment area was not fully determined. The trees within the AgroLiquid treated section of the orchard appeared to be approximately 2-3 ft. taller at the end of the second season of applications. With the larger trees and a similar fruit load per branch, the AgroLiquid treated trees should have had greater fruit production per acre. Still, yield evaluations were primarily limited to fruit quality.
- The nutrient content of the fruit at harvest appeared to have higher levels of nitrogen, magnesium and boron levels in the AgroLiquid treated fruit. All other nutrient levels tested higher in the grower standard treated apples (phosphorus, calcium and zinc). The Brix, starch content and fruit pressure were equal for both treatments in each year of this trial.