NAP Buy-up vs. ARH Insurance for Tart Cherries for the 2016 Crop Year?

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Warm Up Question 1

- What does it take to get too many tart cherry trees planted?
- What was the inflation adjusted price of cherries in late 70's?
- $1.40 / lb (based on GNP price deflator)

Warm Up Question 2:

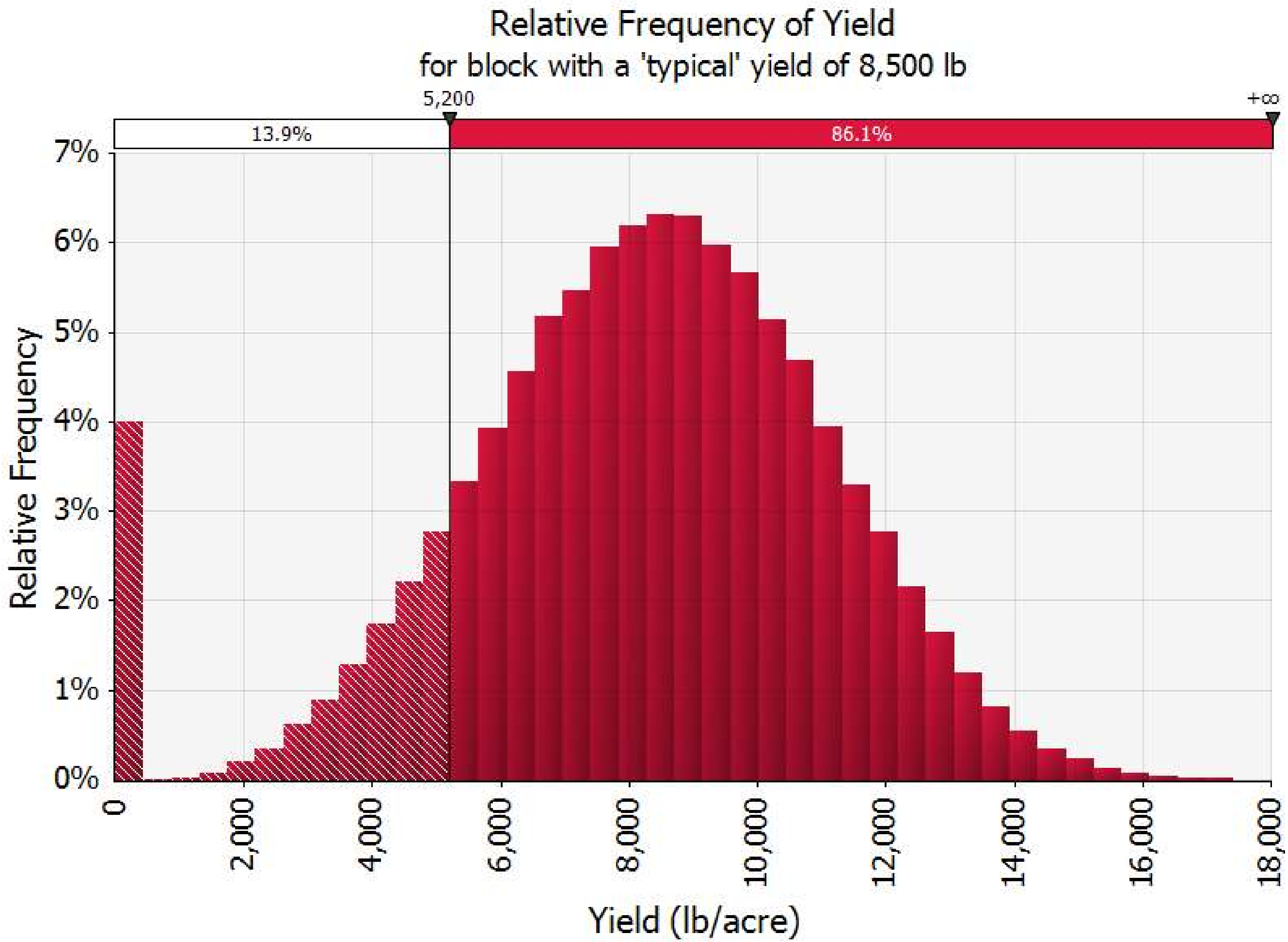
Yield Risk Assessment: What Am I trying to Manage?

What is your farm/legal entity's yield shortfall risk?

- Depends upon site
- Depends on age of trees
- Depends upon number of blocks

Warm Up Question 2: Yield Risk Assessment

- Break out yield risk by block to start discussion
- What are sources of the risk?
  - Is it a 1945/2012 type year? Extremely early spring warm-up, followed by normal weather pattern and freeze.
  - Is it a 2002 type year? Spring warmth ahead of ‘more typical’ pattern followed by ‘wind’ freeze
  - Is it a “Normal” risk type year with inversion freeze(s) perhaps in combination with modest wind freezes and/or pollination problems?
- See if the bar chart on the next slide fits your experience.



Relative Frequency of Yield
for block with a 'typical' yield of 8,500 lb
5,200
+∞
13.9%
86.1%
Relative Frequency
0%
1%
2%
3%
4%
5%
6%
7%
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
Yield (lb/acre)

What Does the Bar Chart Say?

- The ‘typical’ yield for the example block is 8,500 lb/acre
- There is a 14% (1 in 7) chance of yield below 5,200 lb.
- There is a 4% chance of a yield not worth harvesting.

Why?

- Make the probability of a very low yield year 1 in 25 (4%).
  - Lower probability than the 2 out of 15 we have observed recently
  - More than 1 out 50, our pre-2002 estimate
- Make the probability of remaining events 24 out of 25 (96%)
- Yield except for very low yield follows a bell shaped distribution

Quantitative Estimate

- Does this mean we would see one "hit" every 25 years?
- No.
- What about 2002 and 2012?
- If 4% is a good estimate, we would see:
    - No hits in 25 years 39% of the time
    - 1 hit in 25 years 37% of the time
    - 2 hits in 25 years 17% of the time
    - 3 hits in 25 years 5% of the time
    - 4 hits in 25 years 2% of the time

What's New in NAP?

- Prior to 2015 crop, NAP was 50/55
- NAP is now:
  - 50/55 for administrative fee of $250/crop
  - 50/100 for admin fee + premium @ 5.25% of liability
  - 55/100 for admin fee + premium @ 5.25% of liability
  - 60/100 for admin fee + premium @ 5.25% of liability
  - 65/100 for admin fee + premium @ 5.25% of liability
- Tree fruit growers w/ losses in 2012 got a heads up on how the program works with the retroactive freeze program

When is NAP Eligible?

- Crop insurance not available
- But, eligible if RMA crop insurance does not have CAT coverage (50/55).
- But, eligible if RMA crop insurance does not cover your crops type and intended use (e.g., would be true for some cucumbers in MI)

NAP vs. ARH Comparison Challenge

- Both designs are targeted at financial risk protection
- What do lenders say when I ask them to discuss how they look at risk when they lend money for operations and for investments? [when they talk to my undergraduate finance class]
  - If you have a bad year, how are you going to manage your way through the event?

Comparison Challenge

- Both designs are "pilots"
- Designs protect against different risks:
  - Crop insurance: Gross revenue
  - NAP: Yield (and, has an unharvested factor)
- NAP has a cap on payments across all crops of $125,000 / entity
- NAP has a cap on premium across all crops of $6,563 / entity

Comparison Challenge

- Both designs base coverage on grower's history
- Both designs used a moving average of 4 years up to 10 years based on information grower provides
- NAP "replacement" yield for a 2012 type year is the lessor of (yield, 65% of FSA's expected county yield).

Comparison Challenge

- Units (what am I protecting)
  - ARH: Basic and optional units in the county
    - Two units would be common
    - Some with one unit, many with more than two units
  - NAP buy-up
    - All the acreage the producer / legal entity has in cherries
    - Crosses county lines

Comparison Challenge

- When are payments made: rule same for both in terms of days after loss determined
- When are losses determined
  - NAP: Typically, at harvest
  - ARH: Unless sales have been completed by the end of the year, price used dependent upon NASS price which will be mid January

Further Challenges

- Growing and implementation pains
  - NAP does not have what RMA calls “special provisions” for quality well worked out.
  - ARH is struggling with quality issues (e.g., part of crop goes to juice because of weather damage and crop is not completely sold by end of year)

Comparison Challenge

- Premium rates are different
  - NAP: 5.25% of liability for all levels of coverage
  - ARH:
    - Depends upon coverage chosen
    - Depends upon approved revenue compared to a county reference revenue.
    - I have been using a subsidy adjusted rate in the 3.8% to 4.0% range for producers who have approved revenues above the county reference revenue

Comparison Challenge

- When will the policies trigger?
  - ARH triggers in the 2002/2012 type years and in the big crop, low price years (think $0.05/lb and $0.135/lb)
  - NAP:
    - Will trigger more often if the insurance units are the same.
    - Frequency of payments falls as the number of “units forgone” increases. By my preliminary estimates, above the same frequency with three or four units.

Recommendation

- Not unambiguous: depends upon what you are trying to accomplish.
- I have concerns about reducing participation in ARH and losing the policy
- I am not betting on what is in the next Farm Bill … which is to say I regard NAP buy-up as a pilot
- See what changes are made in quality adjustment features in NAP. Development issue; not an authorization issue.

NAP Wrinkle

- Think of NAP in a semi-whole farm context
- Premium is limited by the $125,000 payment limitation ($5,653)
- If your relevant gross revenue for NAP eligible crops is in the $300,000 to $400,000 range, “protect” it all at 65%.
  - There will be a probability you will burn through the cap. But, you still get $125,000
  - For cases I have worked out, probability is in the 2% to 4% range
  - Reduces the ‘effective’ premium rate from 5.25% to 3.7% to 4.5% depending upon case.

Thank You