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
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