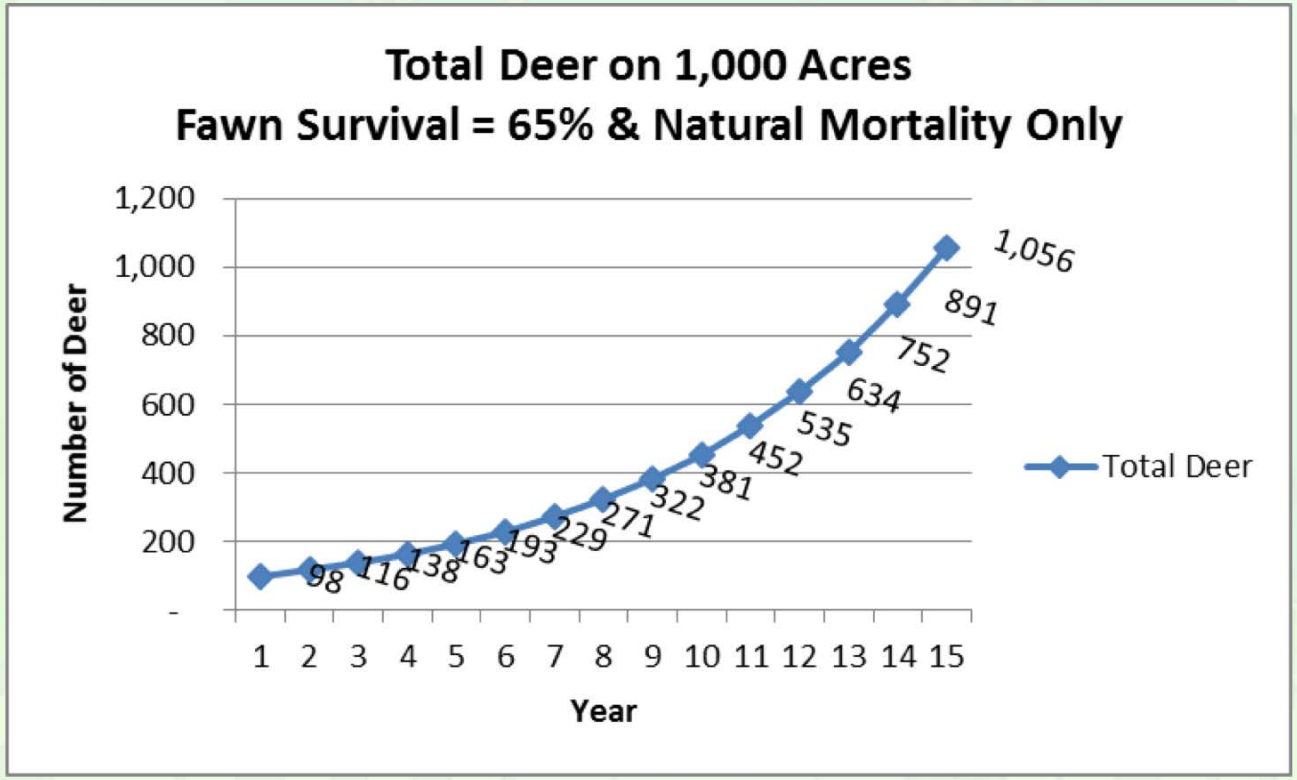
Should You Cull Young Bucks?

Insights from the West-East Yana Project at the Faith Ranch

Spikes

How to Lose Control of a Feeding Program On 1,000 Acres



- With a fawn survival of 65%, production far exceeds natural mortality.
- Growth of the deer herd is exponential.
- The problem is worse at a 100% fawn survival.
- In an unfed environment, populations would crash.
- On protein feed, deer numbers—and feed costs—keep rising.

How to Lose Control of a Feeding Program On 1,000 Acres

- Protein Feed Cost:
  - $400 per ton
  - A deer consumes 3.5 pounds per day of protein feed.
  - We feed 290 days per year.
- Annual feed cost: $200 per deer per year.

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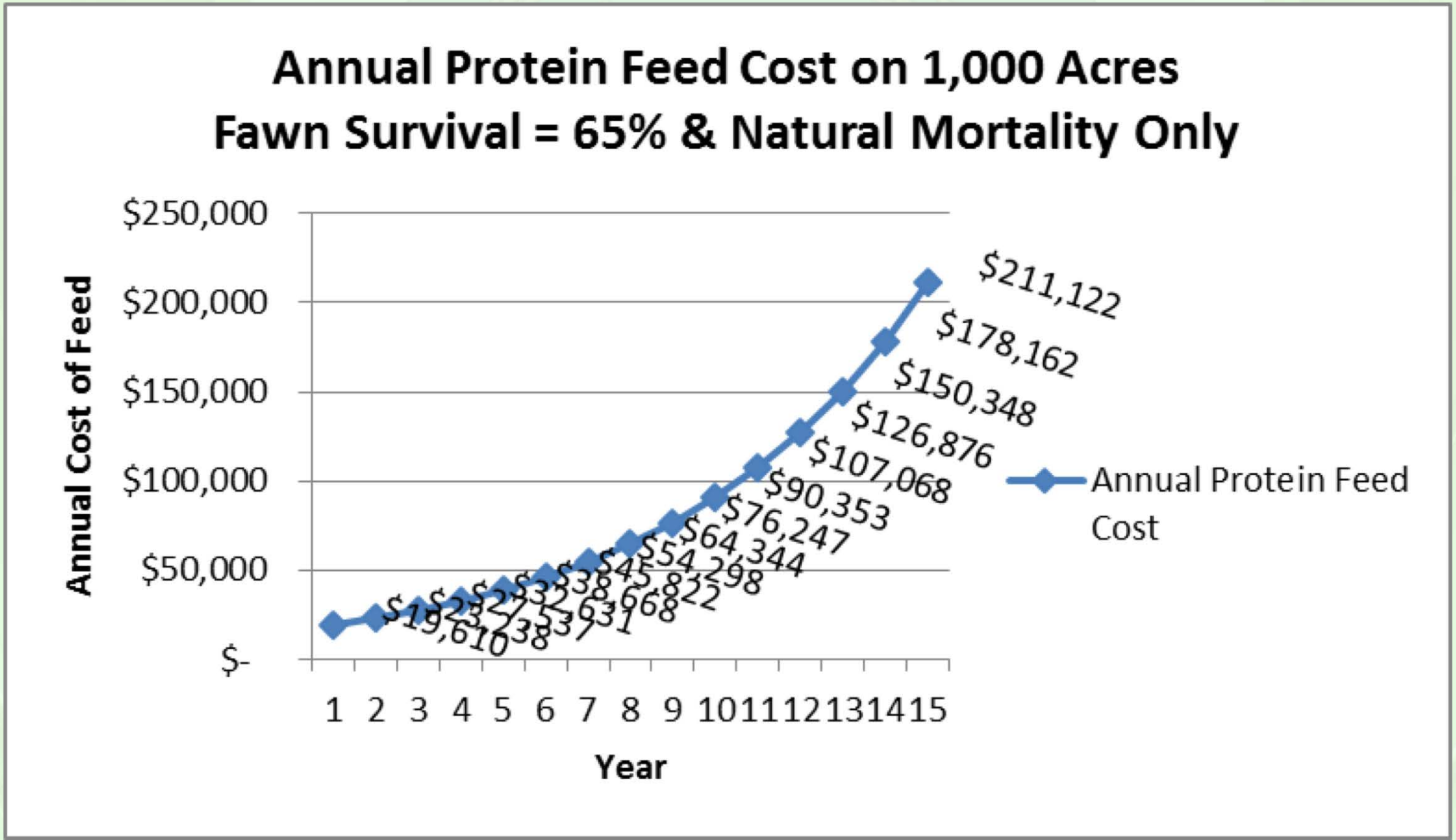


How to Lose Control of a Feeding Program On 1,000 Acres

- The common first step to an out of control feeding program:
  - Start shooting females.
- If you started shooting females in year 5.
  - You have built up a surplus of bucks—mostly young bucks.
  - And you don’t have many mature (5 ½) bucks.
  - In effect, you created a surplus of bucks beyond what you need or can afford.

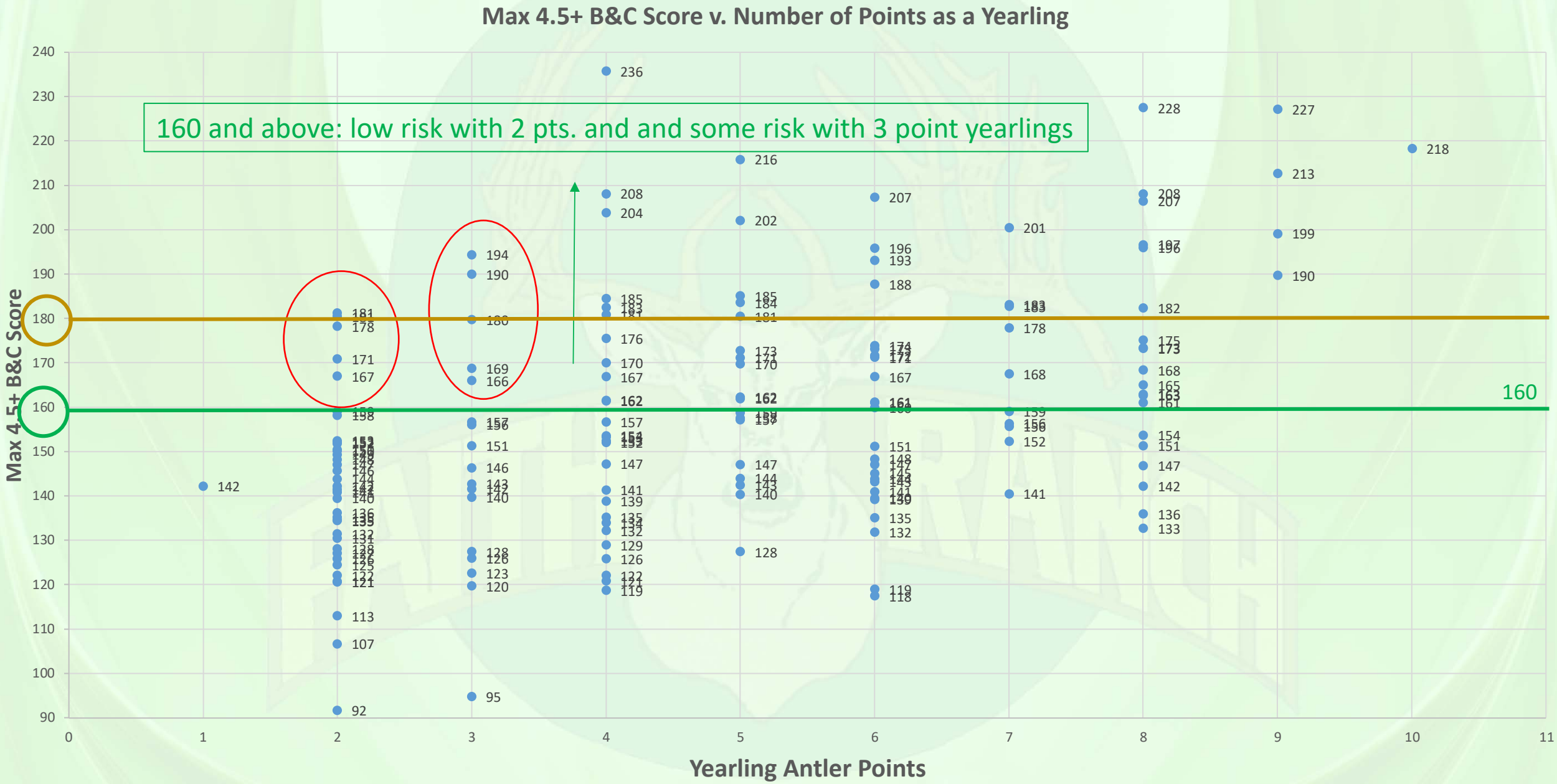
So what do you do about the bulge of bucks?

- You can think about shooting spikes.
- Is it possible that you are killing future giants?

The East-West Yana Data Can Help You Decide Whether to Shoot Spikes

- We have captured 164 yearlings that we recaptured at 4 ½ years and older.
  - 41 of those yearlings (25%) were spikes
  - 123 of those yearlings (75%) had 3 or more points as yearlings
- For each yearling, we identified the maximum score that buck reached from 4 ½ to 8 ½:
  - We compared yearling points to the MAX B&C score of each buck from 4 ½ to 8 ½.

Another Look at the Data: A Scatterplot of Yearlings

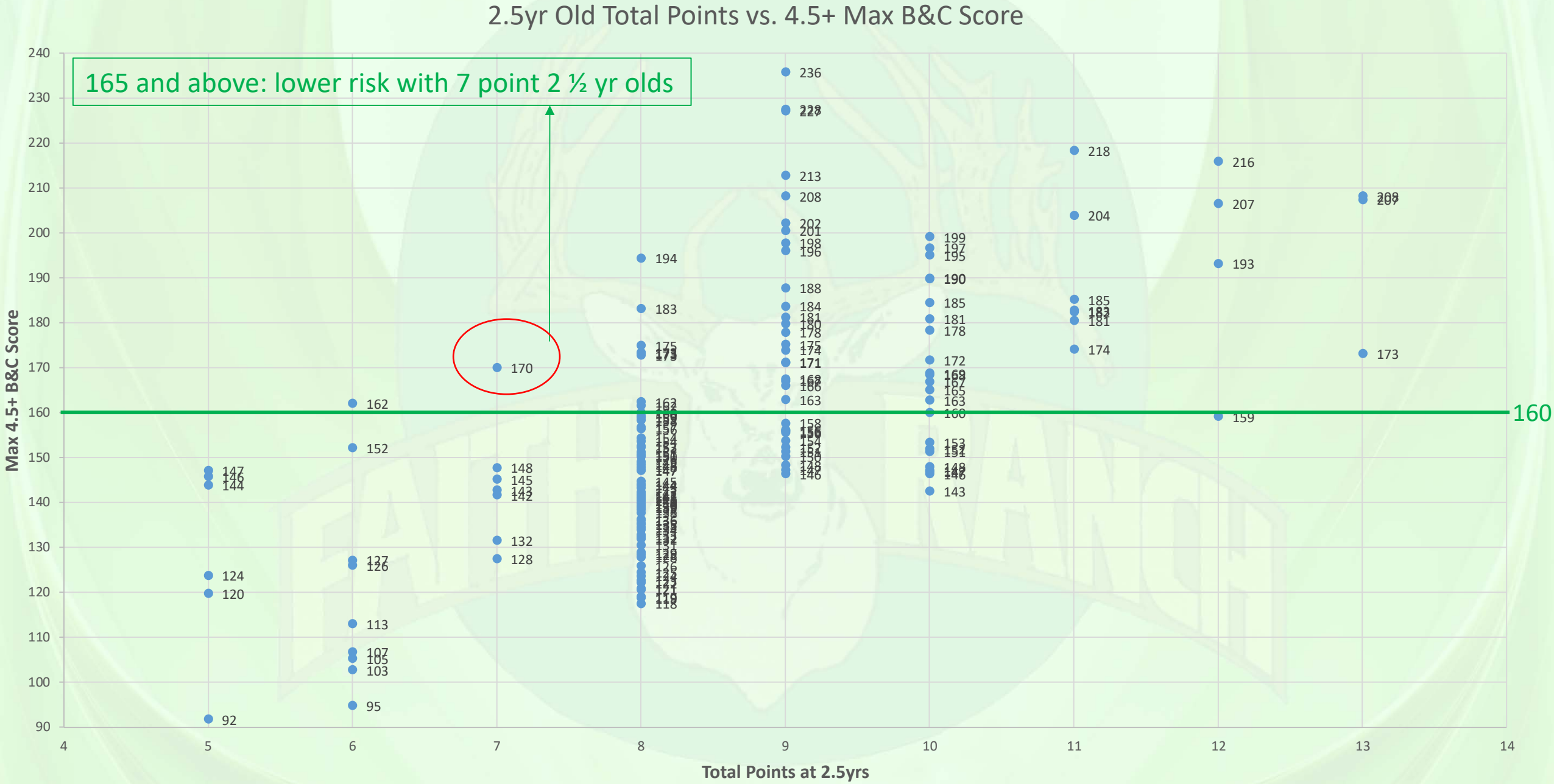


Yearling Harvest Conclusions

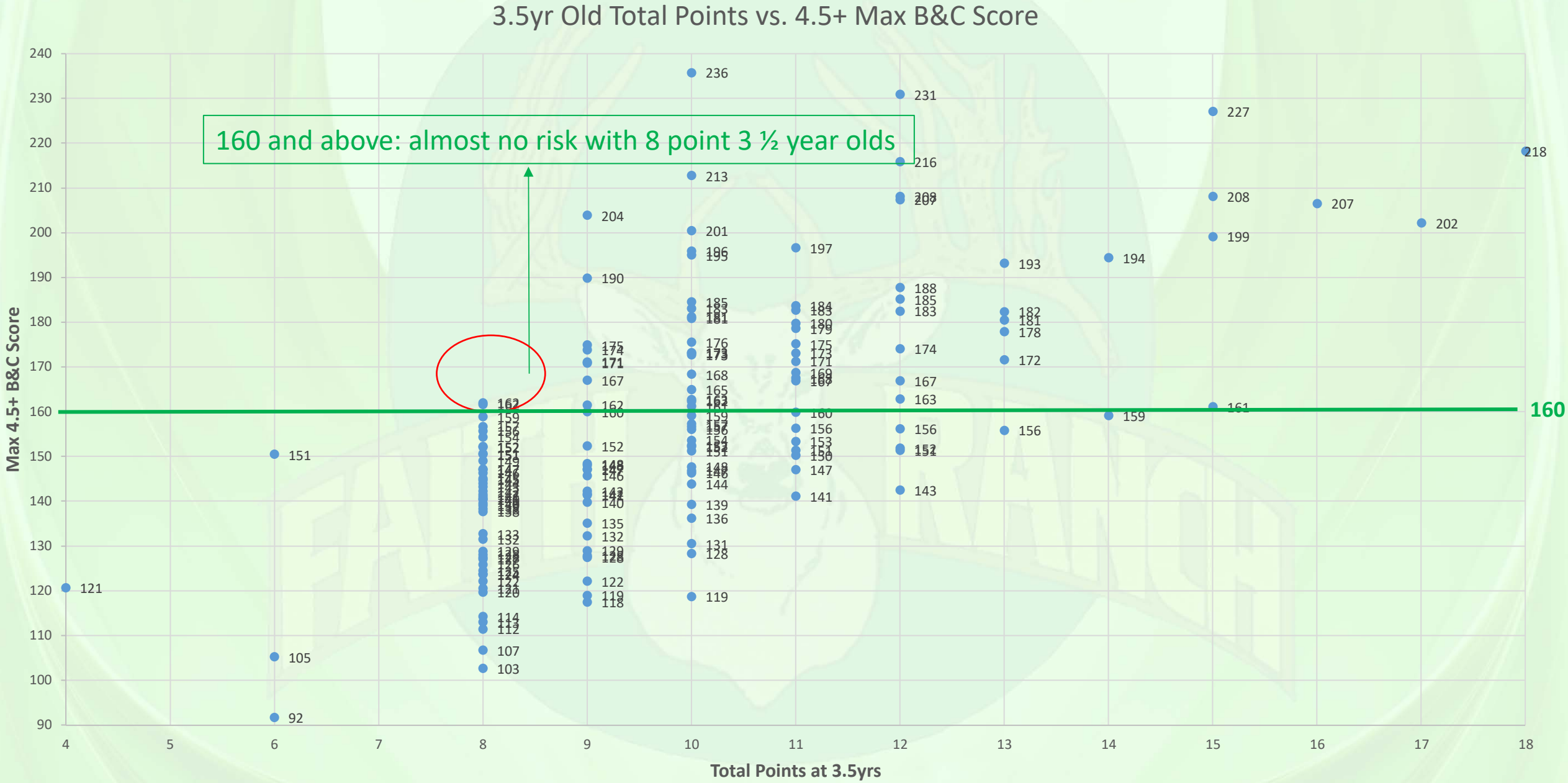
1. You do not want to shoot yearlings with 4 points or more if you want to raise giants.
2. Spikes at maturity simply don't produce the antlers—measured by both the average and the maximum—that yearlings with 4 or more points produce.
3. 3 point yearlings are riskier: average mature antlers are low but one 3 pointer grew 194 points.
   - The two 190 class mature bucks that were 3 pointers as yearlings were sired by DMP sires.

What about 2 ½, 3 ½, and 4 ½ Year Olds?

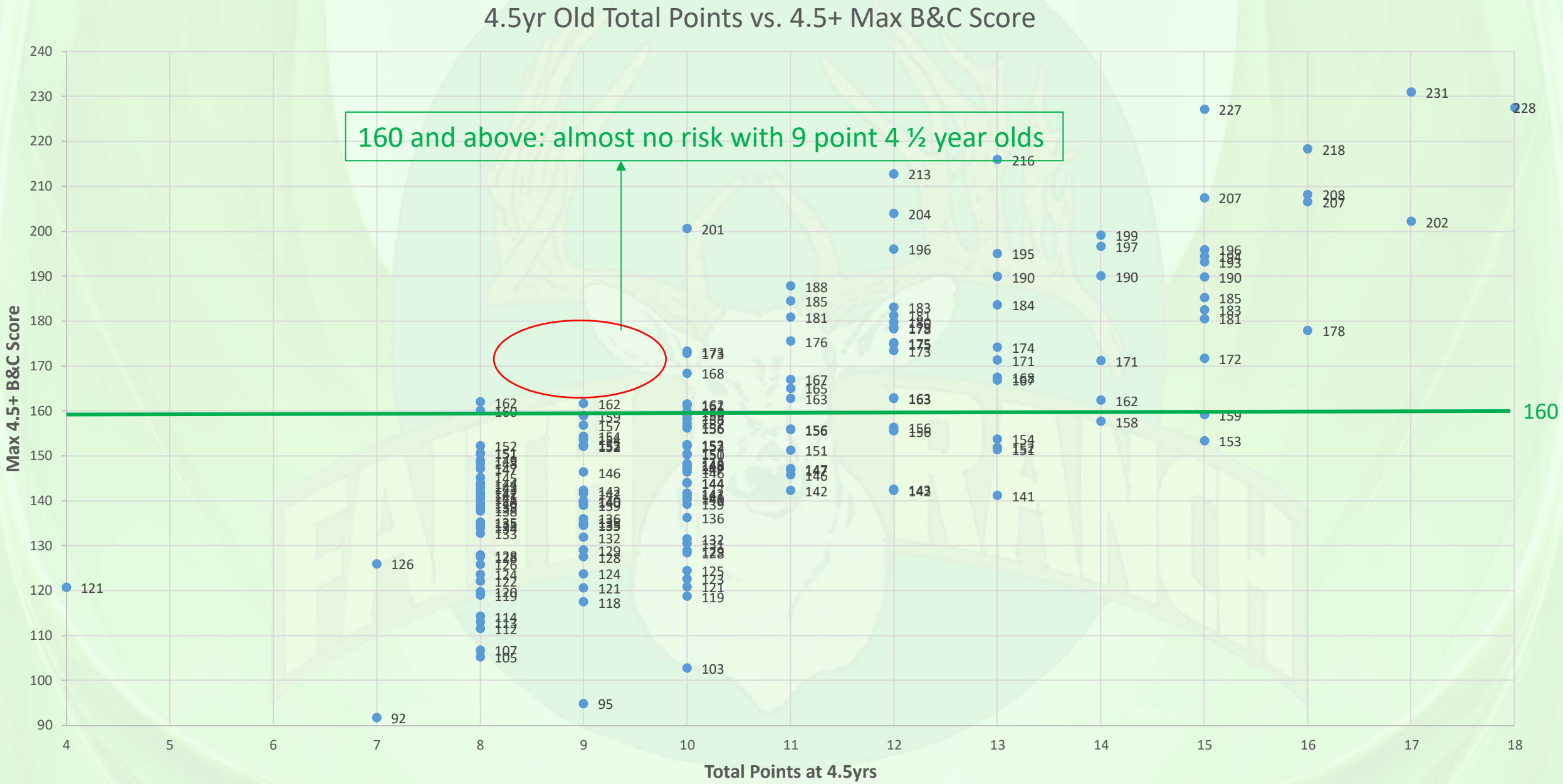
Another Look at the Data: A Scatterplot of 2 ½ Year Olds



Another Look at the Data: A Scatterplot of 3 ½ Year Olds



Another Look at the Data: A Scatterplot of 4 ½ Year Olds



My Conclusions

1. IF you have high fawn survival as a result of a feeding program, I would recommend that you shoot spikes.
   - At $200 per deer per year, you save $1,000 compared with waiting until 5 ½ years old.
   - Risk: some spikes will become big bucks but most spikes—compared to 4 point or more yearlings—will not.
2. Three pointers are riskier, but the two 3 pointers that scored in the 190s at maturity were DMP sired bucks.
   - 3 pointers are probably safe to harvest.

My Conclusions

3. A big surprise from the East-West Yana Dataset:
   - If the goal is to save all 160+ bucks, there are clear cutoffs in number of total points at various younger age classes.
   - 2 ½ year old bucks:
     - Low risk of shooting a future 160+ at 7 total points or less.
   - 3 ½ year old bucks:
     - Almost no risk of shooting a future 160+ at 8 total points or less.
   - 4 ½ year old bucks:
     - Almost no risk of shooting a future 160+ at 9 total points or less.

My Conclusions

CAVEATS:

1. This spike and young deer data may not be valid on an unfed ranch. Or one with only sporadic feeding.
2. DO NOT CULL YOUNGER BUCKS OF ANY KIND ON AN *UNFED* SOUTH TEXAS RANCH:
   - You don't get any feed savings.
   - You are NOT making genetic improvement to your herd.
   - Unless you like shooting tiny young bucks for fun, you simply limit the number of mature culls you can harvest in the future.
3. South Texas v. Other Parts of the Country:
   - South Texas (and particularly western South Texas) is unique: variable rainfall limits deer numbers in the absence of feed (a density independent environment) so shooting younger bucks does not result in a habitat benefit (hunting mortality is additive). So do not shoot younger bucks in the absence of feed.
   - In higher (or more consistent) rainfall environments, deer population increases in the absence of hunting mortality, often putting pressure on habitat (a density dependent environment). Culling younger bucks in the absence of feed has the benefit of reducing the population so that it better matches the habitat (hunting mortality is compensatory). Shooting younger bucks does have a benefit in density dependent environments.

My Conclusions

CAVEATS:

4. NEVER WIPE OUT AN AGE CLASS
   - Limit spike harvest to 20% of an age class.
   - Limit 2 ½, 3 ½, and 4 ½ year olds to the very lowest of the number of points, but don't wipe out those age classes either.
   - You want to have a number of bucks at maturity—even culls.

So now you have some harvest guidelines…

How on earth do you determine age?

A Threshold Issue:
Spike Harvest is NOT about Genetics

1. Spikes are bucks—almost always yearlings—with two scorable points.
2. Spikes are NOT genetically inferior:
   - That is, while they may be inferior to other bucks during their lifetime (as we will see),
   - They will not necessarily pass on those inferior physical traits to the next generation.
   - Genetic inferiority means they pass the undesirable traits to their offspring.
3. If genes don't create most spikes, why do spike antlers appear? Answer: environmental influences such as:
   - Timing of birth
   - Health of the mother
   - A twin or triplet sibling
   - Early stress
   - General environmental impacts in the first few months of life

The Critical Question:
What will a spike's antlers be at maturity (5 ½+)?

There is already strong evidence that yearlings with spike antlers—on average—will have smaller antlers at maturity than yearlings with multiple points:

- John Lewis study in the wild:
  - Random capture of yearlings (known age) in South Texas and recapture at maturity.
  - Results:
    - 3 points or spikes: average Gross B&C score of 124.9 at maturity (5 ½ +).
    - 4 or more points: average Gross B&C score of 140.0 at maturity (5 ½ +).
- Other studies Lewis cites show this relationship between yearling antler size and antlers at maturity.

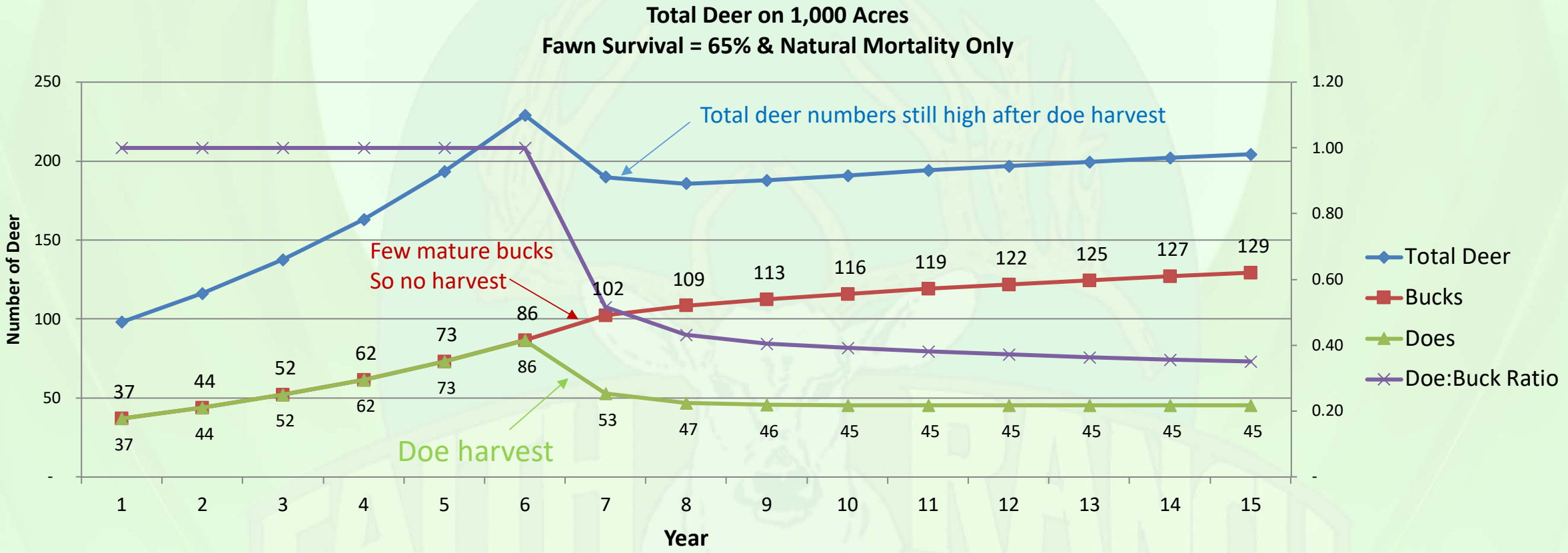
So did I shoot spikes based on Lewis's work?

1. No.
2. My goal was to raise giants.
3. Some spikes can grow into huge bucks.
4. I didn't want to take the chance that I was killing a future giant.
5. Besides, most people get more pleasure shooting a 130 class management buck than a spike.
6. But that was before I lost control of my deer population on our fed pastures.

Michael Deane was Right!

- Michael Deane owns and manages a ranch in Live Oak County.
- He feeds protein and has annual fawn survival of 100% or more.
- At a Deer Associates meeting a few years ago, Michael Deane told me that you get to the point that you HAVE to shoot spikes.
- I didn’t get it.
- I was still focused on raising giants and the relative pleasure of shooting a 130 class buck versus a spike.
- But then I lost control of our feeding program.

How to Lose Control of a Feeding Program



- After 5 years you wake up and start shooting does.
- You have built up a surplus of young bucks.
- After shooting does, you soon have twice as many bucks as does.
- But you don't have many <u>mature</u> bucks to shoot.
- Feed costs are out of control.

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