7 Years and 100 Soybean Variety Trials Later: Find out who won

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Background

- Ask yourself "How do I pick the best possible varieties to test in yield trials on my farm?"
  - How systematic and thorough is it?
  - Is it good enough? Could I do better?

- Problem as I see it is:
  - There is tons of data scattered across a wide landscape and it is too difficult to interpret longitudinal results.
    - Easily Readable?
    - Actionable?
    - Desired outcome?

Solutions…

- ## Create a database!
    - 4 years of on-farm testing
- ## Posted online link for reactions in April 2016.
    - Had 3,500 people view the post.
    - Call from major seed company.
    - Still getting random calls and texts.
- ## Other groups have aggregated data (everyone has data), but it's not very good and is part of a larger scheme to use/borrow/steal your intellectual property.
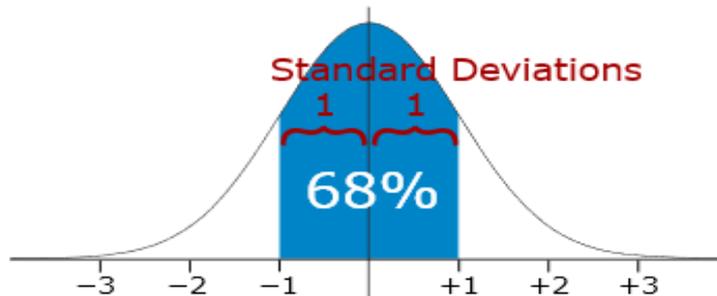   - FBN
    - https://www.morningfarmreport.com/findmyseed

How does it work…(spare me the technical details)

- If my plane is going to crash, I want to be the one flying it.

- 2014 is not 2015

  - Apples are not Oranges

    - Standardization of plot yields into a score

      - Makes things comparable across years, locations, etc.
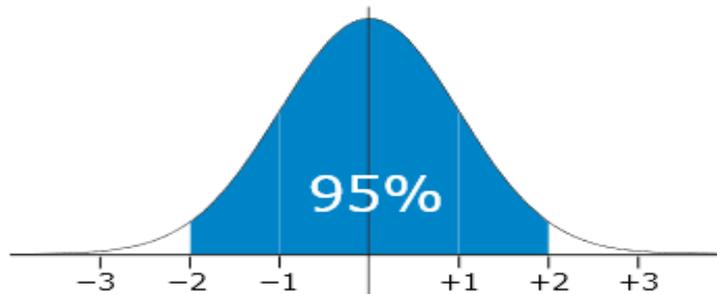
      - Z-Score

See website…

- Go to https://www.evaluationgroupllc.com/projects
- scroll down to SoyZAnalytics to learn more

Boring Stats 101

Standard Deviations

68%

−3 −2 −1   +1 +2 +3

68% of values are within
1 standard deviation of the mean

95%

−3 −2 −1   +1 +2 +3

95% of values are within
2 standard deviations of the mean

99.7%

−3 −2 −1   +1 +2 +3
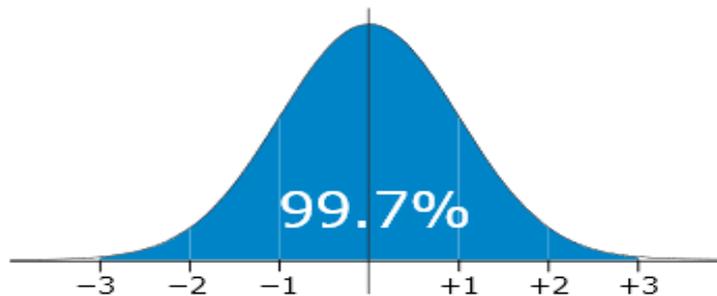
99.7% of values are within
3 standard deviations of the mean

IDC Multi-Year Data, just as important (unless you don't care)

Company	Brand	Year	NDSU IDC	Z-Score
Northstar	0090R2	2014	1.3	-2.128
		2015	2.0	0.189
		2016	2.0	-0.319

On-Farm test…

- 2015 IDC killed me.
  - Two varieties turned out to be the same and didn't figure it out until a year later.
- 2016 Top yielder x IDC got destroyed by WM.
  - Best IDC selection won field trials.
- 2017 Figured WM was a fluke, '16 was a wet year.
  - Dry in 17. Still had WM. Not a fluke after that. Variety got dumped.
  - Started focusing on additional agronomic chars coupled with yield and IDC. WM esp.
- 2018 No more WM problems, No IDC problems, decent yields for limited rains.

Thinking required

- In four years I figured the top yielding IDC trait beans that I can get away with that match my farms Ph levels. Figured out that agronomic packages of varieties are just as important as yield and need to do some leg work once top varieties are identified.

- I like to look for the varieties I know or have grown. Where do they fall on the yield curve in the SoyZ model?
  - What varieties unknown appear to be yielding more?
  - Set the threshold for data available? 1 year? 3 years?
  - How important is IDC? Other agronomic characteristics?

Chat it up

- I like to talk to seed dealers. Ask them "what is/are their most popular varietie(s)? Farmers 'vote' with repeat sales.
  - Then I go back to SoyZ model and see where that recommendation falls in the yield comparisons.
  - Especially for new varieties –they may have very little data. I'm not a huge fan of 'new' varieties due to lack of genetic diversity in soybeans.
  - Any dealers that come in pushing a new variety, check it on SoyZ

De-Throne the Stud

- Try to 'de-throne' your best varieties
  - Narrow the list down to the top 5-10 new varieties you are most interested in.
  - Then, do a deep dive. Make phone calls to dealers, read plant characteristics on websites. Go to chat rooms, neighbors, friends, your BIL, etc.

Skip out on giving intellectual property away…

- For an individual subscription of 150 bucks you get …
    - Aggregated/visualized soybean yield data with a searchable database.
    - **<u>Soybean variety numbers</u>** in a searchable database that is regularly updated as numbers come in.
    - IDC aggregated /visualized data with a searchable database
    - Corn yield by variety data
- $50 bucks off if you submit 3 variety tags.

What did you get out of this…

- Specific examples of the importance of multi-year/multi-site yield/IDC data for variety selection.
- Critical reflection about the efficacy and thoroughness of your soybean variety selection process.
  - How thorough is thorough enough for you?
  - An example of a systematic method for selecting new varieties.
- Awareness of an opportunity to access an affordable platform for examining yields, IDC and variety numbers without giving away intellectual property.
  - ID matching variety numbers, find that variety cheaper from a different dealer.
  - Correct variety selection is the single biggest thing you can do to increase production
- Only <u>YOU</u> can determine who won variety trials based on <u>YOUR</u> criteria

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