



SEEDSELLER ACADEMY | ACADEMY 101

How To (Properly) Use Test Plot Data!

BY ROD OSTHUS

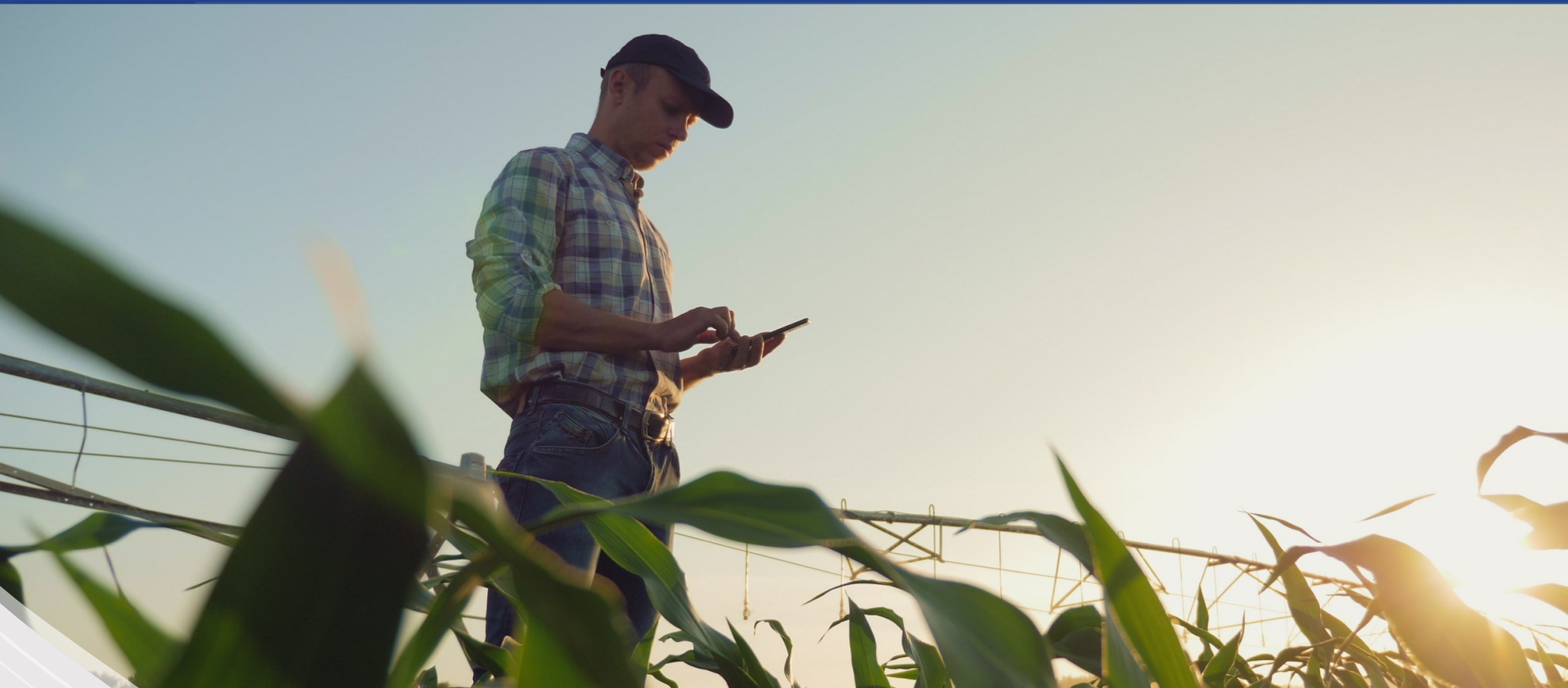
How to Properly Use Test Plots When They're Part of Your Sales Strategy



The Ultimate Purpose
of Gathering Test Plot
Data is to...

Increase Profits





**Most Sellers Don't Have Increasing Profits As Their
Primary Goal When Planting Test Plots!**

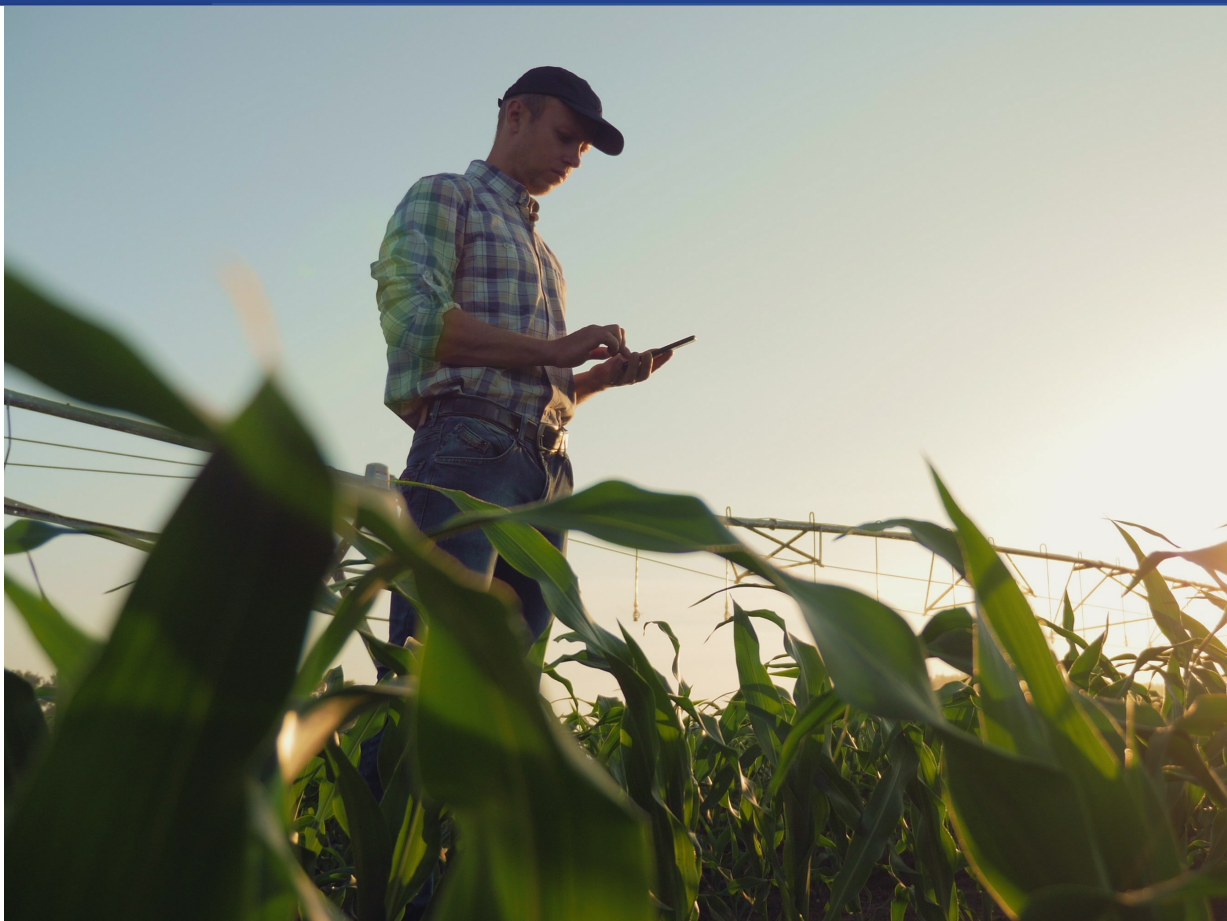


To Achieve the Goal
of Increasing Profits
Through Test Plots,
You Need to
Execute 5 Key
Strategies



Execute 5 Key Strategies

1. Ensure the Test Plot Data is Clean
2. Do Not Include Competitor Varieties
3. Harvest at Moistures of 24-26% to Eliminate Invisible Yield Loss
4. Data Should Only be Viewed by Sales Reps
5. Use All Data Properly



1. Ensure the Test Plot Data is Clean

Execute 5 Key Strategies

1. Ensure the Test Plot Data is Clean

What is Clean Data

Johnson Farms—Newton, MN—Plant 5-4-21 Hvst 10-20-21
 Pop 34,500. Fertility 300-200-300 Fung 2 X. Insect. Yes

Top 5 Factor Ratings:
 Soil conditions—9 Seed Placement—9 Speed—9
 Seed quality—9 Right Variety Right Field—9 Post Planting Mgt—9
 Tester variety Yes
 Plot size 500 ft x 300 ft—6 Entries plus 7 Testers

Average test yield—195
 Tester applied to create adjusted yield—Yes
 Only middle rows of each variety harvested—Yes
 How many times was this test plot replicated? 5 X

Bill Smith—Central, IA Planted 5-6-21 Hvst 10-22-21
 Pop 34,500. Fertility 300-200-300 Fung 2 X. Insect. Yes

Top 5 Factor Ratings:
 Soil conditions—9 Seed Placement—9 Speed—9
 Seed quality—9 Right Variety Right Field—9 Post Planting Mgt—9
 Tester variety Yes
 Plot size 500 ft x 300 ft—6 Entries plus 7 Testers

Average test yield—195
 Tester applied to create adjusted yield—Yes
 Only middle rows of each variety harvested—Yes
 How many times was this test plot replicated? 5 X

Jason Lewis—Man, SD—Plant 5-7-21 Hvst 10-23-21
 Pop 34,500. Fertility 300-200-300 Fung 2 X. Insect. Yes

Top 5 Factor Ratings:
 Soil conditions—9 Seed Placement—9 Speed—9
 Seed quality—9 Right Variety Right Field—9 Post Planting Mgt—9
 Tester variety Yes
 Plot size 500 ft x 300 ft—6 Entries plus 7 Testers

Average test yield—195
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 How many times was this test plot replicated? 5 X

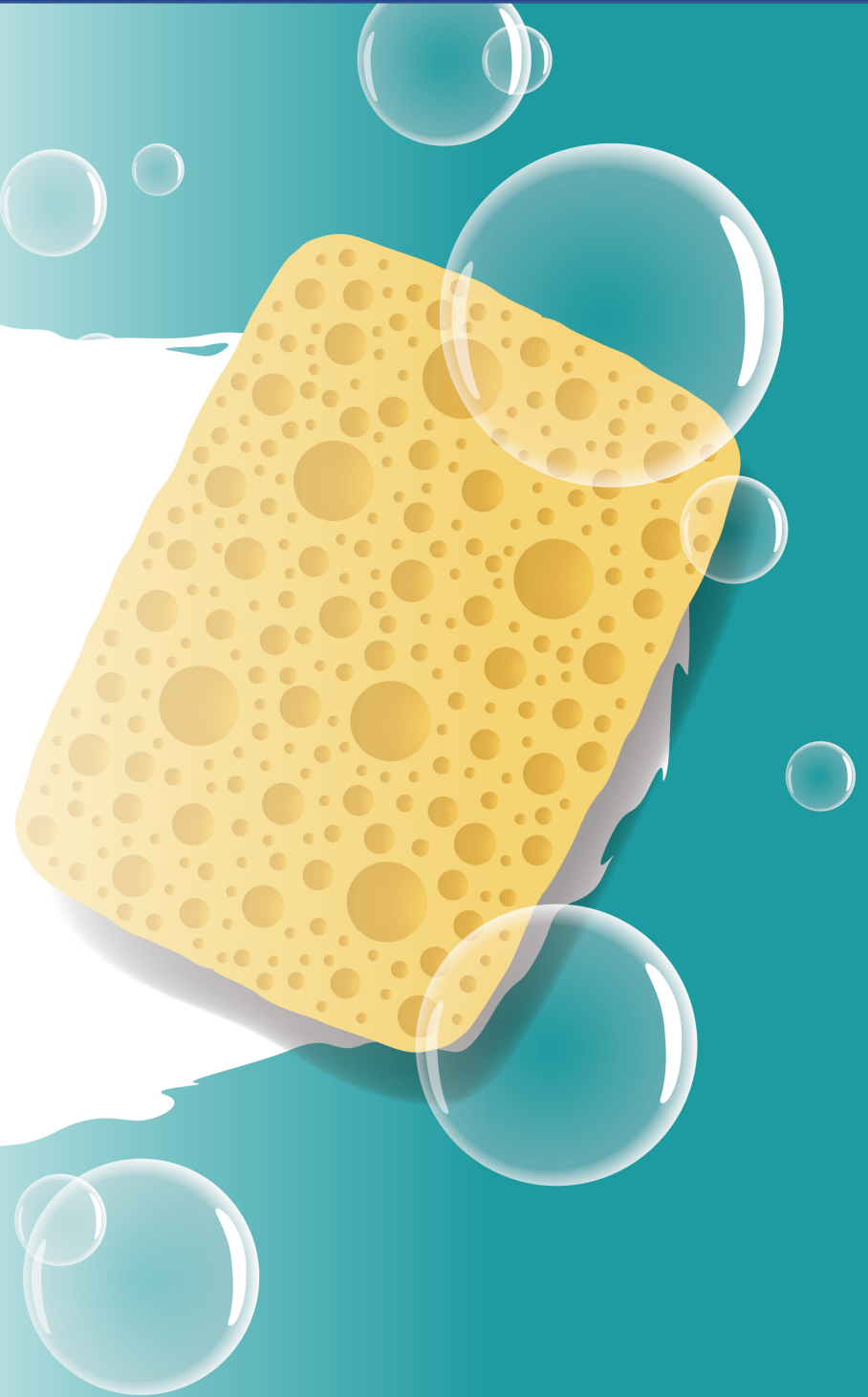
Clean Data:

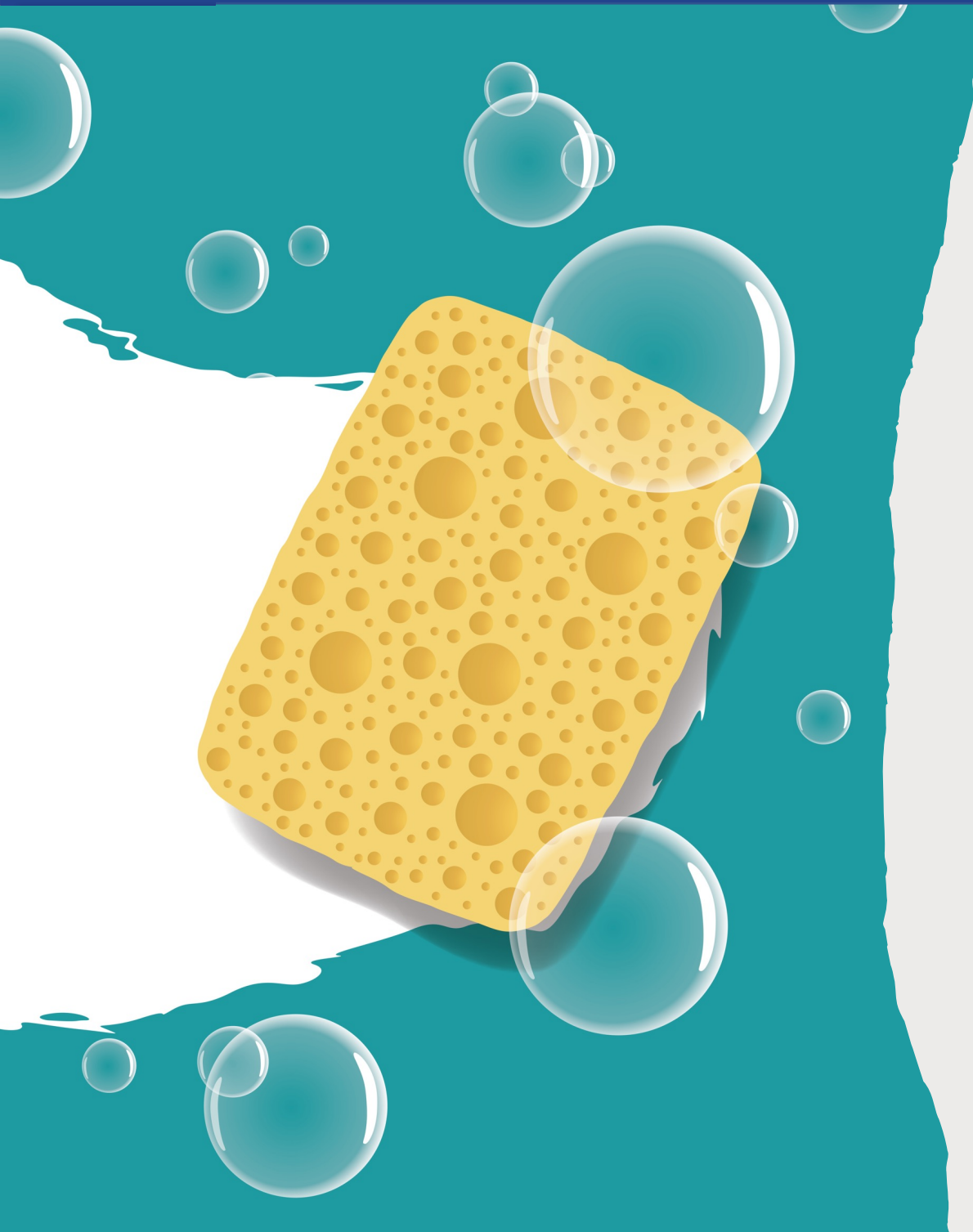
- Created by following strict protocols
- Replicated to ensure validity
- Free of variables that distort results
- Valid enough to assist in decision making



Clean Data Gives Sales Reps...

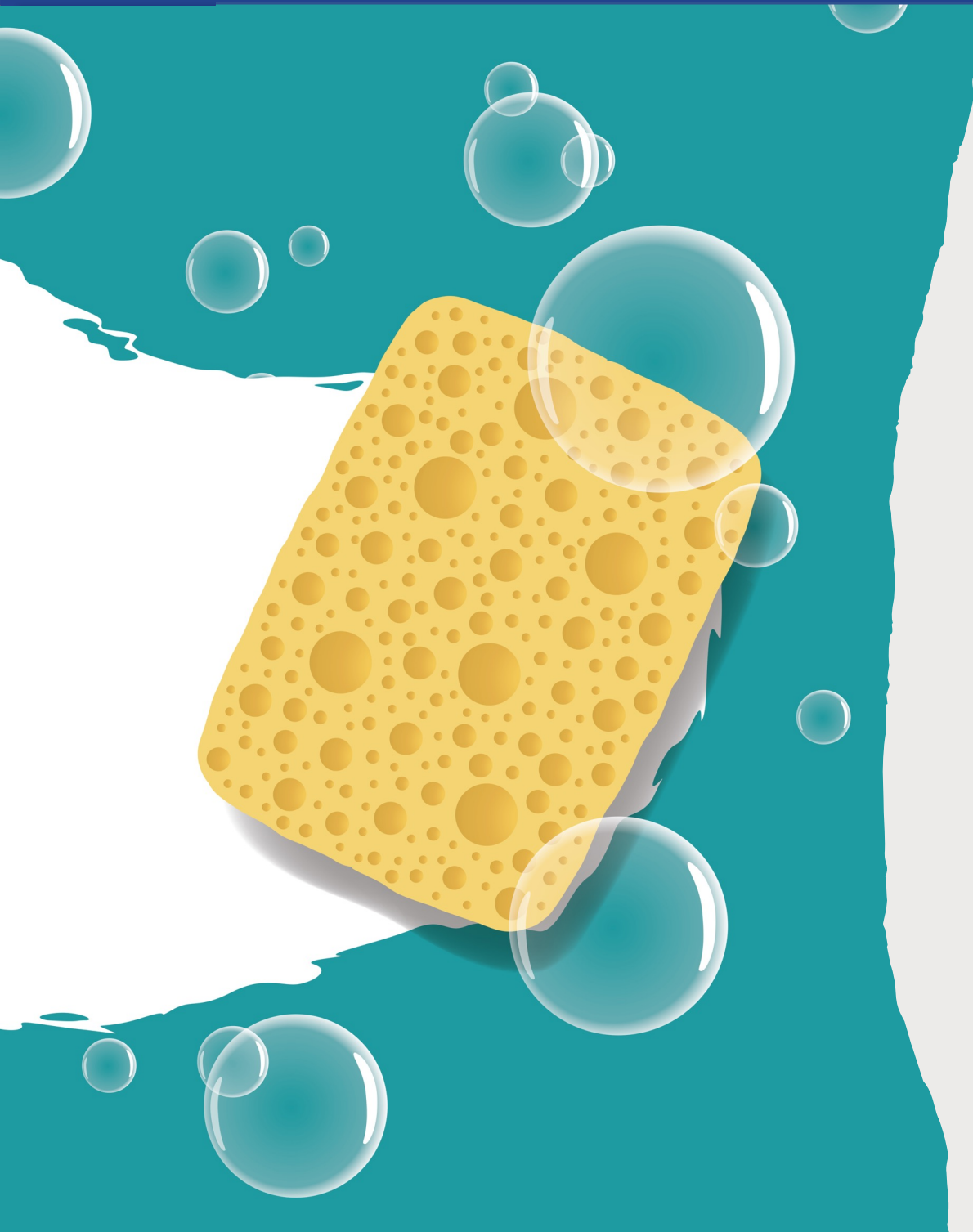
- **Accurate** data—on their varieties in that environment that year
- **Documentation**— how the 1000 variables alter each variety's performance year to year
- **Comprehensive** data—includes information on other increments key to overall performance
- **Actionable** data—gives sellers confidence, motivation to succeed and the power to make decisions and claims





Clean Data Starts With...

- A. Location
- B. Size of the test area
- C. Following the first 3 of the Top 5 Factors when planting the plot
- D. Applying inputs and crop protection at research levels, not farm levels
- E. Utilizing controls
- F. Employing replications



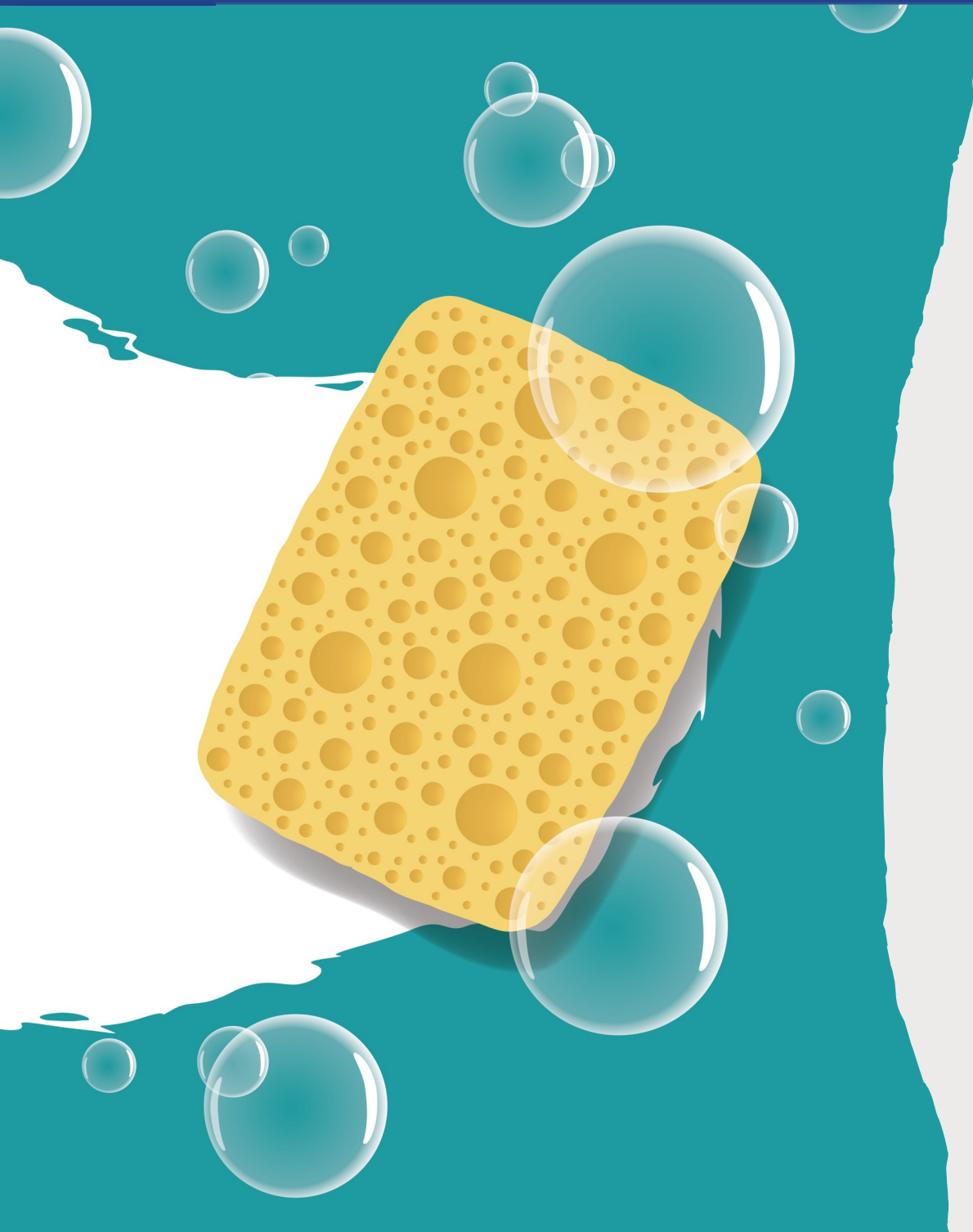
Clean Data Starts With...

A. Location



Getting Clean Data Starts With...

A. Location: Planting in the most uniform portion of a field as possible



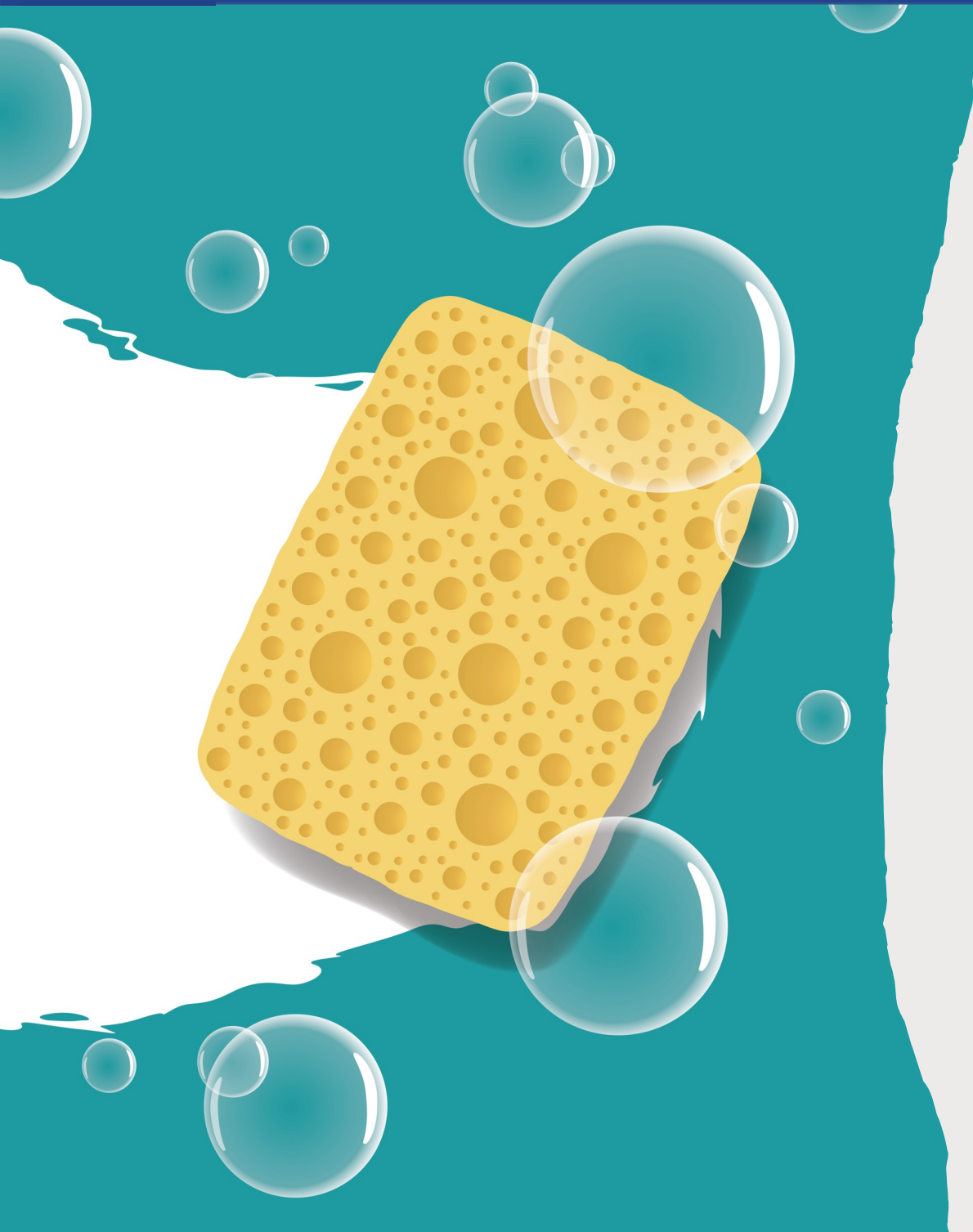
Clean Data Starts With...

- A. Location
- B. Size of the test area**



Getting Clean Data Starts With...

B. Size of the test area: No larger than 500' long x 300' - 400' wide



Clean Data Starts With...

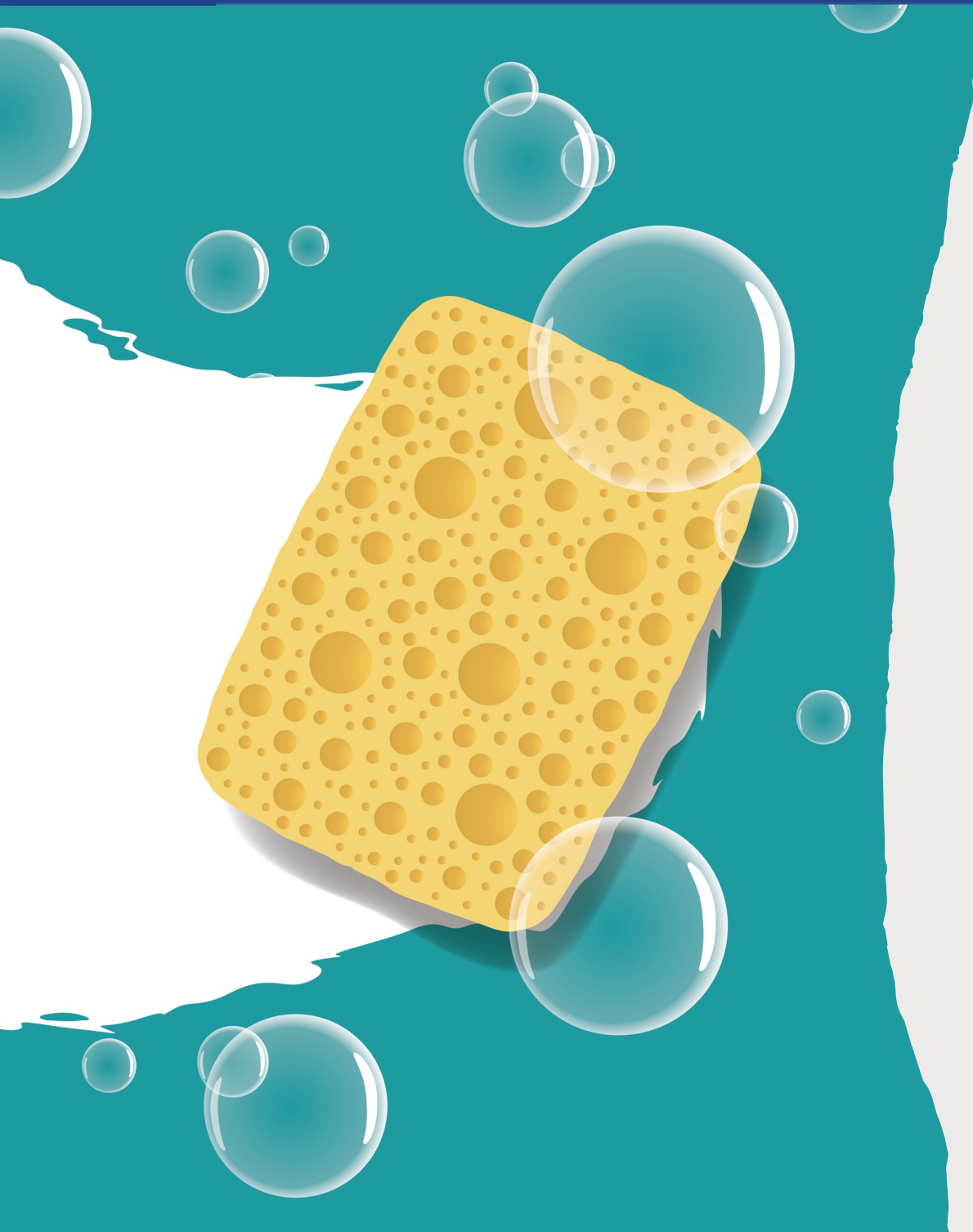
- A. Location
- B. Size of the test area
- C. Following the first 3 of the Top 5 Factors when planting the plot**



Getting Clean Data Starts With...

C. Following the first 3 the Top 5 Factors When Planting a Plot:

1. Soil conditions at planting
2. Seed placement
 - Speed
 - Planting depth
3. Exceptional seed quality



Clean Data Starts With...

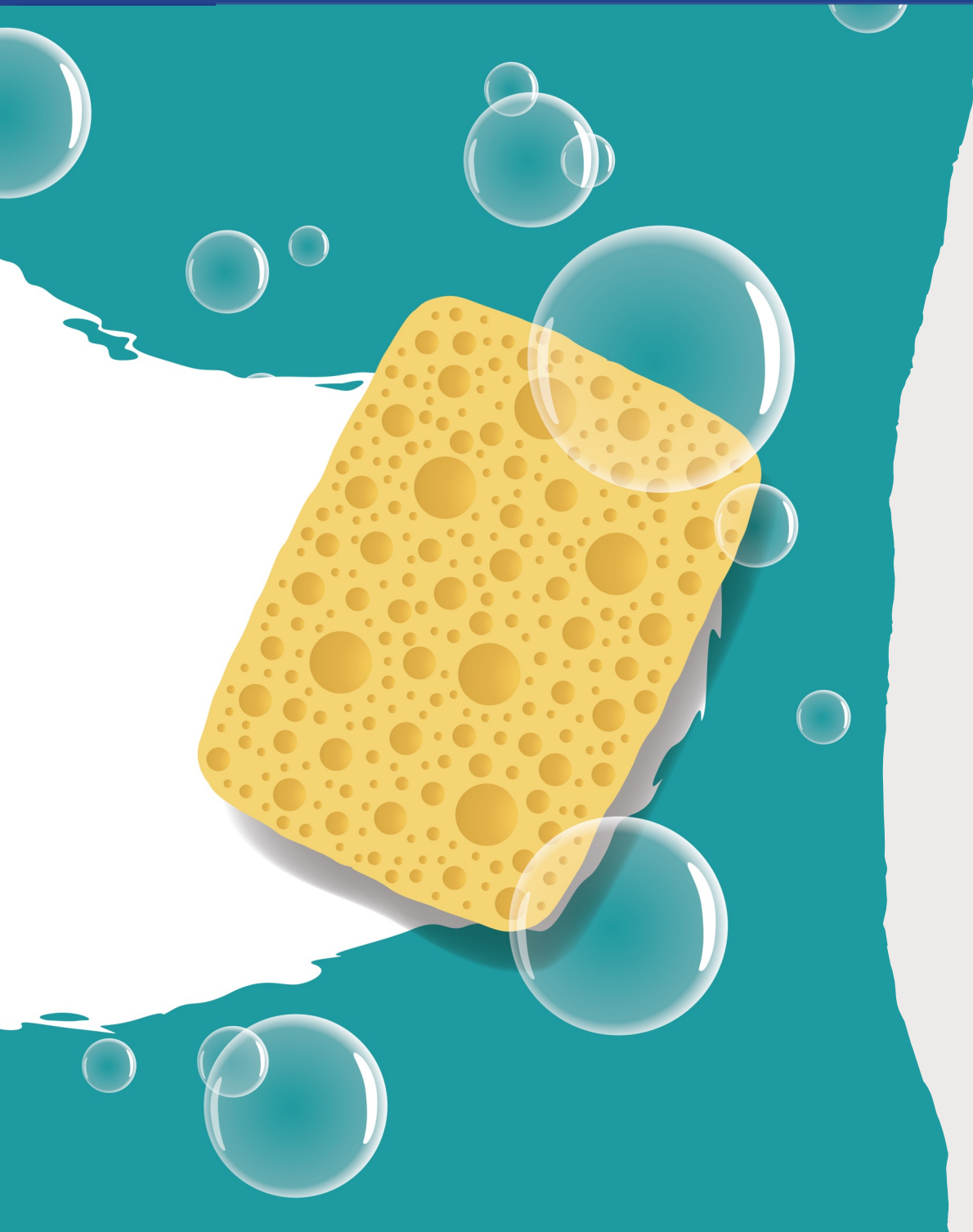
- A. Location
- B. Size of the test area
- C. Following the first 3 of the Top 5 Factors when planting the plot
- D. Applying inputs and crop protection at research levels, not farm levels**



Getting Clean Data Starts With...

D. Applying fertilizer, crop protection and other inputs at research levels, not farm levels:

Ensuring more than adequate levels removes those factors as variables and allows every variety to express its full potential.



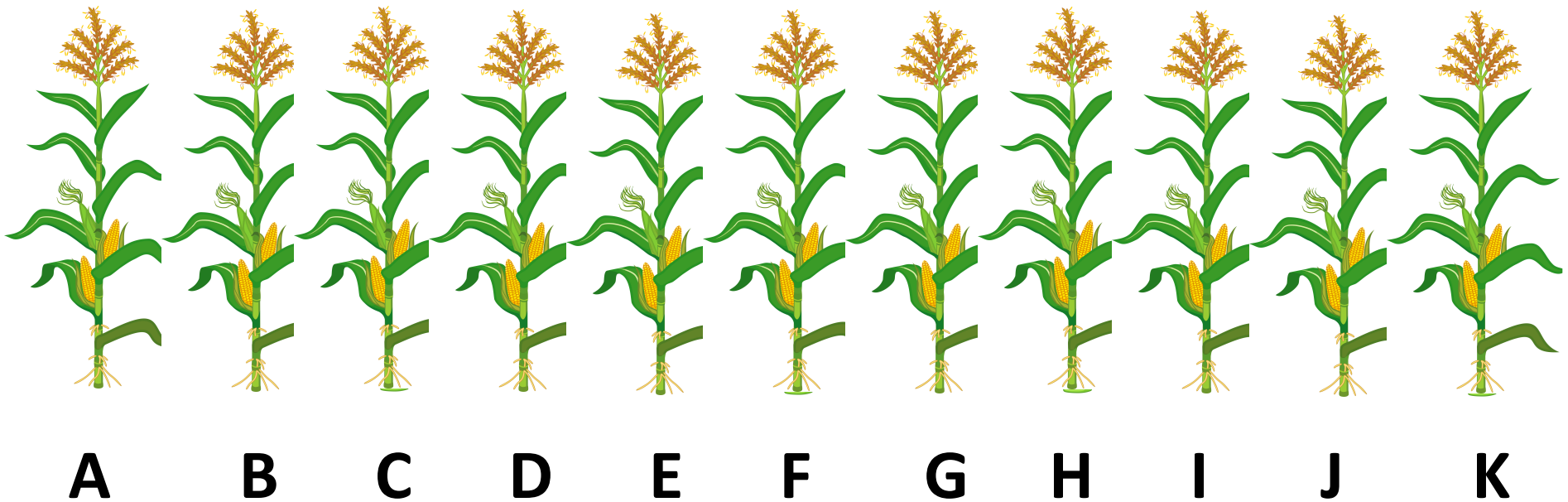
Clean Data Starts With...

- A. Location
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- C. Following the first 3 of the Top 5 Factors when planting the plot
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- E. Utilizing controls**

E. Utilizing Controls

What do you know about this plot?

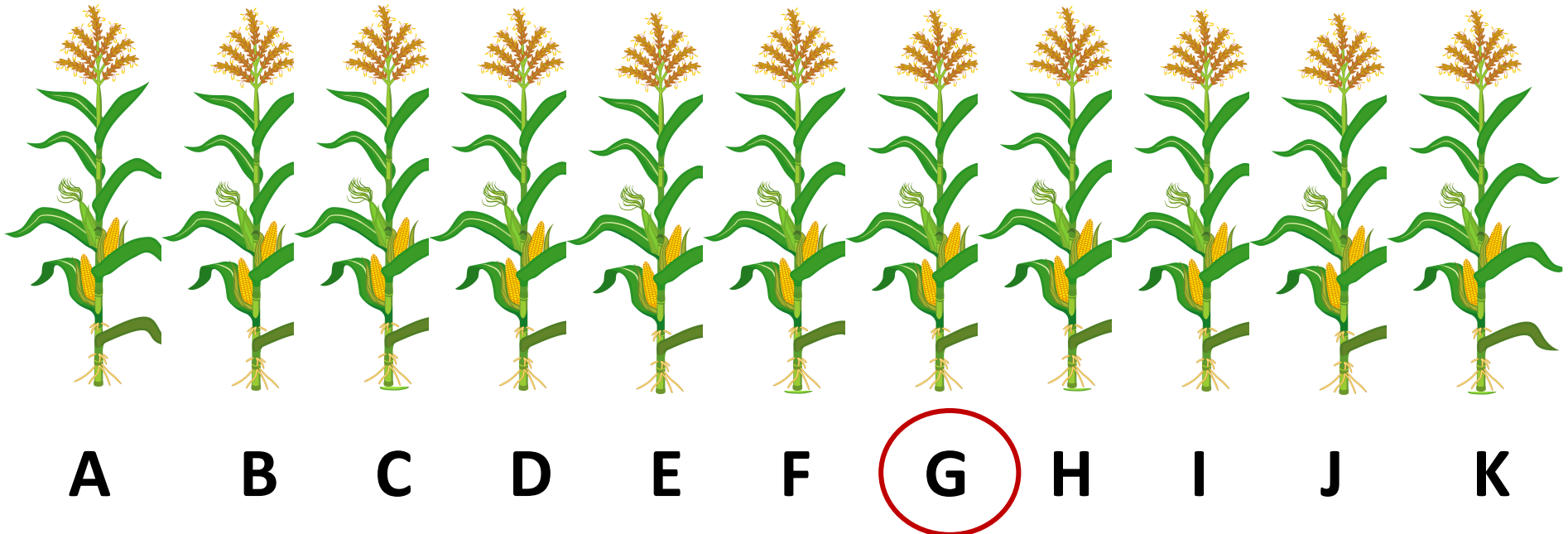
12 rows each



It has no validity...even if it is your plot!

If you are **ENTRY G**, what do you know about this plot?

12 rows each

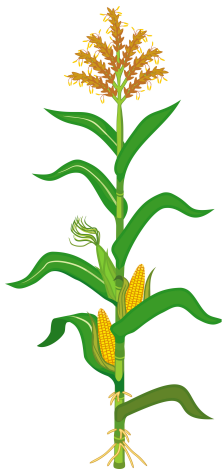


It has no validity!

If you know that, why would you enter it?

The First Step to Increasing Validity of the Data is to Reduce the Number of Entries and Double the Size of Each Entry.

12 rows each



A

220



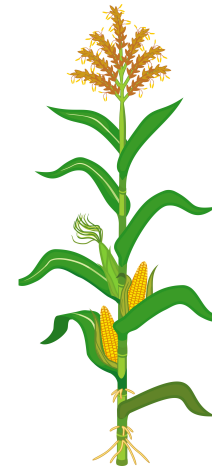
B

218



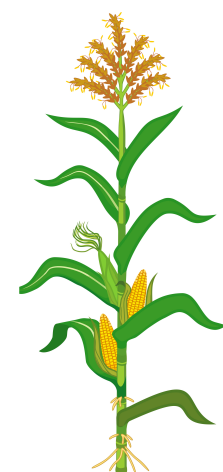
C

214



D

211

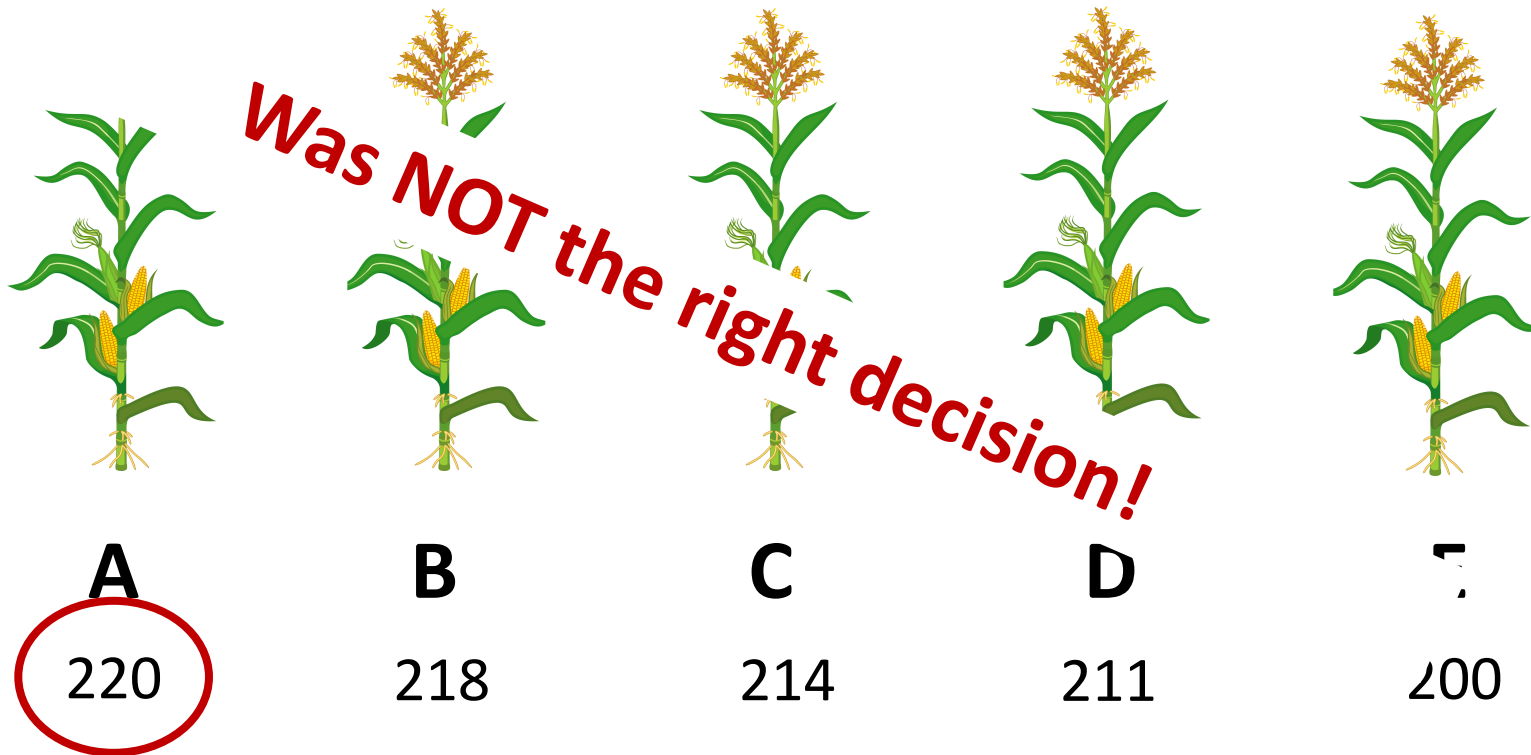


E

200

Once harvested, variety **A** appears to be the clear winner

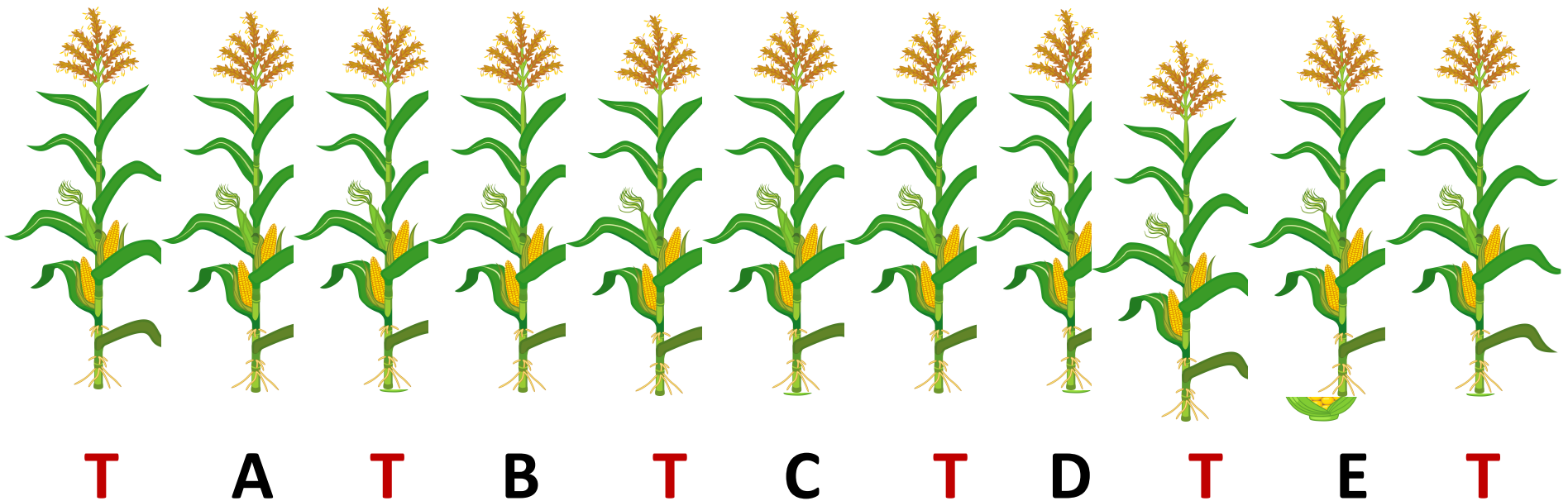
The First Step to Increasing Validity of the Data is to Reduce the Number of Entries and Double the Size of Each Entry.



Insert Controls (**Testers**) in Place of the Eliminated Entries to Increase Accuracy of the Data

Creating 11 total entries = 5 Varieties, **6 Testers** (Controls)

12 rows each



*Harvest the middle 6 or 8 rows of each **Entry** and each **Tester***

Which Variety Won the Plot

Variety A Won



T

A

T

B

T

C

T

D

T

E

T

220

218

214

211

200

Your variety took 4th place out of 5 entries

9 bushels less

But Let's Clean the Data by Including the Yield of the Tester Across the Plot!

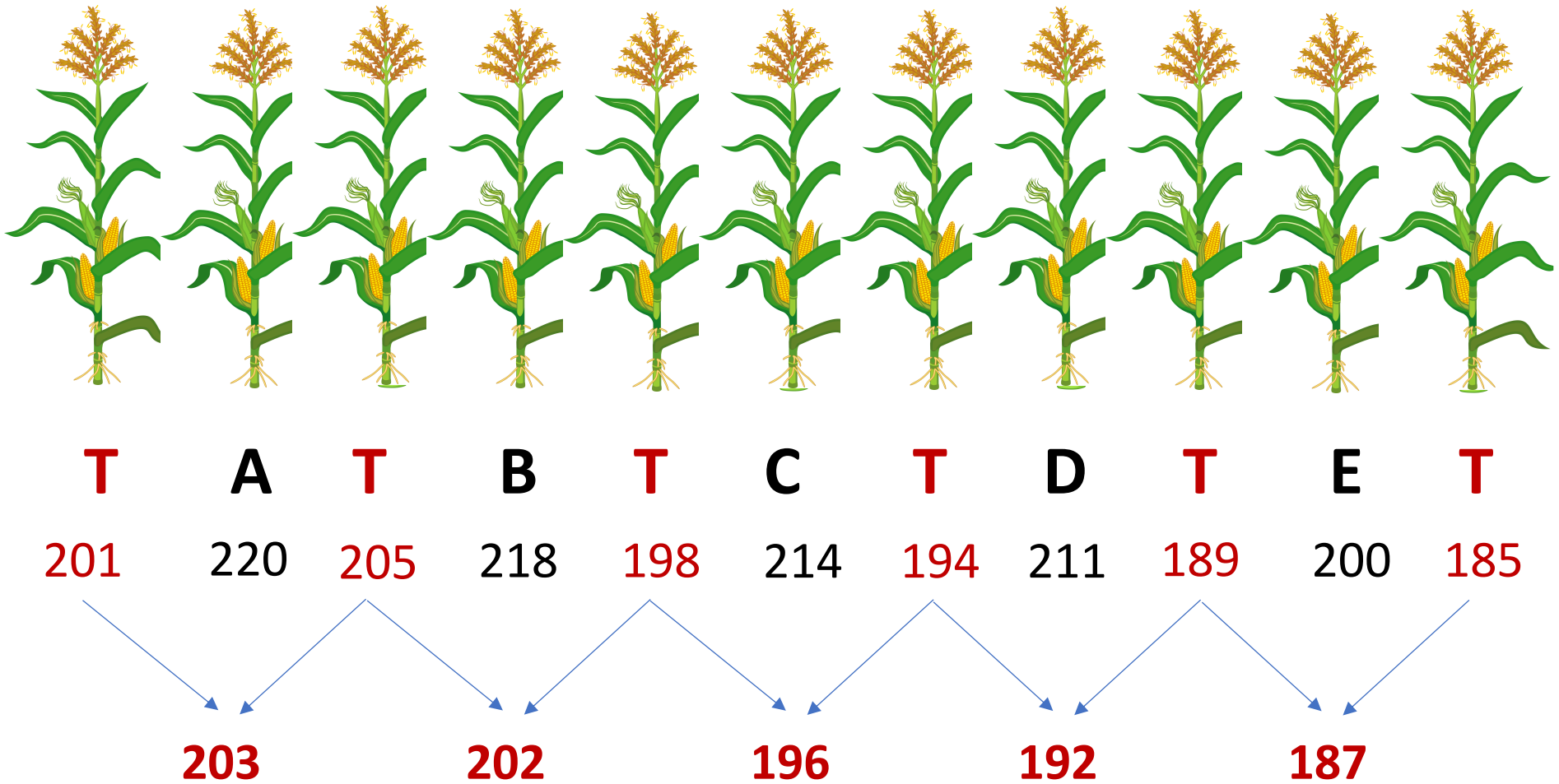


T	A	T	B	T	C	T	D	T	E	T
201	220	205	218	198	214	194	211	189	200	185

$$201 + 205 + 198 + 194 + 189 + 185 = 195 \text{ bu/a (tester ave.)}$$

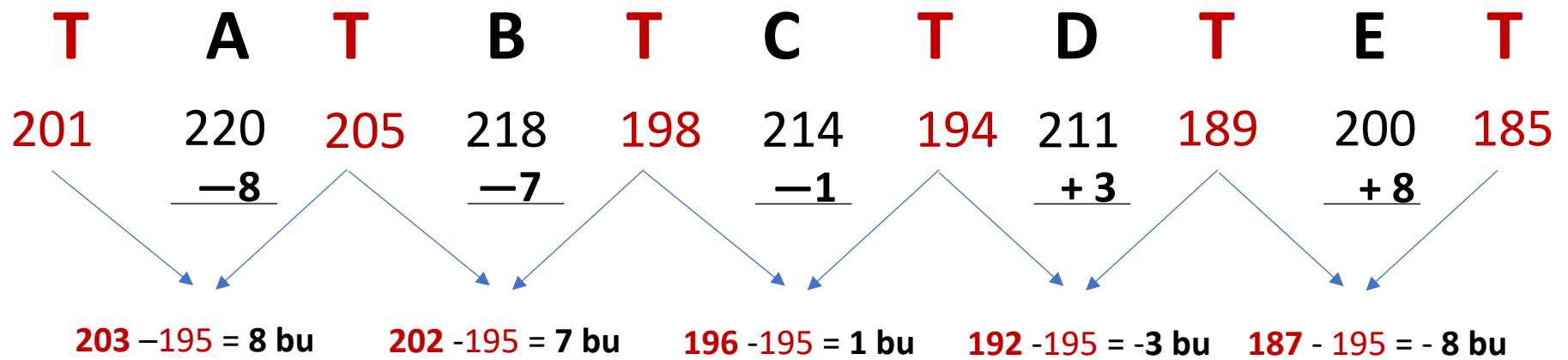
The Tester Demonstrates the Amount of Field Variation

Average the Tester Yield on Each Side of Every Entry



Tester shows 16-bushel variation in the field

Combine Adjacent Tester Averages With Tester Plot Average to Determine Field Location Influence on Yield of the Entry



Tester Ave: 195 bu/a

Clean the Data to Determine the REAL Yield for Each Variety

Your Entry is Variety D



T	A	T	B	T	C	T	D	T	E	T
201	220	205	218	198	214	194	211	189	200	185
	$\frac{-8}{212}$		$\frac{-7}{211}$		$\frac{-1}{213}$		$\frac{+3}{214}$		$\frac{+8}{208}$	
$203 - 195 = 8 \text{ bu}$		$202 - 195 = 7 \text{ bu}$		$196 - 195 = 1 \text{ bu}$		$192 - 195 = -3 \text{ bu}$		$187 - 195 = -8 \text{ bu}$		

Tester Ave: 195 bu/a

Cleaned Data for This Test Plot



T A T B T C T D T E T

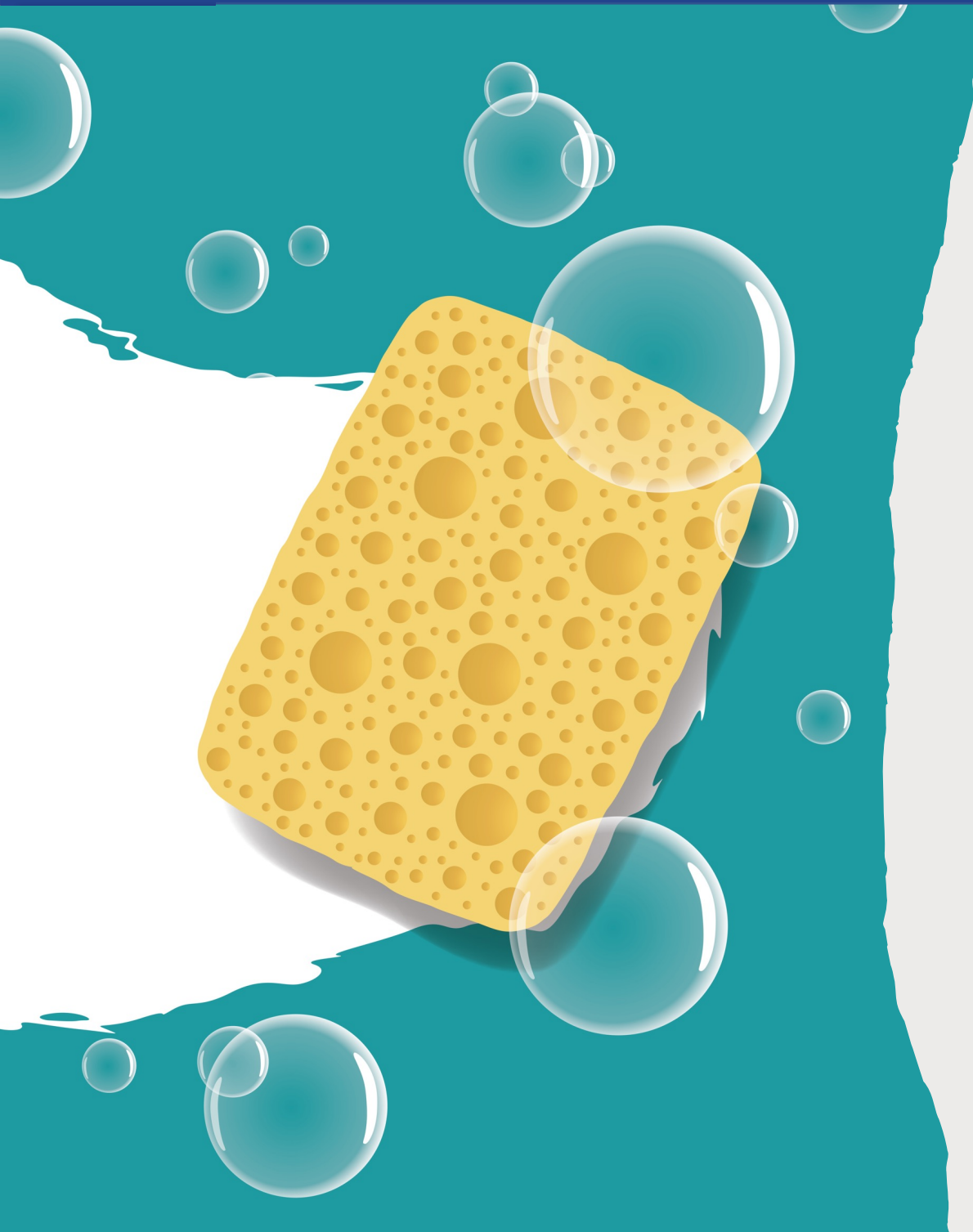
200 220 205 218 198 214 194 211 189 200 185

**Cleaned
Yield Data** →

212 211 213 214 208



**Your Variety, D, is 1st: Variety A is now 3rd.
Variety E was formerly beaten by 20 bushels, now an
insignificant 6 bushels.**



Clean Data Starts With...

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- D. Applying inputs and crop protection at research levels, not farm levels
- E. Utilizing controls
- F. **Employing replications**



F. Every Test Plot Must Be Replicated 3 Times in Each County to Reduce Experimental Error



1. Ensure the Test Plot Data is Clean

**This is the first of the
5 Key Strategies**

Execute 5 Key Strategies



1. Ensure the Test Plot Data is Clean
2. Do Not Include Competitor Varieties

Execute 5 Key Strategies



Why Not Include Competitor Varieties in Test Plots?

- It's not about being afraid to compete
- It's not about having enough confidence in your varieties
- **It's about keeping focused on increasing profits through the outcome of the test plot**

Se
Co

Top
See
Con

Reco
See

Top See
Compar



The Best
SEED COMPANY



ACME SEED COMPANY



Why Not Include Competitor Varieties in Test Plots?

1. What will **your STORY** be when you don't get the results you want?
2. What will **your ATTITUDE** be when you don't get the results you want?
3. What will **your CONFIDENCE** be when you don't get the results you want?
4. How will the results of a plot affect **which varieties you sell**?
5. How will the results of a plot **impact your company's profits**?



1. Ensure the Test Plot Data is Clean
2. Do Not Include Competitor Varieties

This is the Second of the 5 Key Strategies

Execute 5 Key Strategies



1. Ensure the Test Plot Data is Clean
2. Do Not Include Competitor Varieties
3. **Harvest at Moistures of 24-26% to Eliminate Invisible Yield Loss**

Execute 5 Key Strategies

Invisible Yield Loss

- According to Purdue University, **.6% to 1.6%** of corn yield is lost, per point of moisture when corn is allowed to dry in the field.
- That means drying from 25% to 20% would decrease yield up to **8 bu/a**.



Minimize Field Loss

- Lodged stalks, dropped ears, shelling in the header, and so can cause significant yield loss.
- Early harvest lowers the chances for in-the-field damage





1. Ensure the Test Plot Data is Clean
2. Do Not Include Competitor Varieties
3. Harvest at Moistures of 24-26% to Eliminate Invisible Yield Loss

This is number 3 of the 5 Key Strategies

Execute 5 Key Strategies



1. Ensure the Test Plot Data is Clean
2. Do Not Include Competitor Varieties
3. Harvest at Moistures of 24-26% to Eliminate Invisible Yield Loss
4. **Should be Viewed Only by Sales Reps**

Execute 5 Key Strategies

4. Plot Data Should be Viewed Only by Sales Reps

- Most farmers don't have the information sellers do, to understand how to properly use plot data
- Farmers who believe in plots, view the results as the final answer
- Farmers who believe in plots view plot results as their crop plan for the next year





Data is Clean

2. Do Not Include Competitor Varieties
3. Harvest at Moistures of 24-26% to Eliminate Invisible Yield Loss
4. Should be Viewed Only by Sales Reps

This is the 4th of the 5 Key Strategies

Execute 5 Key Strategies



Execute 5 Key Strategies

1. Ensure the Test Plot Data is Clean
2. Do Not Include Competitor Varieties
3. Harvest at Moistures of 24-26% to Eliminate Invisible Yield Loss
4. Should be Viewed Only by Sales Reps
5. Use All Data Properly

5. Make the Right Decisions When Using Plot Data

1. Insert every entry into a portfolio with 2 other entries—don't offer farmers singular results
2. Decide that plot results are used to support your confidence and not to get sales
3. Understand that any plot that was not totally in your control, is not valid data





Execute 5 Key Strategies

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