DEMONSTRATION STUDIES

AEA'S

QUESTIONS

- What is the value of a demonstration farm?
- Who benefits?
- What kind of study should be conducted?

ANSWERS

- What kind of study?
  - You visit with a farmer or farmers approach you with a question or a problem?
  - As a extension agent you examine the situation, diagnose a problem, design a study to solve the problem

Row

Broadcast

Benefits of Demo-farm Studies

- You get to know farmers and farmers get to know you
- Farmers gain confidence in your ability to provide advice
- Through interaction with growers you are able to perceive other areas where you can provide assistance

Designing Demo-farm Research

Problem > Input > Solution

- Keep input simple
- Do not try to demonstrate more than one input per study

PLANTING CROPS

Broadcast Wheat

versus

Drilled Wheat

DESIGNING DEMO-FARM RESEARCH

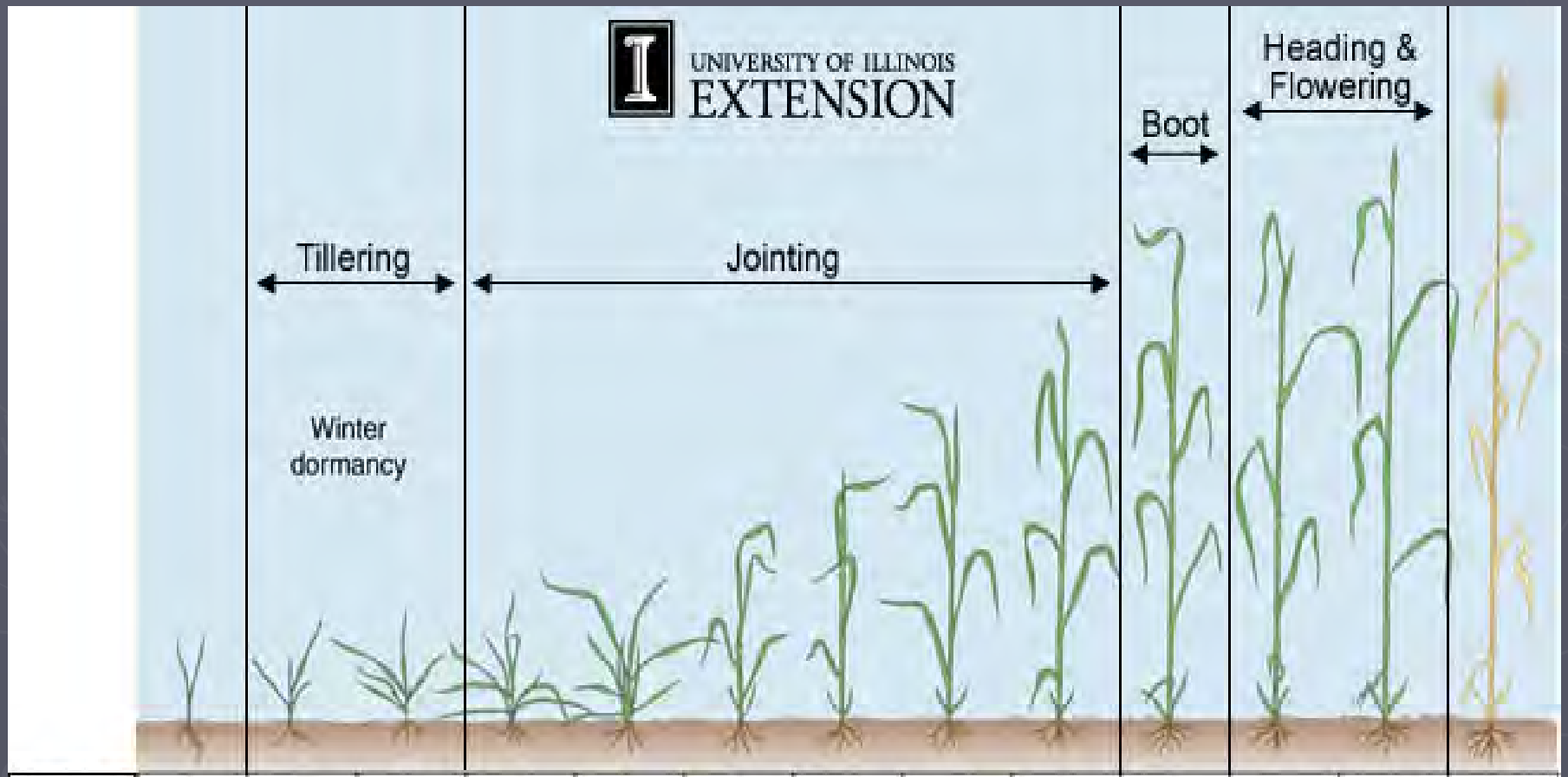
- Example: Hypothesis-drilling wheat will increase yield than broadcasting wheat

  Broadcast wheat <> Drilled wheat > Drilled wheat increased yield

Data to be Collected

- 1. Plant population at early growth stage
- 2. Plant population at stem extension
- 3. Plant population at head stage
- 4. Yield at harvest

Wheat Stage

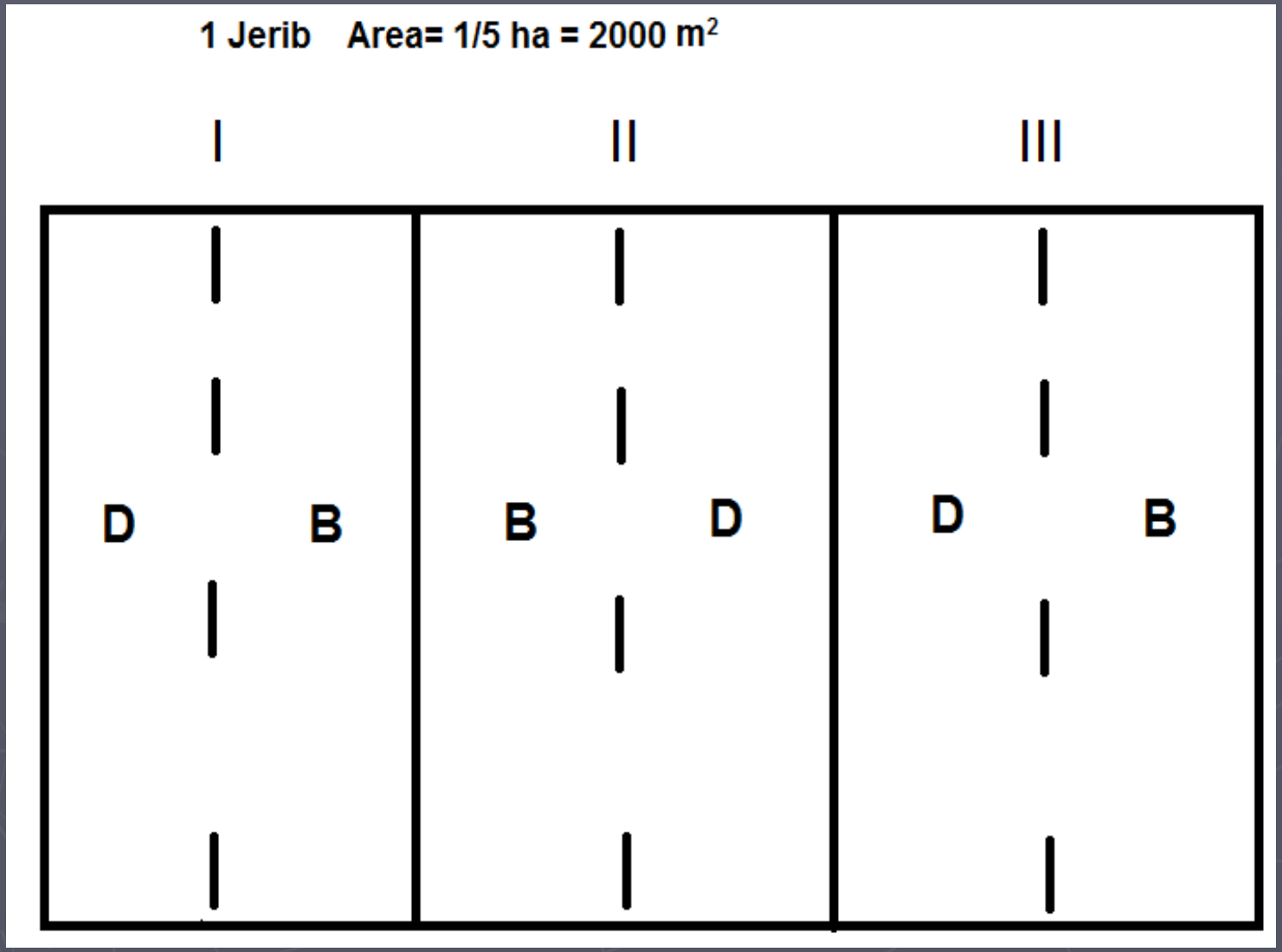


Feekes	1	2	3	4	5	6	7	8	9	10	10.1	10.5	11
Zadoks	10	21	26	30	30	31	32	37	39	45	50	60	90

CONDUCTING DEMO-FARM RESEARCH

- Use a randomized complete block statistical design
- Replicate each treatment a minimum of three times
- 2 treatments x 3 replications = 6 plots
- You and farmer or you and technician determine the size of plots

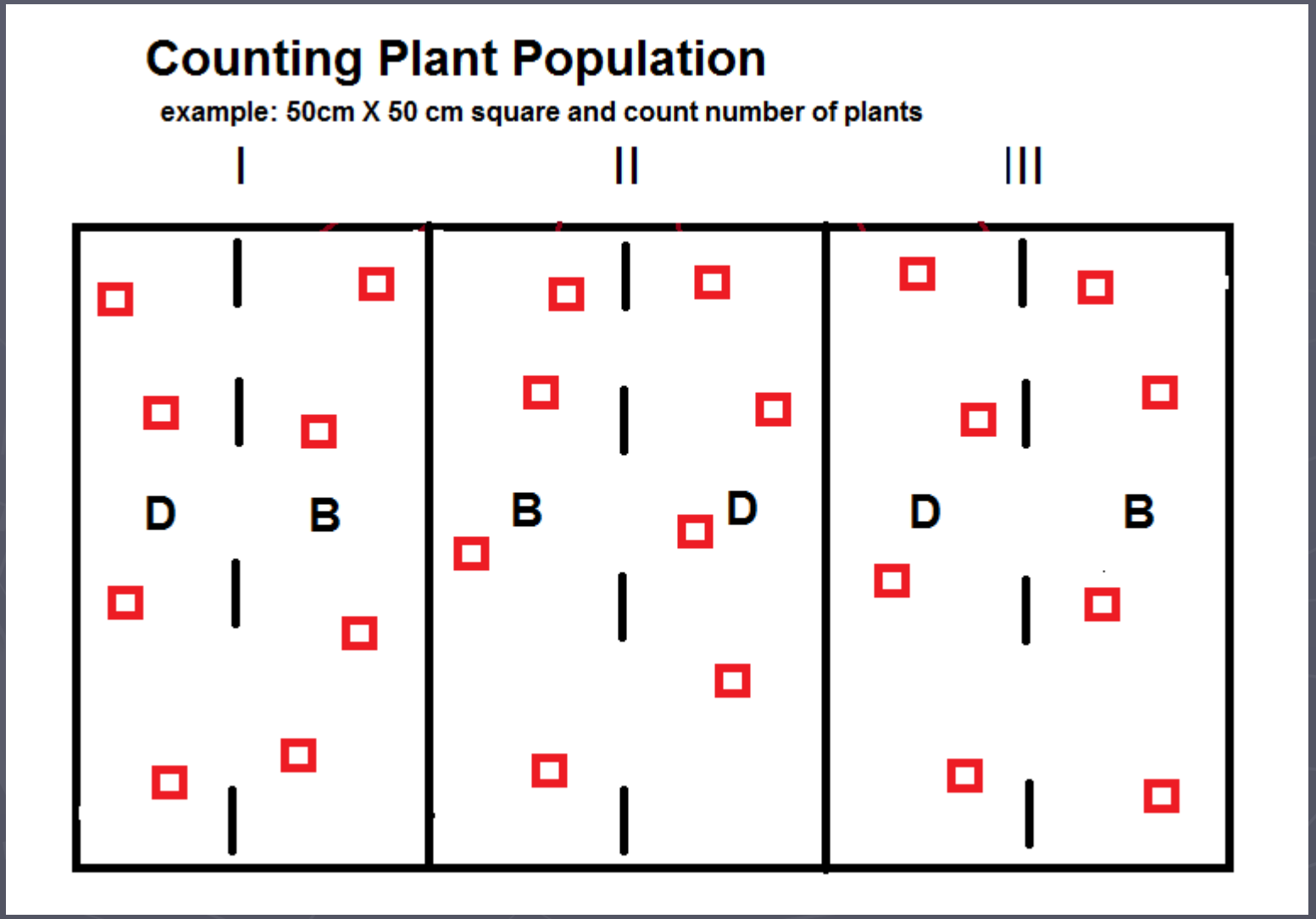
PLOT PLAN



DATA TO COLLECT

- Pictures of wheat at the different growth stages between broadcast vs. drilled
- Count number of plants at early growth stage from broadcast and drilled wheat
  - 4 spots from broadcast and 4 spots from drilled
- Count number of plants at stem extension from both drilled and broadcast

DATA TO COLLECT continued



DATA TO COLLECT continued

- Count number of plants at head stage from both drilled and broadcast
- Yield at harvest and compare. Get harvest yield from broadcast and harvest yield from drilled. Harvest each spot separately.

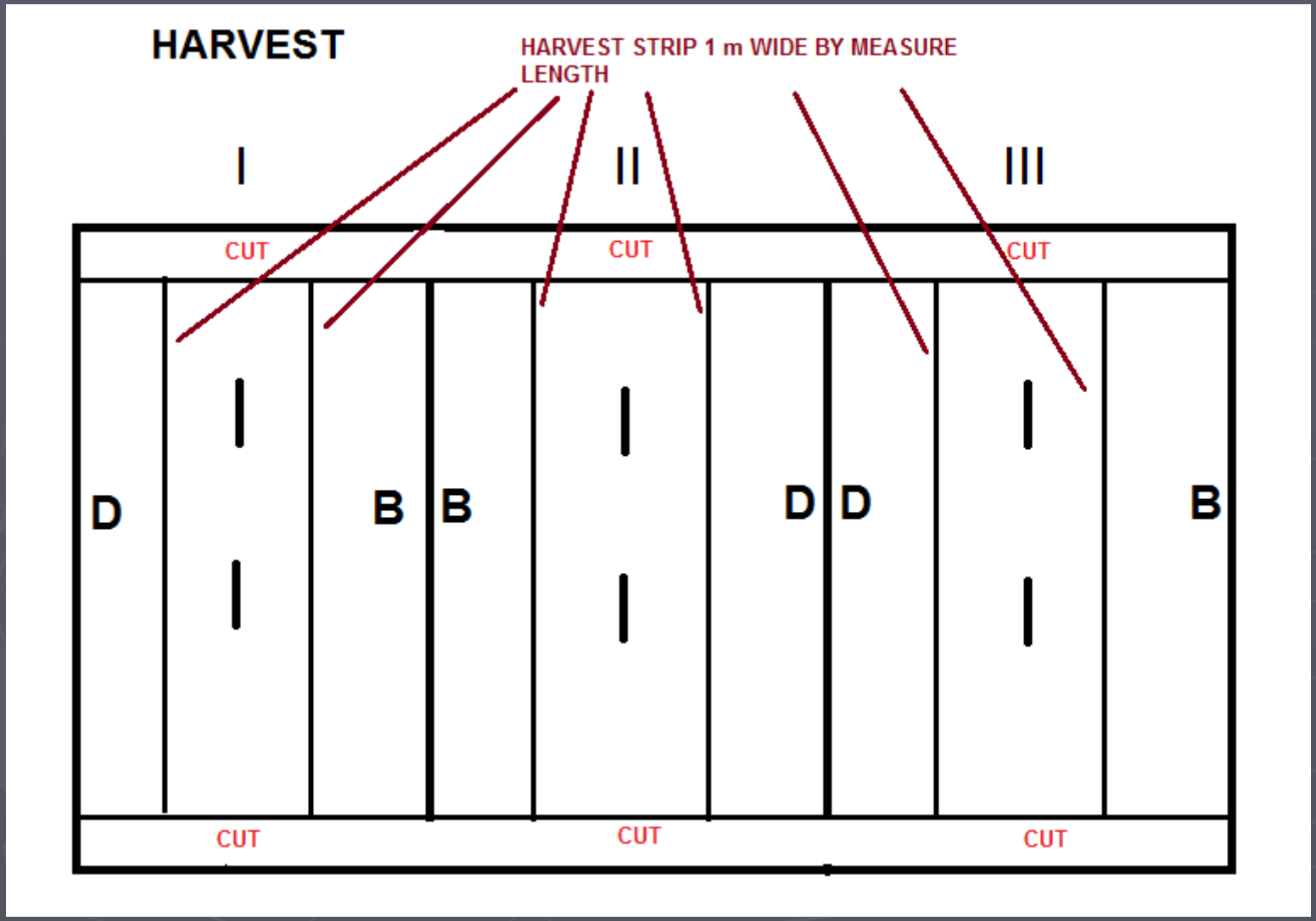
CONDUCTING DEMO-FARM RESEARCH

- Good time from this point until harvest for a field tour
- Invite local farmers to site, explain study, look at plots and then have refreshments. Let people discuss what they have observed.

CONDUCTING DEMO-FARM RESEARCH

- Harvest plots-cut the wheat in each plot and keep each plot separate, thrash the wheat from each plot and weigh the grain
- Do this for each plot, summarize data by calculating means for each of the four treatments. Are the means different for the four treatments?

HARVEST PLAN



CONDUCTING DEMO-FARM RESEARCH

- After harvest and farmers have their field work completed, have a meeting with growers to discuss results
- Answer question: was it economical to broadcast or drill wheat

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thank you

Credit

- UNL Extension, Dr. Robert Wilson, Extension Weed Specilist