

2015 KBS LTER Main Site

Main Cropping System Experiment

Treatment Key

- T1 Conventional corn/**soybean**/wheat
 - T2 No-till corn/**soybean**/wheat
 - T3 Reduced Input corn/**soybean**/wheat with cover crop
 - T4 Biologically Based corn/**soybean**/wheat with cover crop
 - T5 Poplar
 - T6 Alfalfa
 - T7 Early Successional community
 - T8 Mown Grassland (never tilled) community
- r = replicate number

Microplot Treatment Key

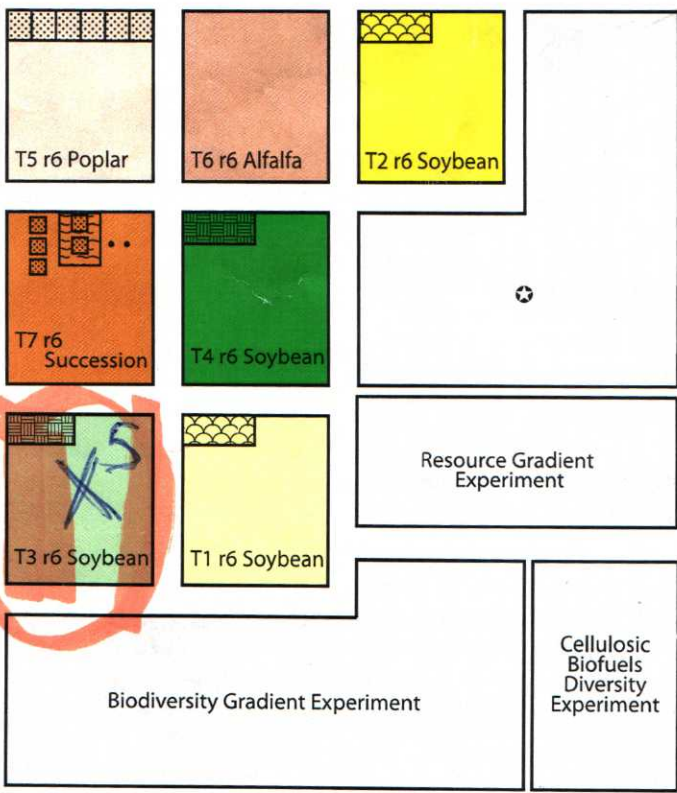
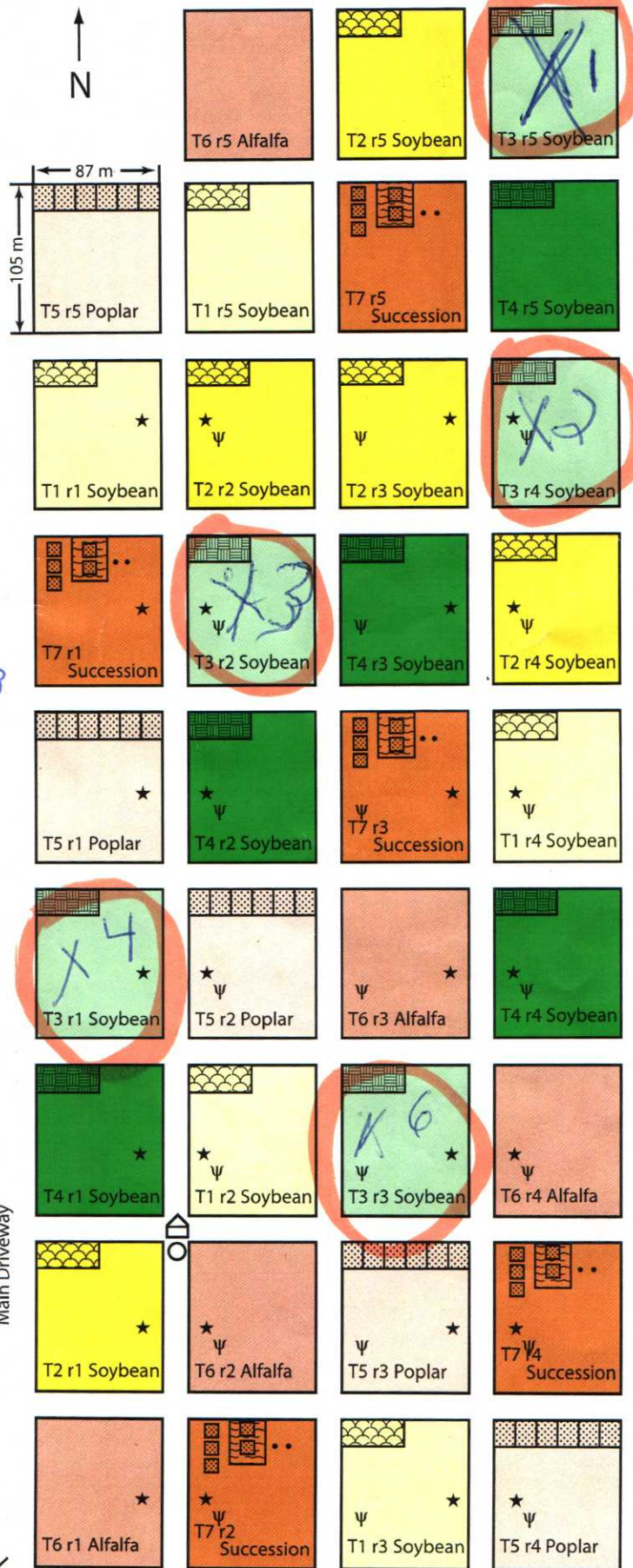
- Nitrogen fertilized
- Tillage (T7)
- Herbicide-free
- Nitrogen fertilized and weed-free

Instrumentation Key

- Minirhizotrons
- ★ Trace gas flux chambers
- ψ Low tension suction lysimeters
- ☼ Weather station & weighing lysimeter
- ⌂ Trace gas shed
- Wireless tower & sun photometer
- ⊙ Aphid tower

- Storage & Shop
- Field Lab

Plant Red
Clover in
T3 plots
Reps 1, 2, 4, 5, 6
and 4 passes in rep 3
Planted 8/3/16
Rest of Rep 3
Planted 8/4/16



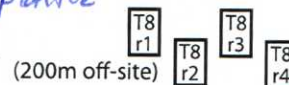
40th Street

B Avenue

Main Entrance (Gate)

loaded 7 bags in drill = 350 lbs
Seed left over = 66 lbs
Acres planted 14.4
Seed used to plant = 284

284 lbs clover planted
14.4 A
= 19.7 lbs/A



2016 T3 Red Clover Calibration

- JD 15' Drill. Drill has 24 seed tubes.
- Test strip will be 100' long.
 - $100' \times 15' \text{ drill} = 1500 \text{ sqft}$
 - $1500 \text{ sqft} \div 43560 \text{ sqft/A} = .0344 \text{ A}$
 - $.0344 \text{ A} \div 24 \text{ seed tubes} = .0014348 \text{ Acres per 1 seed tube.}$
- Pure Live Seed calculation (PLS)
 - $\text{PLS} = \% \text{ pure seed} \times \% \text{ Germination}$
 - $\text{PLS} = 65.64\% \text{ pure seed} \times 80\% \text{ Germ} = 5,251.2$
 - $\text{PLS} = 5,251.2 \div 100 = \boxed{52.5\%}$
 - Target RATE = 12 lbs pure seed
 - $12 \div .5225\% \text{ PLS} = 22.9 \text{ lbs/A}$
 - ★ We are going to calibrate for 20 lbs/A that is close to what we did for T4
- In 100' test strip we cover .0014348 A with 1 seed tube
 - $20 \text{ lbs/A} \times .0014348 = .028696 \text{ lbs}$
 - $.028696 \text{ lbs} \times \frac{454 \text{ grams}}{1 \text{ lb}} = 13.03 \text{ grams}$
 - should collect 13.03 grams of clover from 1 seed tube in the 100' test strip.
- We Averaged 13.8 grams This = 21.2 lbs/A
 - $13.8 \div 454 = .0303964 \text{ lbs in } .0014348 \text{ A.}$
 - $.0303964 \div .0014348 \text{ A} = 21.185$

2016 T3 Red Clover Calibration

Test #	Drill setting.	weight in bags (grams)		
		1	2	3
1	9	19.17	19.26	19.52
2	8	18.88	18.93	18.66
3	5	9.85	9.74	16.01
4	6	12.58	12.54	12.70
5	6.25	13.87	13.72	13.61
6	6.25	13.86	13.94	13.82

Target 13.03 grams.

Avg on last setting 13.8

Clover Bag weighed 51 lbs

loaded 5 lbs

collected 0.61 lbs

seed left in drill 46.6 lbs