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
- Low tension suction lysimeters
- Weather station & weighing lysimeter
- Trace gas shed
- Wireless tower & sun photometer
- Aphid tower

- Storage & Shop
- Field Lab

- Biodiversity Gradient Experiment
- Resource Gradient Experiment
- Cellulosic Biofuels Diversity Experiment


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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


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B 8 Avenue

Main Entrance (Gate)

40th Street

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

(200m off-site)
2016 T3 Red Clover Calibration

- JD 15' Drill. Drill has 24 seed tubes.

- Test strip will be 100' long.
  - 100' x 15' drill = 1500 sq ft
  - 1500 sq ft ÷ 43560 sq ft/acre = .0344 acre
  - .0344 acre ÷ 24 seed tubes = .0014348 acres per seed tube

- Pure Live Seed Calculation (PLS)
  - PLS = % pure seed x % germination
  - PLS = 65.64% pure seed x 80% germ = 5.2512
  - PLS = 5.2512 ÷ 100 = 5.25%
  - Target RATE = 12 lbs/pure seed
  - 12 ÷ 5.25% PLS = 22.9 lbs/acre

  We are going to calibrate for 20 lbs/acre
  That is close to what we did for T4

- In 100' test strip we cover .0014348 acre with 1 seed tube
  - 20 lbs/acre x .0014348 = .028696 lbs
  - .028696 lbs x 454 grams = 13.03 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/acre
  - 13.8 ÷ 454 = .0303946 lbs/acre • .0014348 = .000217 lbs/acre
<table>
<thead>
<tr>
<th>Test #</th>
<th>Drill Setting</th>
<th>Weight in bags (grams)</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>19.17</td>
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</table>

Target 13.03 grams
Avg on last setting 13.8
Clover Bag weight: 51 lbs
loaded 5 lbs
collected .61 lbs
seed left in drill 46.4 lbs