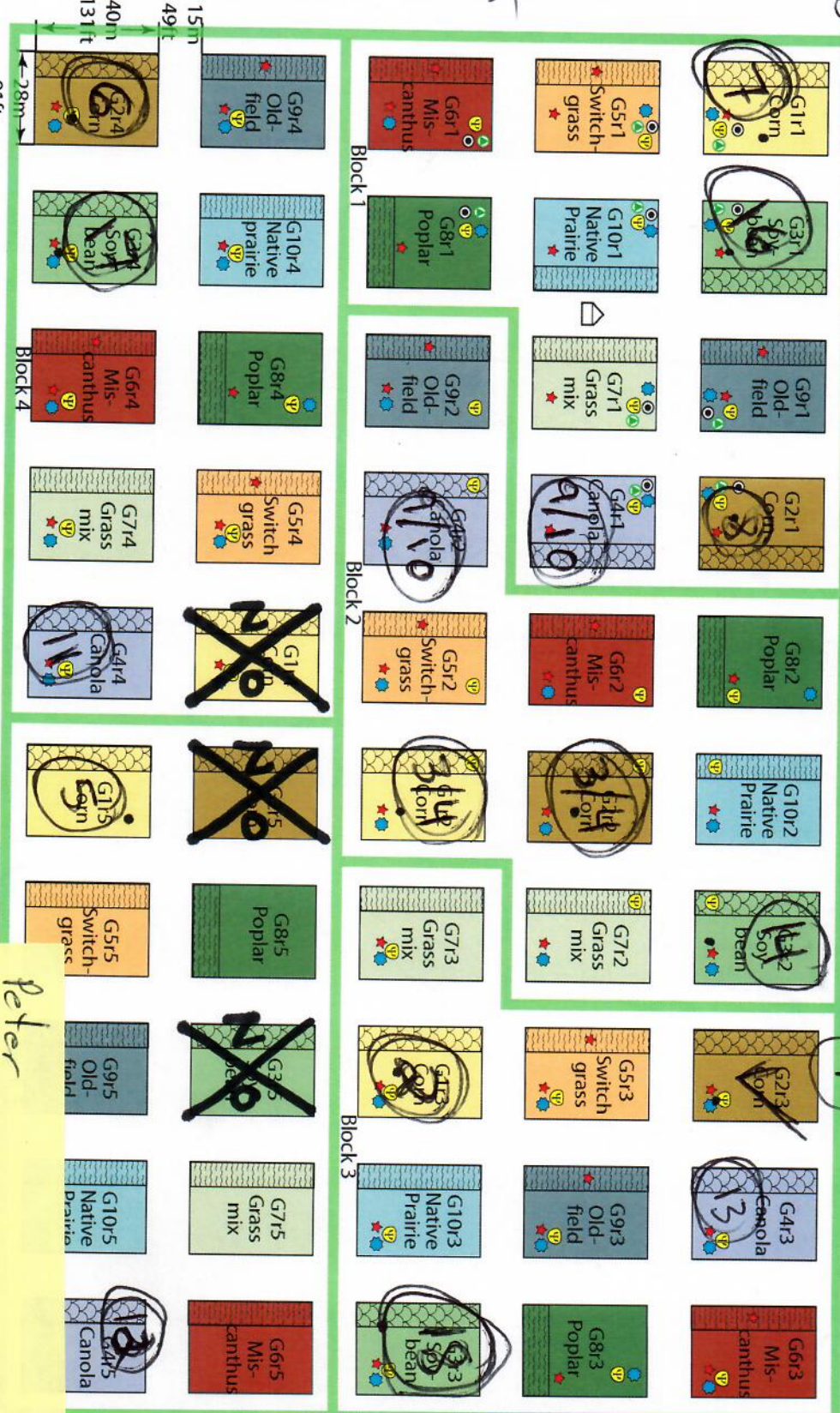
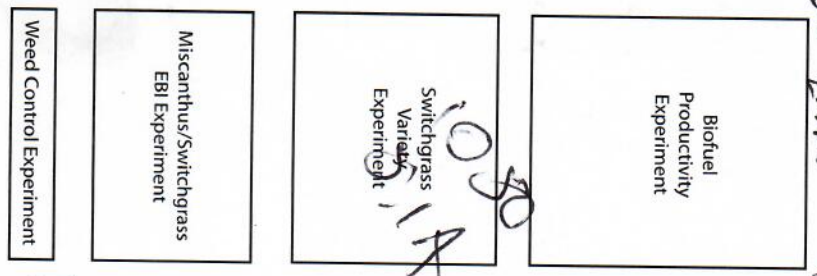


KBS GLBRC Intensive Field Site (2011)

1-8 @ 2-22-11
1500 Reps 1-18 Reps B1

14-18 135#1/A

102# 23# 216#



- Treatment Legend**
- G1 Continuous corn
 - G2 Corn-Soybean-Canola
 - G3 Soybean-Canola-Corn
 - G4 Canola-Corn-Soybean
 - G5 Switchgrass
 - G6 Miscanthus
 - G7 Native Grass mix
 - G8 Poplar
 - G9 Old field
 - G10 Native prairie

- Plot Legend**
- ★ Trace gas flux chamber
 - Ⓜ Low tension suction ly
 - Ⓜ Trace gas shed
 - Ⓜ Time domain reflector
 - Ⓜ Automated gas chamt
 - Ⓜ Time TDR
 - Ⓜ Unfertilized microplot
 - Ⓜ Stover non removal mi

Handwritten note: Chamber all other roads.

Handwritten note on yellow background:
 Peter
 you can put 335 lbs/A
 of 0-0-60 on
 G1 Reps 1,2,3, and 5 not R4
 G2 Reps 1,2,3, and 4 not R5
 G4 if enough.

2011 KBS and Arlington GLBRC Agronomic Protocol

January 11, 2011

G1: Annual grain monoculture: Continuous Corn (no crop rotation). This treatment represents a best management practice for conventional, high-intensity grain produced for biofuel, with some portion of the stover removed for cellulosic yield.

Site	KBS	Arlington
Planting	Plant Dekalb DKC52-59 in late April or early May. Variety DKC52-59 is a triple stack variety of corn Roundup Ready and Bt corn	Plant Dekalb DKC52-59 in late April or early May. Variety DKC52-59 is a triple stack variety of corn Roundup Ready and Bt corn
Cover Crop	No cover crops used	No cover crops used
Tillage	No-till	No-till
Harvest	Harvest corn in October or November. After grain harvest remove plant stover (except not in 6 west or east rows, see microplots, below)	Harvest corn in October or November. After grain harvest remove plant stover (except not in 6 west rows, see microplots, below)
Fertilization	Based on MSU Soil and Plant Nutrient Laboratory <ul style="list-style-type: none"> • 0.1 N: Corn price ratio • Medium Soil Productivity • Fertilizer recommendations based on corn silage (not corn grain). Total nitrogen recommendations: 150 lb N ac ⁻¹ (168 kg N ha ⁻¹). Starter: 14 gals/A of 19-17-0 (29 lbs N acre ⁻¹ , 33 kg N ha ⁻¹) (26 lbs P ₂ O ₅ acre ⁻¹ , 29 kg P ₂ O ₅ ha ⁻¹) Side-dress: 41 gal/A 28% N solution (121 lbs N acre ⁻¹ , 136 kg N ha ⁻¹). To be modified based on pre-plant NO ₃ ⁻ test.	Based on UWEX BMP's for: <ul style="list-style-type: none"> • 0.1 N: Corn price Ratio • Very High Yield Potential Soils • Corn silage Starter: 112 kg ha ⁻¹ (100 lb ac ⁻¹) of 5-14-42 Side-dress: 54 gal/A 28% N solution (160 lbs N acre ⁻¹ , 180 kg N ha ⁻¹), application rate based on silage usage since stover is being removed. To be modified based on pre-plant NO ₃ ⁻ test. Phosphorus (P): applied pre-plant as 0-46-0 to selected plots base on UWEX recommendations.
Weed Control	Potassium (K) applied as 0-0-60 K applied preplant: 335 lb ac ⁻¹ (376 kg ha ⁻¹) → [201 lb K ₂ O ac ⁻¹ (226 kg K ₂ O ha ⁻¹)] Apply the K to Reps 1, 2, 3, and 5. Rep 4 does not need any K applied. Fall Soil Sampling: 3 x 15cm cores are to be taken from main plot & stover-retention micro-plot in Fall 2011	Burn-down: Roundup + 2,4-D Ester at label rates Pre-emergence: Dual II Magnum at 1.74 l ha ⁻¹ (1.5 pts/ac) Post-emergence: Roundup + Laudis at label rates as needed Corn Stover Retention: Leave stover on west 6 rows of each plot. Using a 2 row combine harvest the middle two rows of the outer 15' (6 rows) on both the East and West of each plot for use as stover retention and stover removal micro-plots.
Micro-plots	Corn Stover Retention. Leave stover on west 6 rows of each plot (except east 6 rows of Block 1 at KBS due to gas chambers). Using a Kincaid plot combine harvest the middle two rows of the outer 15' (6 rows) on both the East and West of each plot for use as stover retention and stover removal micro-plots.	Corn Stover Retention. Leave stover on west 6 rows of each plot. Using a 2 row combine harvest the middle two rows of the outer 15' (6 rows) on both the East and West of each plot for use as stover retention and stover removal micro-plots.

This is a working protocol used for planning purposes. Due to potential changes in chemicals, fertilizer, varieties planted, planting dates etc...
Please refer to the agronomic field log for actual field operations that take place during 2011.