### BioEnt – Early Season Survey

**Grower:** MGR  
**Date:** 7/25/2013

<table>
<thead>
<tr>
<th>Field Name/Number</th>
<th>TIR</th>
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**General Appearance**

- [ ] Good
- [ ] OK
- [ ] Poor
- [x] General
- [ ] Spotty

**Vigor:**

- [ ] Heat
- [ ] Moisture
- [ ] Nitrogen
- [x] General
- [ ] Spotty

**Stress-Chlorophyll:**

- [ ] None
- [ ] Low
- [ ] High
- [x] General
- [ ] Spotty

**Weed Control:**

- [ ] Good
- [ ] OK
- [ ] Poor
- [ ] Spotty
- [ ] Dense Spots
- [ ] Grasses
- [ ] Broadleaves
- [ ] Perennials

**Plant Population**

- [ ] Soil Moisture 0-12
- [ ] 12+
- [ ] %AWC

### ACTION:

- [ ] None Required
- [x] Watch
- [x] Yes, see comments

### Comments:

- Harvested
- NG - general to dense spots
- UL - scattered plants
- CRAB - few spots

### Orientation:

- N
- W
- E
- S

### Plants:

- Annual Grasses AG
- Foxtail F
- Panicum-Fall FP
- Quack grass QG
- Wirestem Muhly WM
- Field Sandbur FS
- Crabgrass CG
- Johnsongrass JG
- Shattercane SCA
- Nutsedge NS
- Winter Annuals WA
- Chickweed CW
- Biennials WB
- Cover Crop CC
- Velvetleaf VL
- Cocklebur CBUR
- Milkwheed CM
- Pigweed RRP
- Horserettle HN
- Bindweed - Field FBW
- Bindweed - Hedge HBW
- Smartweed - Penn. PSM
- Smart - Swamp SSM
- Dogbane - Hemp HDB
- Lambsquarrel LOU
- Ragweed CRAG
- Ragweed - Giant GRAG
- Dock - Curly CD
- Nightshade - Black BNS
- Jimsonweed JW
- Canada Thistle CTH
- Yellow Rocket YR
- Perennials P
- Pokeweed PW

### Other Observations:

- No 1/4" Root
- Spike PE
- Breaking
- VC / V1
- Nutrient Deficiency
- Spots
- General
- Soil Compaction:
  - Spots
  - General
  - Hard
  - Crusted
- Standing Water
  - Small Spots
  - Large Spots
- Herbicide damage
- Emergence stress
- Physiological Disorder in Corn
  - Yellowish whorl
  - Buggywip
  - Stalk bending
  - Twisted whorl
- Doubles
- Density
- Variance
- Growth
- Variance
- Plant spacing
- Variance
- Emergence
- Variance
- Soil Temperature
  - 2"
BioEnt – Early Season Survey

Gary Manley 269-273-7070 or 269-816-1080

Grower MSY Date 7.25.2013

Field Name/Number T2R1

General Appearance

Size Variance Leaf Color Variance

Plant Population

Soil Moisture 0-12

12+ %AWC

Vigor: □ Good □ OK □ Poor □ General □ Spotty

Stress: □ Heat □ Moisture □ Nitrogen □ General □ Spotty

Stress-Chlorophyll: □ None □ Low □ High □ General □ Spotty

Weed Control: □ Good □ OK □ Poor □ Spotty □ Dense Spots

Grasses □ Broadleaves □ Perennials

ACTION:

□ None Required □ Watch □ Yes, see comments

Comments:

Harvested

AG - general spotty - moderate

CRAB - scattered

VL - few plants

□ Annual Grasses AG

□ Foxtail F

□ Panicum - Fall FP

□ Quack grass QG

□ Western Muhly WM

□ Field Sandbur FS

□ Crabgrass CG

□ Johnson Grass JG

□ Shattercane SCA

□ Nutseed NS

□ Winter Annuals WA

□ Chickweed CW

□ Biennials WB

□ Cover Crop CC

□ Velvetleaf VL

□ Cocklebur CBUR

□ Milkweed CM

□ Pigweed RRP

□ Horsenettle HN

□ Bindweed - Field FBW

□ Bindweed - Hedge HBW

□ Smartweed - Penn. PSM

□ Smart - Swamp SSM

□ Dogbane - Hemp HDB

□ Lamb'squarter LOU

□ Ragweed CRA

□ Ragweed - Giant GRAG

□ Dock - Curly CD

□ Nightshade - Black BNS

□ Jimsonweed JW

□ Canada Thistle CTH

□ Yellow Rocket YR

□ Perennials P

□ Pokeweed PW

□ Germination □ No 1/4" Root □ Spike PE

□ Emergence □ Breaking □ VC / V1

□ Nutrient Deficiency □ Spots □ General

□ Soil Compaction: □ Soil Surface:

□ Spots □ General □ Hard □ Crusted

□ Standing Water □ Small Spots □ Large Spots

□ Herbicide damage □ Emergence stress

□ Physiological Disorder in Corn □ Yellowish whorl

□ Buggywip □ Stalk bending □ Twisted whorl

□ Doubles □ % Density □ Variance

□ Growth □ Variance

□ Plant spacing □ Variance

□ Emergence □ Variance

□ Soil Temperature 2"
BioEnt – Early Season Survey

Seed Corn ☐ Corn ☐ Soybeans ☐ Wheat ☒ Grower 1W4 ☒ Date 4.25.2013
Field Name/Number ☒ 321 ☒ Growth Stage

General Appearance ☒ Size ☒ Variance ☒ Leaf Color ☒ Variance
Plant Population ☒ Soil Moisture 0-12 ☒ 12+ ☒ %AWC

Vigor: ☐ Good ☐ OK ☐ Poor ☐ General ☐ Spotty
Stress: ☐ Heat ☐ Moisture ☐ Nitrogen ☐ General ☐ Spotty
Stress-Chlorophyll: ☐ None ☐ Low ☐ High ☐ General ☐ Spotty
Weed Control: ☐ Good ☐ OK ☐ Poor ☐ Spotty ☐ Dense Spots
☐ Grasses ☐ Broadleaves ☐ Perennials

ACTION:
☐ None Required ☐ Control
☐ Watch ☐ Yes, see comments

Comments:
Harvested
AC - general/dense spots
CRAG - scattered throughout common/dense spots

☐ Annual Grasses AG
☐ Foxtail F
☐ Panicum-Fall FP
☐ Quack grass QG
☐ Wiretend Muhly WM
☐ Field Sandbur FS
☐ Crabgrass CG
☐ Johnsongrass JG
☐ Shattercane SCA
☐ Nutseed NS
☐ Winter Annuals WA
☐ Chickweed CW
☐ Biennials WB
☐ Cover Crop CC
☐ Velvetleaf VL
☐ Cocklebur CBUR
☐ Milkweed CM
☐ Pigweed RRP
☐ Horse pasture HH
☐ Bindweed -Field FBW
☐ Bindweed -Hedge HBW
☐ Smartweed -Penn. PSM
☐ Smart -Swamp SSM
☐ Dogbane -Hemp HDB
☐ Lambsquarter LOU
☐ Ragweed CRAG
☐ Ragweed -Giant GRAG
☐ Dock -Curly CD
☐ Nightshade -Black BNS
☐ Jimsonweed JW
☐ Canada Thistle CTH
☐ Yellow Rocket YR
☐ Perennials P
☐ Pokeweed PW

Germination ☐ No ☐ 1/4” Root ☐ Spike PE
Emergence ☒ Breaking ☐ VC/V1
Nutrient Deficiency ☐ Spots ☐ General
Soil Compaction:
☐ Spots ☐ General ☐ Hard ☐ Crusted
Standing Water ☐ Small Spots ☐ Large Spots
Herbicide damage ☐ Emergence stress
Physiological Disorder in Corn ☐ Yellowish whorl
☐ Buggywip ☐ Stalk bending ☐ Twisted whorl
Doubles %
Density ☒ Variance ☒
Growth ☒ Variance ☒
Plant spacing ☒ Variance ☒
Emergence ☒ Variance ☒
Soil Temperature 2”

Cutworms ☐ White Grubs ☐ Seed Corn Maggots
Armyworms ☐ Flea Beetles ☐ Foliar Disease-Rust
Stalkborers ☐ Aphids ☐ Foliar Disease-Fungi
Wireworms ☐ Slugs ☐ Corn Borer-%
Spider mites ☐ Leafhoppers ☐ Stunted plants

Root Damage ☐ Insects ☐ Plants
☐ Nematodes ☐ Stunting
☐ Purplish ☐ Diseases ☐ Yellowish

Nematodes ☐ Stunting
BioEnt – Early Season Survey

Field Name/Number: T4R1

General Appearance: 
Size: 
Variance: 
Leaf Color: 
Variance: 

Plant Population: 
Soil Moisture: 0-12 12+ %AWC

Vigor: 
Good □ OK □ Poor □ 
General □ Spotty □

Stress: 
Heat □ Moisture □ Nitrogen □ General □ Spotty □

Stress-Chlorophyll: 
None □ Low □ High □ General □ Spotty □

Weed Control: 
Good □ OK □ Poor □ Spotty □ Dense Spots □
Grasses □ Broadleaves □ Perennials □

ACTION:

□ None Required □ Watch □
□ Yes, see comments □

Comments:

Harvested
CLOVER - good stand
AG - general
CRAB - general moderate
dense spots

□ Annual Grasses AG □ Pigweed RRP
□ Foxtail F □ Horsemettle HN
□ Panicum - Fall FP □ Bindweed - Field FBW
□ Quack grass QQ □ Bindweed - Hedge HBW
□ Wirestem Muhly WM □ Smartweed - Penn. PSM
□ Field Sandbur FS □ Smart - Swamp SSM
□ Crabgrass CG □ Dogbane - Hemp HDB
□ Johnsongrass JG □ Lambsquarter LOU
□ Shattercane SCA □ Ragweed CRAG
□ Nutsedge NS □ Ragweed - Giant GRAG
□ Winter Annuals WA □ Dock - Curly CD
□ Chickweed CW □ Nightshade - Black BNS
□ Biennials WB □ Jimsonweed JW
□ Cover Crop CC □ Canada Thistle CTH
□ Velvetleaf VL □ Yellow Rocket YR
□ Cocklebur CBUR □ Perennials P
□ Milkweed CM □ Pokeweed PW

□ Germination □ No □ 1/4" Root □ Spike PE
□ Emergence □ Breaking □ VC / V1
□ Nutrient Deficiency □ Spots □ General □

□ Soil Compaction: □ Soil Surface:
■ Spots □ General □ Hard □ Crusted □
□ Standing Water □ Small Spots □ Large Spots
□ Herbicide damage □ Emergence stress
□ Physiological Disorder in Corn □ Yellowish whorl
□ Buggywip □ Stalk bending □ Twisted whorl
□ Doubles □% □ Density □ Variance □
□ Growth □ Variance □
□ Plant spacing □ Variance □
□ Emergence □ Variance □
□ Soil Temperature □ 2°

□ Cutworms □ Root Damage □ Plants
□ White Grubs □ Insects □ Purplish
□ Flea Beetles □ Diseases □ Yellowish
□ Aphids □ Corn Borer - % □ Nematodes
□ Slugs □ Stunted plants □ Stunting
□ Leafhoppers □
BioEnt – Early Season Survey

Gary Manley 269-273-7070 or 269-816-1080

Seed Corn ☐ Corn ☐ Soybeans ☐ Wheat ☐
Grower: MSU Date: 7-25-2013

Field Name/Number: Altalpa
Growth Stage:

General Appearance: ok Size: ok Variance: ok Leaf Color: ok Variance: ok

Plant Population: Soil Moisture 0-12: Good 12-24: Good %AWC

Vigor: ☑ Good ☐ OK ☐ Poor ☐ General ☐ Spotty
Stress: ☐ Heat ☐ Moisture ☐ Nitrogen ☐ General ☐ Spotty
Stress-Chlorophyll: ☐ None ☐ Low ☐ High ☐ General ☐ Spotty
Weed Control: ☐ Good ☐ OK ☐ Poor ☐ Spotty ☐ Dense Spots
☐ Grasses ☐ Broadleaves ☐ Perennials

ACTION:
☒ None Required ☐ Watch
☐ Yes, see comments

Comments:

Altalpa key hopper: 0.2/ sweep
10-12" tall regrowth. Color/growth good

☐ Annual Grasses AG
☐ Foxtail F
☐ Panicum-Fall FP
☐ Quack grass QG
☐ Wirestem Muhly WM
☐ Field Sandbur FS
☐ Crabgrass CG
☐ Johnsonsgrass JG
☐ Shattercane SCA
☐ Nutsedge NS
☐ Winter Annuals WA
☐ Chickweed CW
☐ Biannuals WB
☐ Cover Crop CC
☐ Velvetleaf VL
☐ Cocklebur CBUR
☐ Milkwort CM
☐ Pigweed RRP
☐ Horsetail HN
☐ Bindweed-Field FBW
☐ Bindweed-Hedge HBW
☐ Smartweed-Penn. PSM
☐ Smart-Swarm SSM
☐ Dogbane-Hemp HDB
☐ Lamb's-quarters LQU
☐ Ragweed CRAG
☐ Ragweed-Giant GRAG
☐ Dock-Curly CD
☐ Nightshade-Black BNS
☐ Jimsonweed JW
☐ Canada Thistle CTH
☐ Yellow Rocket YR
☐ Perennials P
☐ Pokeweed PW

Germination ☐ No ☐ 1/4" Root ☐ Spike PE
Emergence ☐ Breaking ☐ VC / V1
Nutrient Deficiency ☐ Spots ☐ General
Soil Compaction: ☐ Soil Surface:
☐ Spots ☐ General ☐ Hard ☐ Crusted
Standing Water ☐ Small spots ☐ Large spots
Herbicide damage ☐ Emergence stress
Physiological Disorder in Corn ☐ Yellowish whorl
☐ Buggywip ☐ Stalk bending ☐ Twisted whorl
Doubles ☐ %
Density ☐ Variance
Growth ☐ Variance:
Plant spacing ☐ Variance:
Emergence ☐ Variance:
Soil Temperature: 2°

Cutworms ☐ White Grubs ☐ Seed Corn Maggots
Armyworms ☐ Flea Beetles ☐ Foliar Disease-Rust
Stalkborers ☐ Aphids ☐ Foliar Disease-Fungi
Wireworms ☐ Slugs ☐ Corn Borer-%
Spider mites ☐ Leafhoppers ☐ Stunted plants

Root Damage ☐ Insects ☐ Purplish
☐ Diseases ☐ Yellowish
Nematodes ☐ Stunting
Comments:

Harvested

AG - General
14 N few plants

ACTION:

[ ] None Required

[ ] Watch

[ ] Yes, see comments

ANNUAL GRASSES

- AG - General
- 14 N few plants

Pigweed RRP

- Pigweed RRP

Horsenettle HN

- Horsenettle HN

Bindweed - Field FBW

- Bindweed - Field FBW

Bindweed - Hedge HBW

- Bindweed - Hedge HBW

Smartweed - Penn. PSM

- Smartweed - Penn. PSM

Smart - Swamp SSM

- Smart - Swamp SSM

Dogbane - Hemp HDB

- Dogbane - Hemp HDB

Lambquarter LOU

- Lambquarter LOU

Ragweed CRAG

- Ragweed CRAG

Ragweed - Giant GRAG

- Ragweed - Giant GRAG

Dock - Curly CD

- Dock - Curly CD

Nightshade - Black BNS

- Nightshade - Black BNS

Jimsonweed JW

- Jimsonweed JW

Canada Thistle CTH

- Canada Thistle CTH

Yellow Rocket YR

- Yellow Rocket YR

Perennials P

- Perennials P

Pokeweed PW

- Pokeweed PW
BioEnt – Early Season Survey

Gary Manley 269-273-7070 or 269-816-1080

Seed Corn [ ] Corn [ ] Soybeans [ ] Wheat [ ]
Grower [ ] Date [ ]
Non-Irrigated - N Study [ ] Growth Stage [ ]

General Appearance [ ] Size [ ] Variance [ ] Leaf Color [ ] Variance [ ]

Plant Population [ ] Soil Moisture 0-12 [ ] 12+ [ ] %AWC [ ]

Vigor: [ ] Good [ ] OK [ ] Poor [ ] General [ ] Spotty [ ] Stress: [ ] Heat [ ] Moisture [ ] Nitrogen [ ] General [ ] Spotty [ ]
Stress-Chlorophyll: [ ] None [ ] Low [ ] High [ ] General [ ] Spotty [ ]
Weed Control: [ ] Good [ ] OK [ ] Poor [ ] Spotty [ ] Dense Spots [ ] Grasses [ ] Broaddleaves [ ] Perennials [ ]

ACTION:
[ ] None Required [ ] Watch [ ] Yes, see comments [ ]

Comments:

Harvested

AG - general dense grass stands

Annual Grasses AG [ ]
Foxtail F [ ]
Panicum -Fall FP [ ]
Quack grass QG [ ]
Wiresman Muhly WM [ ]
Field Sandbur FS [ ]
Crabgrass CG [ ]
Johnsongrass JG [ ]
Shatercane SCA [ ]
Nutsedge NS [ ]
Winter Annuals WA [ ]
Chickweed CW [ ]
Biannuals WB [ ]
Cover Crop CC [ ]
Velvetleaf VL [ ]
Cookiebr CBUR [ ]
Milkweed CM [ ]

Pigweed RRP [ ]
Horsenettle HN [ ]
Bindweed -Field FBW [ ]
Bindweed -Hedge HBW [ ]
Smartweed -Penn. PSM [ ]
Smart -Swamp SSM [ ]
Dogbane -Hemp HDB [ ]
Lambsquarter LOU [ ]
Ragweed CRAG [ ]
Ragweed -Giant GRAG [ ]
Dock -Curly CD [ ]
Nightshade -Black BNS [ ]
Jimsonweed JW [ ]
Canada Thistle CTH [ ]
Yellow Rocket YR [ ]
Perennials P [ ]
Pokeweed PW [ ]

[ ] Germination [ ] No [ ] 1/4" Root [ ] Spike PE [ ]
[ ] Emergence [ ] Breaking [ ] VC / V1 [ ]
[ ] Nutrient Deficiency [ ] Spots [ ] General [ ]
[ ] Soil Compaction: [ ] Soil Surface: [ ]
[ ] Spots [ ] General [ ] Hard [ ] Crusted [ ]
[ ] Standing Water [ ] Small Spots [ ] Large Spots [ ]
[ ] Herbicide damage [ ] Emergence stress [ ]
[ ] Physiological Disorder in Corn [ ] Yellowish whorl [ ]

[ ] Buggynwip [ ] Stalk bending [ ] Twisted whorl [ ]
[ ] Doubles ______% [ ]
[ ] Density ______ Variance [ ]
[ ] Growth ______ Variance [ ]
[ ] Plant spacing ______ Variance [ ]
[ ] Emergence ______ Variance [ ]
[ ] Soil Temperature 2° [ ]

[ ] Root Damage [ ] Plants [ ]
[ ] Insects [ ] Purplish [ ]
[ ] Diseases [ ] Yellowish [ ]
[ ] Nematodes [ ] Stunting [ ]

[ ] Cutworms [ ] White Grubs [ ] Seed Corn Maggots [ ]
[ ] Armyworms [ ] Flea Beetles [ ] Foliar Disease-Rust [ ]
[ ] Stalkborers [ ] Aphids [ ] Foliar Disease-Fungi [ ]
[ ] Wireworms [ ] Slugs [ ] Corn Borer-% [ ]
[ ] Spider mites [ ] Leafhoppers [ ] Stunted plants [ ]