

# Corn and Soybeans- A Managed Approach

**Ken Dalenberg**

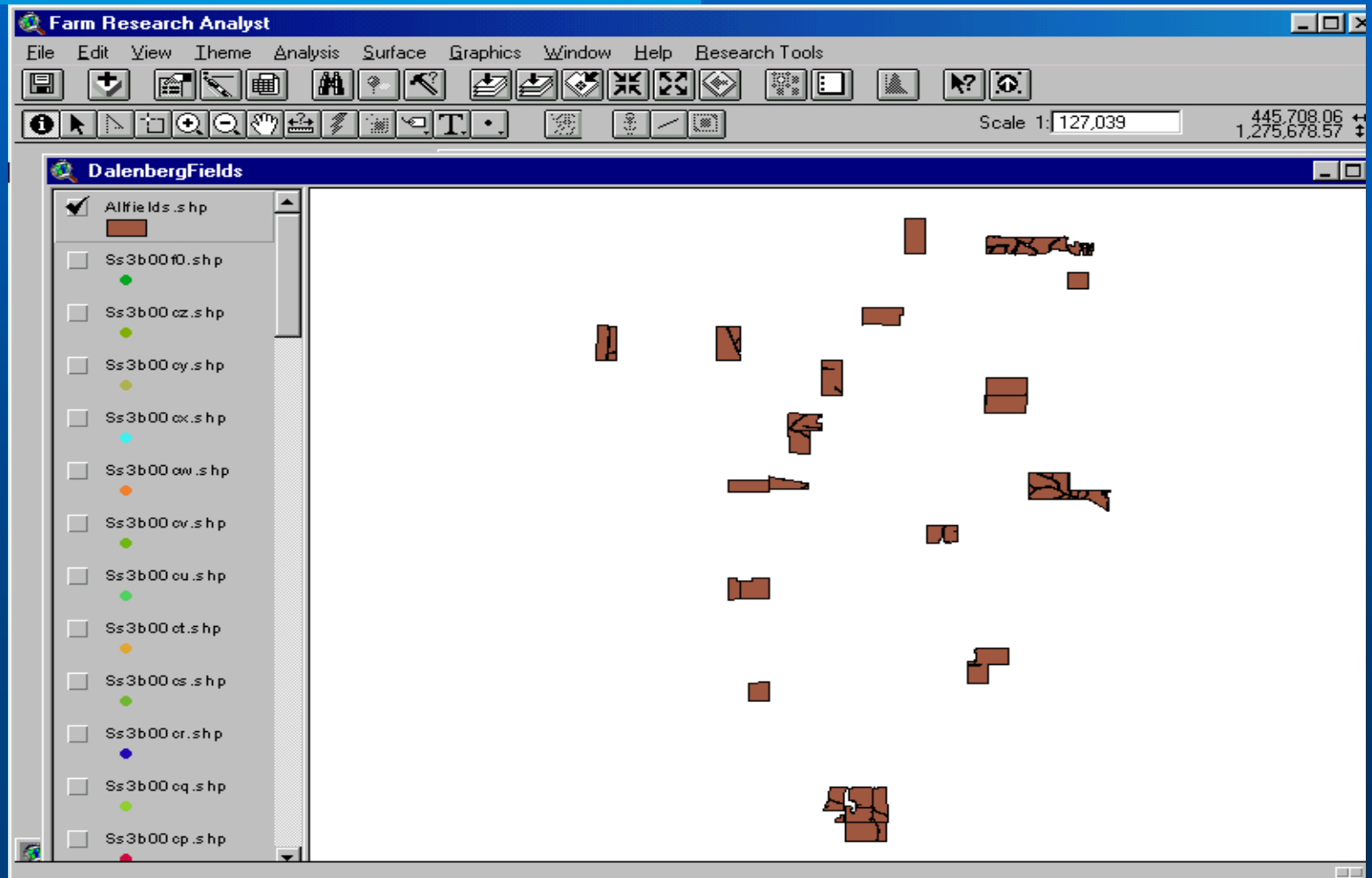
**An Illinois Farmer's Perspective**

# Scattered Acres Farms



- Name of Farm
- 2000 acres
- Corn/Soybeans
- 5 Townships
- 2 Counties

# FARMING OPERATION



# View of the Farm Equipment

- **Corn and soybean no-till operation**
- **Planting in residue**
  - corn stalks for soybeans
  - soybean stubble for corn

# Herbicide Sprayer

- John Deere
- 6000 HiCycle
- for post and pre
- spraying



# New Sprayer

- John Deere
- 6700 with SprayStar
- All types of spray



# Corn Planter

- John Deere
- 7200
- 16 rows 30 inch
- insecticide



# Tillage Tools

- 4 wheel drive
- 9100 John Deere
- Sunflower
- Soil Finisher





# Soybean Drill

- John Deere 8300
- 750 Notil drill



# John Deere 9550 Combine

- **New series**
- **Offer the Single Tine Separation**
- **Two larger sizes**
- **893 Cornhead**
- **925F Platform**



# Small Tractor



- 4320 John Deere
- Loader
- Used to Mow
- Forklift use
- Blade work

# Four Wheel Drive



- 9100 John Deere
- 260 Horsepower
- Heavy tillage
- Anhydrous Toolbar
- V-Ripper

# Cat Tractor



- Track tractor
- Less Compaction
- High Cost

# Tillage Equipment



- 490 International
- Primary tillage
- Cornstalks
- Secondary tillage
- 22 inch blades
- 7.5 inch spacing

# Deep Tillage



- **DM I 2500 Ripper**
- **15 inch depth**
- **Compaction**
- **Notil**



# Deep Till Shank



- Relieves compaction
- Disc to cut trash
- Lifts and heaves
- Increase water infiltration



# Maintenance Shop



- Machinery maintenance
- Concrete floor
- Heated for winter

# Storage Shed



- Storage shed
- Truck and trailer
- Mower and tractor

# John Deere Car



- 1984 Chevette
- Field Transport
- Labor Saver

# Semi Truck



- **Single Axle Tractor**
- **600 bushel trailer**
- **Diesel**

# Seed Truck



- Ton truck
- Haul seed
- Pull gooseneck trailer

# Grain Bins

---



- **Bins for specialty crops**
- **Waxy corn**
- **Specialty beans**

# Rain Guage



- **Dry Start with little subsoil moisture**
- **Average rainfall to date**
- **Timely rains for average crop**

# Tile Machine



- **Underground drainage for poorly drained soils**
- **Tile to improve soil moisture**



# Tile Systems



- **Layout every 100 feet to draw**
- **5 inch plastic tile**
- **Systems drains to ditch**

# Tile Outlet



- **Outlet of tile main**
- **Drainage ditch**
- **Usually on 1-2% grade**

# Crop Residue



- **Planting corn into soybean stubble**
- **One pass tillage**
- **Early season warmup for germination**

# Emerging crop



- **Corn at 32000 population**
- **Planted on April 10**
- **Use Force insecticide at planting**

# Corn at 3 leaf stage



- **Post application**
- **Fultime herbicide at 3.3 quarts per acre**
- **Atrazine at 1 pint per acre**
- **Broadleaf and grass control**



# June Corn



- **Corn at knee high**
- **Excellent color**
- **All inputs applied**
- **Weather last factor**

# Planter Monitor



- John Deere 250 Population monitor for planter and drill
- Sensors to count
- Radar for speed

# Ag Leader Monitor



- Mapping of fields
- Hybrid tracking
- GPS track
- Verification of crop



# Crop Documentation



- **Seed Star Monitor**
- **Documentation**
  - Weather**
  - Variety**
  - Population**
  - Speed**
- **GPS**
- **Parallel Tracking**

1. Pigweeds
2. Foxtails
3. Velvetleaf
4. Sunflower
5. Volunteer corn
6. Shattercane
7. Cocklebur
8. Pennsylvania smartweed
9. Common lambsquarter
10. Kochia

Other weeds that are frequently troublesome include hemp dogbane, field bindweed, buffalobur, morningglory and black nightshade.

Recording weed infestations on field maps can be a valuable tool for soybean producers. This scouting can be done while combining, and will give a good indication of what weeds will be troublesome in each field the next year. Weed control programs then can be planned to minimize early season weed establishment and competition with soybeans.

### CULTURAL WEED CONTROL

[Weed Control in Alfalfa](#)

[Weed Control in No-Till Corn, Grain Sorghum & Soybeans](#)

[Weed Control in Soybeans](#)

[VelvetLeaf](#)

[Common Milkweed](#)

[Weed-Pro](#)

[Weed Images & Descriptions](#)

[Weed Management](#)

## Lambsquarters



Lambsquarters, *Chenopodium album* (CHEAL) is a widespread weed in the state. It thrives on rich soils so is a problem in gardens and farm fields. It enjoys some favor with the natural food folks. The triangular leaf is the chief identifying feature. A related plant, *C. ambrosioides* (CHEAM), Mexican tea, is used as a vermifuge. Often found growing near barns.

[Full-size image of Lambsquarters](#)





[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from the University of California

[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from

**Common Name:** Hemp Dogbane

**Scientific Name:** *Apocynum*

**Life Cycle:** *cannabinum*

**Control:** Perennial

[CT-2](#)



[Flower](#)



[Creeping perennial typically growing in a patch](#)



[Leaves are opposite on the stem](#)

[Index or Top of Page](#)



[Weed Control in Alfalfa](#)

[Weed Control in No-Till Corn, Grain Sorghum & Soybeans](#)

[Weed Control in Soybeans](#)

[VelvetLeaf](#)

[Common Milkweed](#)

[Weed-Pro](#)

[Weed Images & Descriptions](#)

[Weed Management](#)

# Jimson Weed



Jimsonweed, *Datura stramonium* (DATST) was at one time a feared plant in soybeans but



[Common Weeds in No-Till](#)  
Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)  
Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)  
Weed pest. ID and resource guide focused on the California region, from the University of California

Marketing Management **Agronomic** Ag Sites Consulting

[AgPage Home](#) | [General Agronomy](#) | [Weeds & Pesticides](#) | [Insects](#) | [Diseases](#) | [Corn & Soybeans](#)

[Common Weeds in No-Till](#)  
Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)  
Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)  
Weed pest. ID and resource guide focused on the California region, from

[becomes a vine](#)

---

[Index](#) or [Top of Page](#)

**Common Name:** Horseweed (Marestail)  
**Scientific Name:** *Conyza canadensis*  
**Life Cycle:** Annual  
**Control:** [CT-2](#)

		
<a href="#">Flower</a>	<a href="#">Winter or early summer annual</a>	<a href="#">Taproot</a>

[Index](#) or [Top of Page](#)



[Weed Control in Alfalfa](#)

[Weed Control in No-Till Corn, Grain Sorghum & Soybeans](#)

[Weed Control in Soybeans](#)

[VelvetLeaf](#)

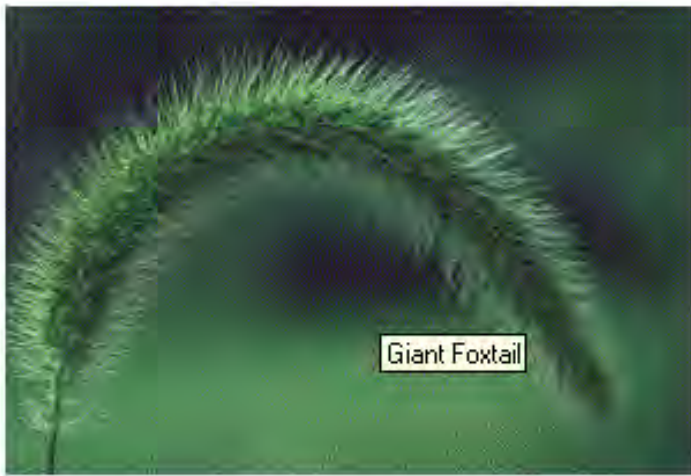
[Common Milkweed](#)

[Weed-Pro](#)

[Weed Images & Descriptions](#)

[Weed Management](#)

# Giant Foxtail



Foxtails, *Setaria spp.*, are present in New Jersey in several species. *S. lutescens* (SETLU), yellow foxtail, is often present along roadsides while giant foxtail, *S. faberii* (SETFA), is a weed of cultivated fields. The seed head is composed of dense bristles which make the genus easy to recognize. The yellow foxtail has yellow bristles while those of giant foxtail are brown. There is a green foxtail but it is scarce in New Jersey.



[Weed Control in Alfalfa](#)

[Weed Control in No-Till Corn, Grain Sorghum & Soybeans](#)

[Weed Control in Soybeans](#)

[VelvetLeaf](#)

[Common Milkweed](#)

[Weed-Pro](#)

[Weed Images & Descriptions](#)

[Weed Management](#)

## Velvetleaf



Velvetleaf, *Abutilon theophrasti* (ABUTH), is very aptly named because the large leaves are velvety-hairy. A leading weed problem in corn, soybeans, and other cultivated crops. A member of the mallow family, the pie-shaped seed capsule is unique.

[Full-size image of Velvetleaf](#)





[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from the University of California

[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

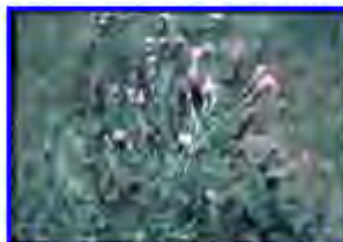
Weed pest. ID and resource guide focused on the California region, from

**Common Name:** Canada Thistle

**Scientific Name:** *Cirsium arvense*

**Life Cycle:** Perennial

**Control:** [CT-2](#)



[Flower](#)



[Creeping perennial typically growing in a patch](#)



[Underground vertical stems and horizontal creeping roots](#)

[Index](#) or [Top of Page](#)

# Burndown



- Roundup at 1.5 pints
- 2,4-D for winter annuals  
(dicholophenxy acetic acid)

# STS Soybeans



- Thifensulfuren Methol
- Chlorimuron Ethyl
- Classic/Pinnacle
- Requires STS beans



# Sulfonylurea

- **Rapid adsorption by foliar means**
- **Soybeans bred to translocate herbicide**
- **Used in Non GMO contracts because can be validated by test.**

# Flexstar



- Fomasafen sodium salt
- Diphenylether
- Absorbed by leaves
- Cell disruption

# Poast Plus

- **Sethoxydim**
- **Plants growth ceases**
- **Grasses- Soybeans**

# Ammonium Sulfate



- 96% AMS
- Drift retardant
- Nonionic retardant



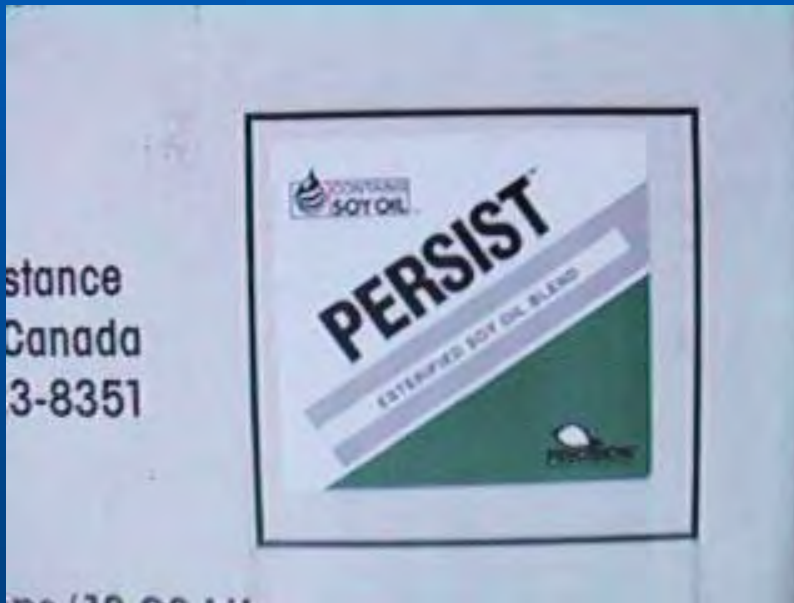
# NonIonic Surfactant

- Instead of croipoil
- Less burn



# Crop Oil

- Methylated soybean oil



# Atrazine



- Triazine
- absorbed thru roots and leaves
- Corn broadleaf and grasses

# Accent



- Nicosulfuron
- (Sulfonylurea)
- foliar
- Grass compound

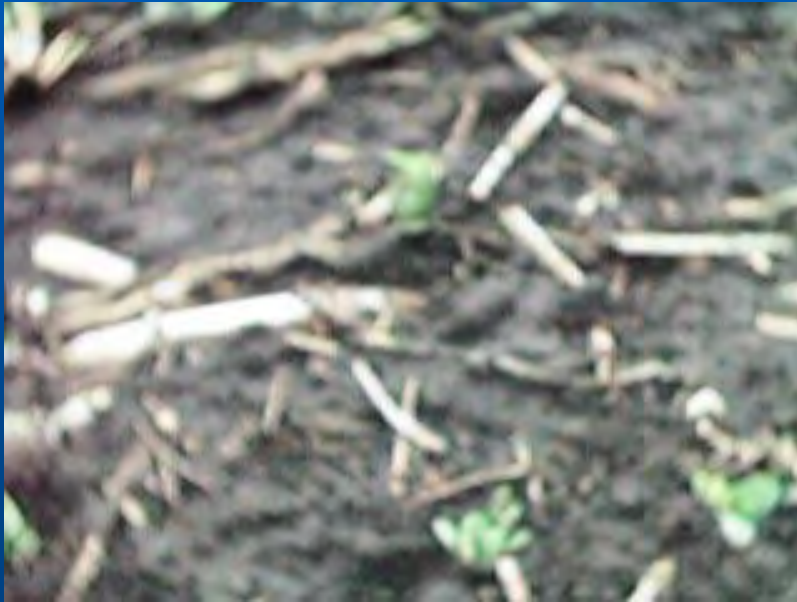
# Fultime

- Acetochlor and atrazine
- absorbed by plant shoots

# Force- Insecticide

- **Tefluthrin**
- **Pyrethroid-non systemic**
- **Corn rootworms,seedcorn maggots,white grub, wireworm**

# Soybeans



- **Notil in corn stubble**
- **Burndown**
- **Post chemicals**
- **7.5 inch rows**



# Field Operations

- **Notil soybeans**
- **Spray burndown**
- **Plant beans**
- **Post spray**
- **Combine**
- **Notil V-Rip to 15 inches**

# Corn Operations

- **Fall Anhydrous Ammonia**
- **Fall dry fertilizer**
- **Plant Spring- one pass with soil finisher with insecticide**
- **Spray with herbicide**

# FERTILITY

---

- **Soil Sample on one hectare grids**
- **Sample for Potassium, Phosphorus, pH**
- **Organic Matter**
- **CEC**
- **Sample every 2-4 years**

# Soil Lab, Inc.

Independent Soil Testing Service

120 1/2 E. Sale St.  
Tuscola Ill. 61953  
Box 308  
Phone (217) 253-3523

LAB ANALYSIS SHEET

Name: Illini F.S.

Address: Mahomet, Ill.  
(New Dalenberg Mansfield)

No. Samples 17 How billed Illini F.S.

Date entered lab: 7/11/80

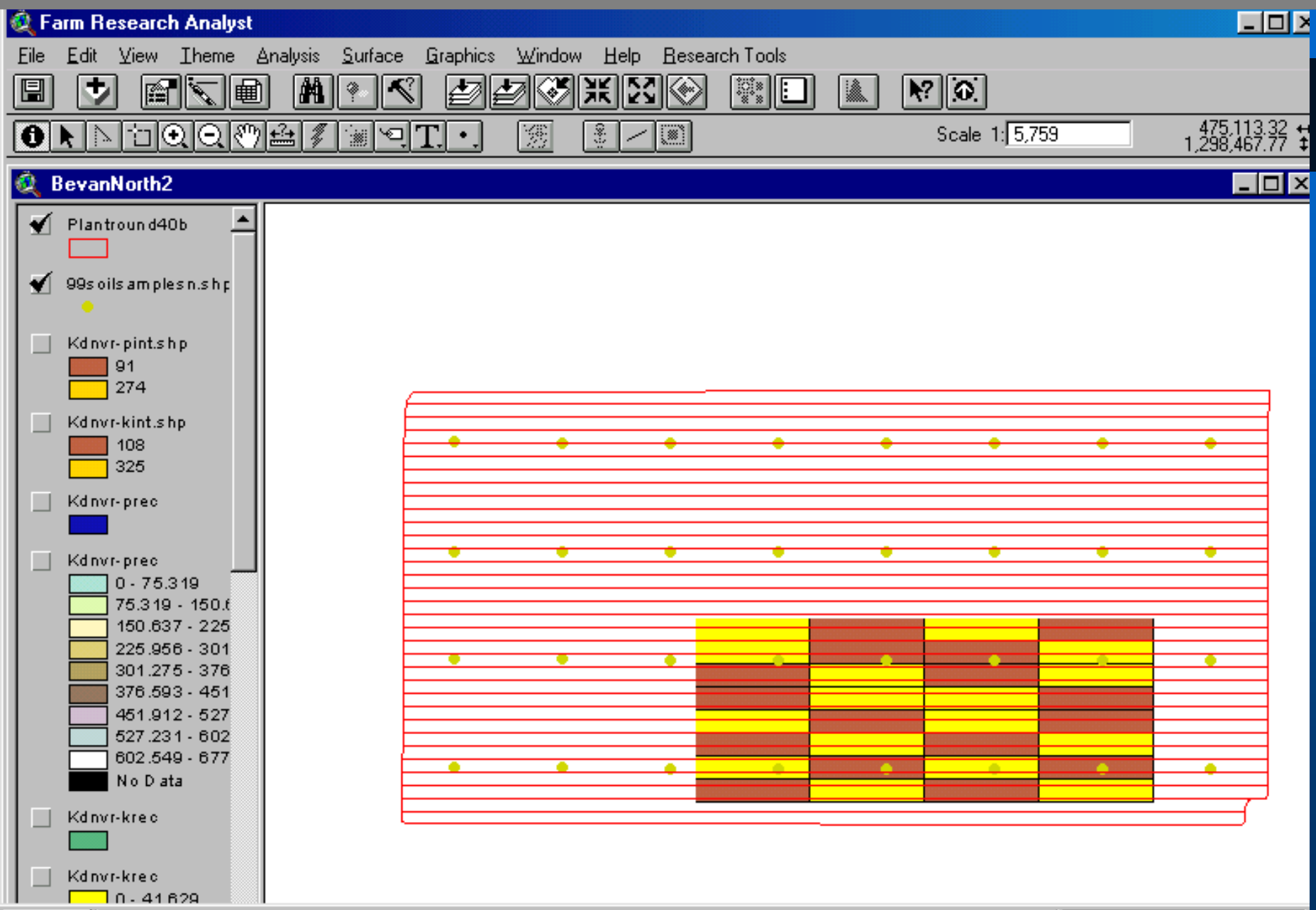
Tests desired:  Standard (pH, P<sub>1</sub>, K)  Organic Matter

Date tested: 7/18/80

Other tests: \_\_\_\_\_

Field No.	Sample No.	Lab No.	Acidity pH Test	Phosphorus P <sub>1</sub> Test	Potassium K Test	Organic Matter	Other
<i>Gravel pit</i>	1		6.3	103	364	3.34	
	2		6.4	78	332	2.62	
	3		6.0	60	400	3.21	
	4		5.9	76	292	3.09	
	5		5.8	78	252	3.21	
	6		5.8	146✓	524✓	3.60	
	7		6.0	80	396	2.97	
	8		6.8	60	300	3.60	
	AVE.		6.1	76	334	3.21	AVE
<i>Tom/Baran 580# (by ch)</i>	1		6.2	30	216	4.32	
	2		6.7	36	336	4.97	
	3		5.9	68	200	5.87	
	4		5.6	25	200	3.47	
	5		6.1	31	216	4.97	
	6		6.0	29	252	4.97	
	7		5.7	43	252	3.15	

# Plat layouts with grid sampling on 2.5 acre grids in 80 acre field

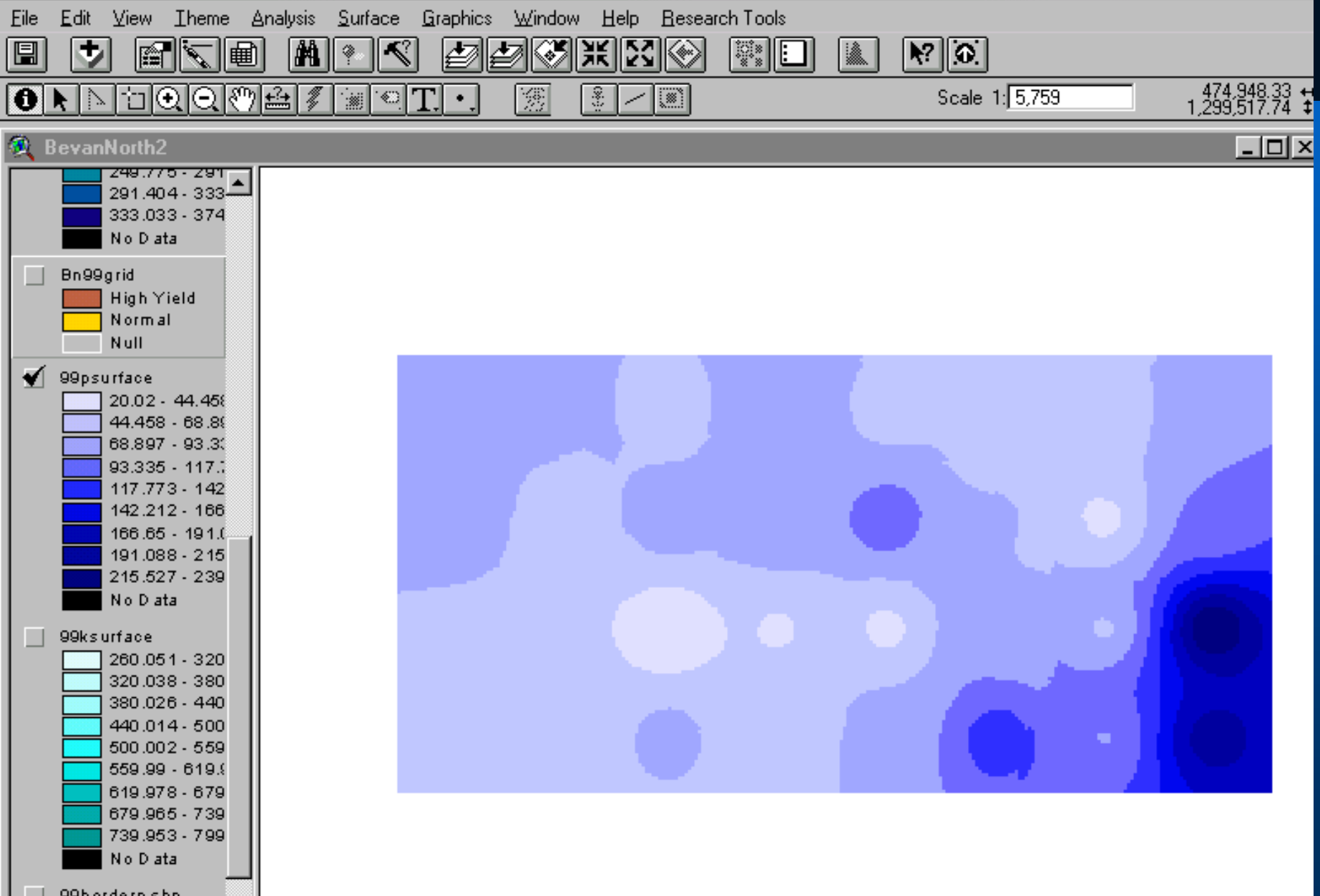


# Research Plots

---

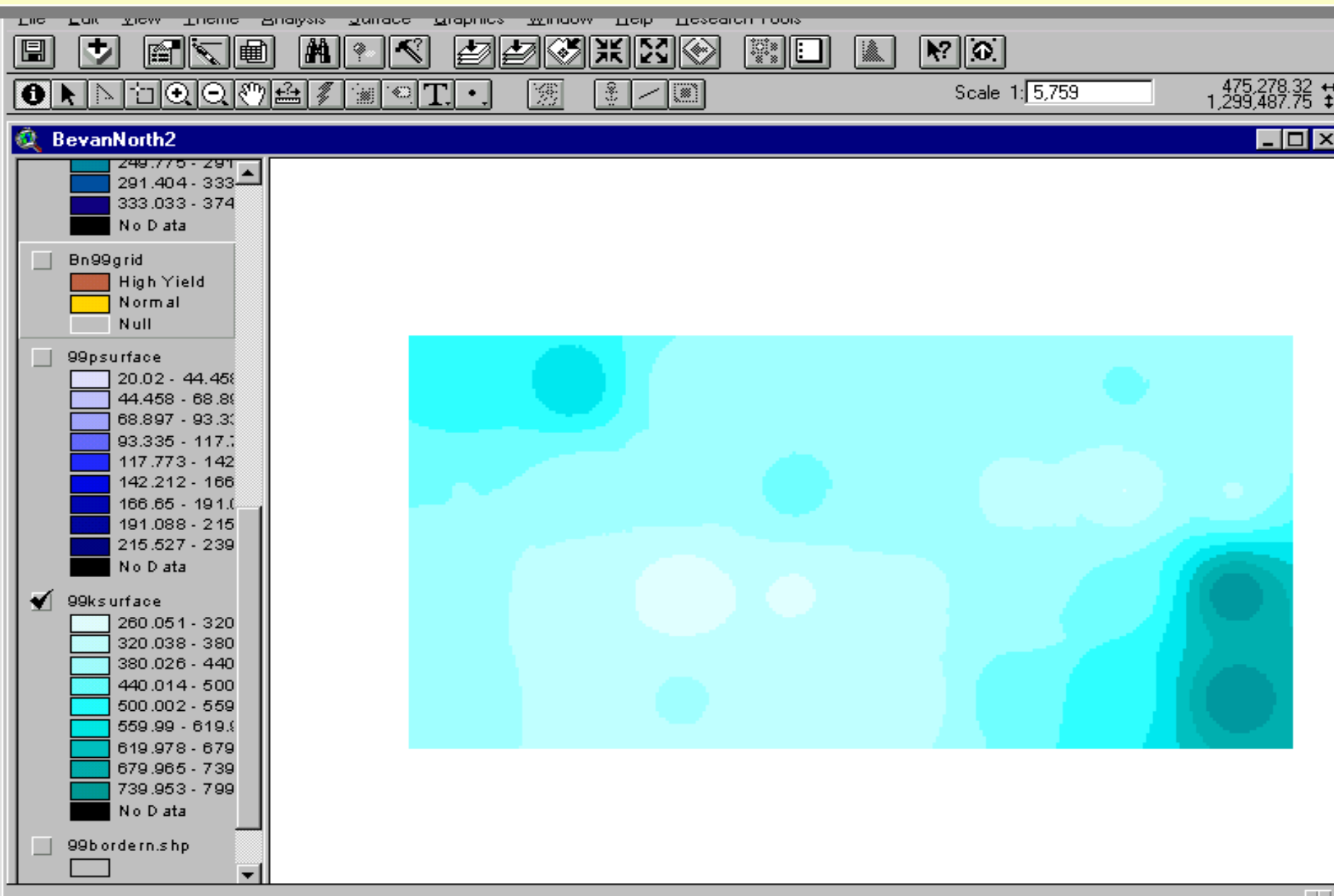
- **University Research**
- **Chemical Companies**
- **Seed companies**
- **Whole field trials vs. plots**

Phosphorus test on 80 acre field using kriging to visualize. Zones vary by color.

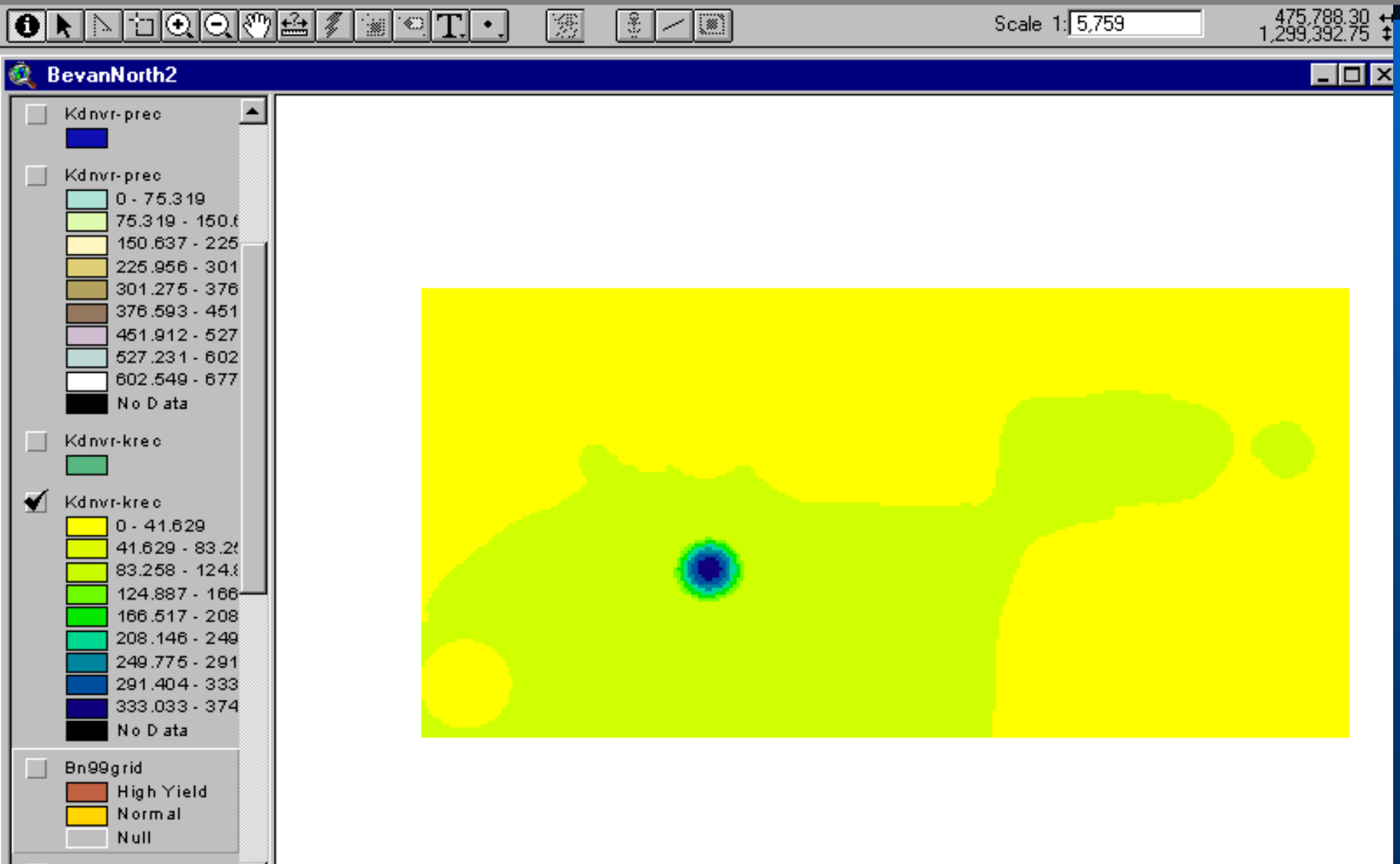




Potassium test kriged on 80 acre field. Shows variability within soil types.



Potash recommendation spread with a variable rate machine. Rate varies from 0 to 250 pounds per acre according to soil test.



# Farm actual yields for the last 25 years for corn and soybeans.

Microsoft Excel - Bevan Fertility

File Edit View Insert Format Tools Chart Window Help

63% Prompt

Year	Corn	Acreage	Beans
1974	98.5	80	27
1975	148.8	80	47.7
1976	156.5	80	48.7
1977	142	80	43.4
1978	153	80	46.5
1979	158	80	46
1980	105.6	80	49.4
1981	148	80	41.5
1982	160	80	51.4
1983	92	80	49.3
1984	122	80	35.7
1985	192.6	80	52.9
1986	146.8	80	54.8
1987	180	80	53.7
1988	108	80	27.6
1989	175.6	80	53.6
1990	155.5	80	46.4
1991	111.6	80	40.7
1992	176.5	80	48.6
1993	138	80	54.2
1994	187	80	58
1995	134.5	80	47.7
1996	184	80	51.8
1997	141	80	49
1998	138	80	42
1999	186	80	51

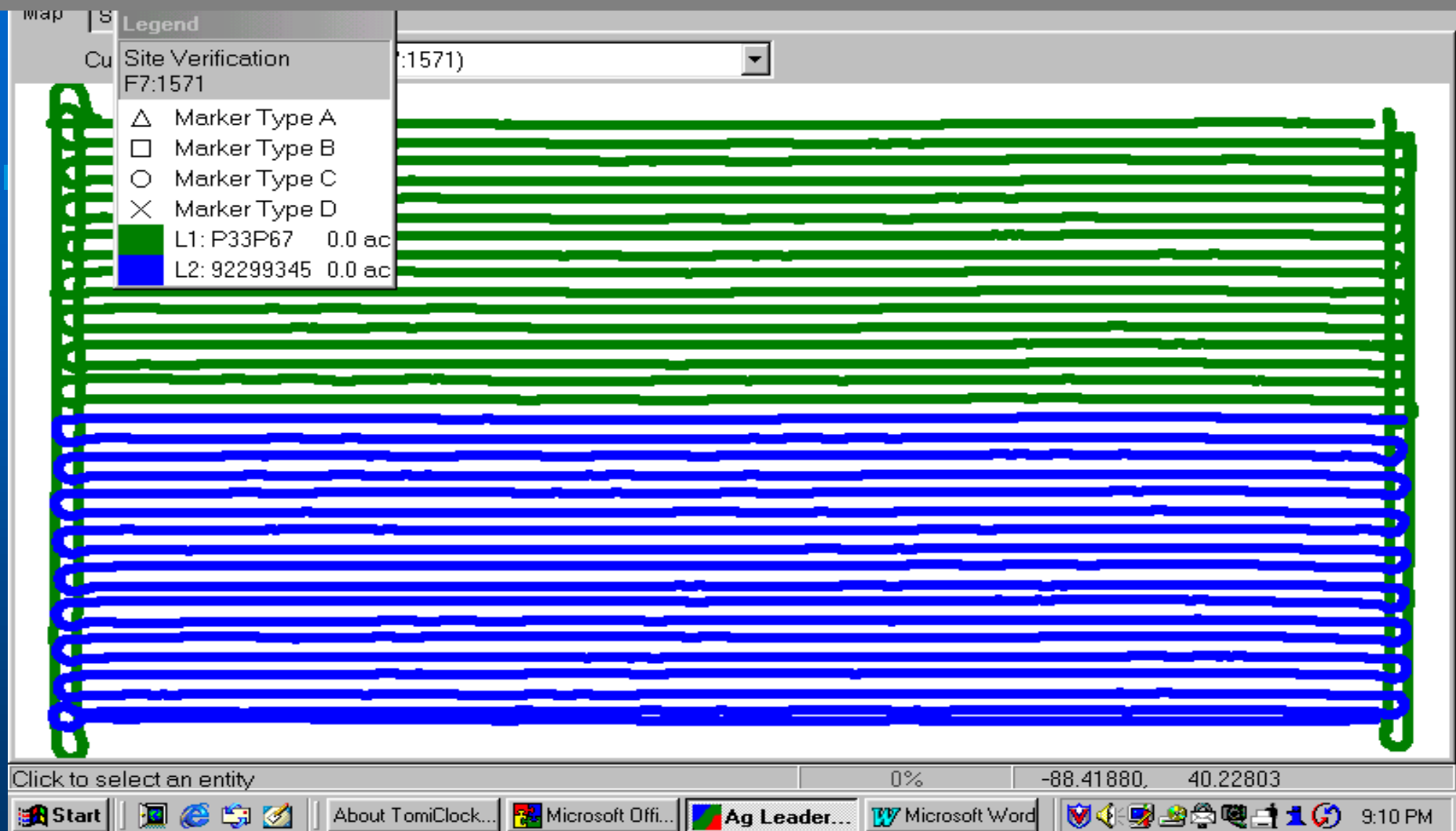
Bevan 25Yr Corn | **BevanAllYield** | Sheet1 | Sheet2 | Sheet3

Ready NUM

Start | 09:15:38 PM 05/24/00 | HP OfficeJet Status | Microsoft PowerPoint - ... | Microsoft Excel - ...

9:15 PM

# Corn Variety site verification with GPS track.



Corn planted on April 5, 2000

Pioneer 33P67Bt for north 40 acres at 32,000

Balance of field is Golden Harvest 9229 and Golden Harvest 9345

Corn Herbicide- Fultime at 3.3 quarts with 1 pint of Aatrex and 1 pint of Crop Oil

Corn Insecticide- Force at 3.3 pounds per acre

# Howe Farm Yields versus County Average

Howe Farm  
County  
Yields

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Corn			153	137	102	170	145	184	119	160	134	147	160
County	154	85	136	138	88	169	141	161	102	147	140	140	160
Soybeans			51	48	46	54	52	56	47	49	52	48	55
County	45	44	44	44	35	48	49	50	44	48	48	44	51



Bevan  
Farm  
Historical  
Yields

			Fertilizer		pH		
	Corn	Acreage	Beans	Analysis	Limestone		
1974	98.5		27				
1975	148.8	80.4	47.7	36-92-120	South 80 2 tns		
1976	156.5		48.7	36-92-120	North 80 2 tns		
1977	142	80.4	43.4	36-92-120			
1978	153		46.5	54-138-120	Lime north 54 acres 2 tns		
1979	158		46	54-138-120	0-66-48	VRT Lime	
1980	105.6	80.4	49.4	21-54-166	0-66-120	VRT Lime	
1981	148	80.4	41.5	36-92-120	0-0-180		
1982	160	72.4	51.4	36-92-120	0-0-120		
1983	92	64.3	49.3	36-92-150	0-0-120		
1984	122	72.4	35.7	36-92-120	0-0-90		
1985	192.6	80	52.9	45-115-150	88tns lime so 80		
1986	146.6	64.3	54.8	54-138-60	0-0-120	no80- 2tns	
1987	180	52.2	53.7	54-138-90	36-92-120	N40- fert	VRT Lime
1988	108	64	27.6	36-92-120	0-0-120		
1989	175.6	72	53.6	45-90-150	0-88-120	N40- fert	
1990	155.5	72	46.4	18-46-70VRT	0-22-61VRT		
1991	111.6	74	40.7	0-138-115			
1992	176.5	76	48.6	0-80.5-115			
1993	138	72	54.2	54-138-192VRT			
1994	187	80	58	54-150-180			
1995	134.5	76	47.7	VRT			
1996	184	80	51.8	27-69-150VRT	Lime VRT-N80		
1997	141	80	49	35-91-156VRT	Lime VRT-N80		
1998	138	80	42	36-92-120	LimeVRT-S80		
1999	186	80	51	VRT?			

\  
F  
1

1997 Corn yield average of 141 bushels per acre.

**Ag Leader Precision Map 2000**

File Edit View Options Help

Map Summary

Current Map: BevanCorn1997N.ymp(F23:BEVAN)

**Legend**

Yield  
F23:BEVAN

- △ Marker Type A
- Marker Type B
- Marker Type C
- × Marker Type D

155.8 - 174.0+ Bu/Ac	7.1 ac
149.7 - 155.8 Bu/Ac	7.6 ac
145.3 - 149.7 Bu/Ac	7.8 ac
141.8 - 145.3 Bu/Ac	8.7 ac
139.2 - 141.8 Bu/Ac	7.5 ac
135.7 - 139.2 Bu/Ac	9.3 ac
131.4 - 135.7 Bu/Ac	9.1 ac
123.6 - 131.4 Bu/Ac	9.6 ac
103.6 - 123.6 Bu/Ac	8.5 ac
0.0 - 103.6 Bu/Ac	8.1 ac

-88.42096, 40.23378

Start | 10:00:08 A... | Microsoft Po... | My Computer | Exploring - P... | Ag Leade... | Microsoft W... | 10:00 AM

# 1999 Corn Yield average of 186 bushels per acre.:

File Edit View Options Help

Map Summary

Current Map: Bevancom1999.ymp(F20:1571)

**Legend**

Yield  
F20:1571

- △ Marker Type A
- Marker Type B
- Marker Type C
- × Marker Type D

236.4 - 264.2+ Bu/Ac	0.0 ac
225.9 - 236.4 Bu/Ac	0.0 ac
217.9 - 225.9 Bu/Ac	0.0 ac
210.0 - 217.9 Bu/Ac	0.0 ac
203.4 - 210.0 Bu/Ac	0.0 ac
195.5 - 203.4 Bu/Ac	0.0 ac
186.2 - 195.5 Bu/Ac	0.0 ac
174.4 - 186.2 Bu/Ac	0.0 ac
150.6 - 174.4 Bu/Ac	0.0 ac
0.0 - 150.6 Bu/Ac	0.0 ac

Click to select an entity

-88.41988, 40.23587

Start

09:44:02 AM 0... Microsoft Power... My Computer Exploring - Progr... Ag Leader Pr...

9:44 AM

# 1998 Corn yield average of 138 bushels per acre

**Ag Leader Precision Map 2000**

File Edit View Options Help

Map Summary

Current Map: Y00063.YMP(F27:1571C-98)

**Legend**

Yield  
F27:1571C-98

- △ Marker Type A
- Marker Type B
- Marker Type C
- × Marker Type D

155.1 - 183.5+ Bu/Ac	7.3 ac
149.6 - 155.1 Bu/Ac	7.2 ac
145.0 - 149.6 Bu/Ac	9.4 ac
141.3 - 145.0 Bu/Ac	8.5 ac
137.6 - 141.3 Bu/Ac	8.5 ac
133.0 - 137.6 Bu/Ac	9.7 ac
127.5 - 133.0 Bu/Ac	8.8 ac
111.0 - 127.5 Bu/Ac	9.4 ac
62.4 - 111.0 Bu/Ac	8.2 ac
0.0 - 62.4 Bu/Ac	8.9 ac

Click to select an entity

-88.42004, 40.22969

Start | 09:54:50 A... | Microsoft Po... | My Computer | Exploring - P... | Ag Leade... | Microsoft W... | 9:54 AM

# 1997 soybean yield average of 49 bushels per acre.:

File Edit View Options Help

Map Summary

Current Map: BevanSoybeans1997.ymp(F19:BEVAN)

**Legend**

Yield  
F19:BEVAN

- △ Marker Type A
- Marker Type B
- Marker Type C
- × Marker Type D

56.7 - 63.7+ Bu/Ac	8.2 ac
54.7 - 56.7 Bu/Ac	7.9 ac
52.8 - 54.7 Bu/Ac	9.4 ac
50.9 - 52.8 Bu/Ac	9.6 ac
49.3 - 50.9 Bu/Ac	7.7 ac
47.1 - 49.3 Bu/Ac	9.6 ac
44.6 - 47.1 Bu/Ac	8.6 ac
41.1 - 44.6 Bu/Ac	8.1 ac
34.4 - 41.1 Bu/Ac	8.2 ac
0.0 - 34.4 Bu/Ac	7.5 ac

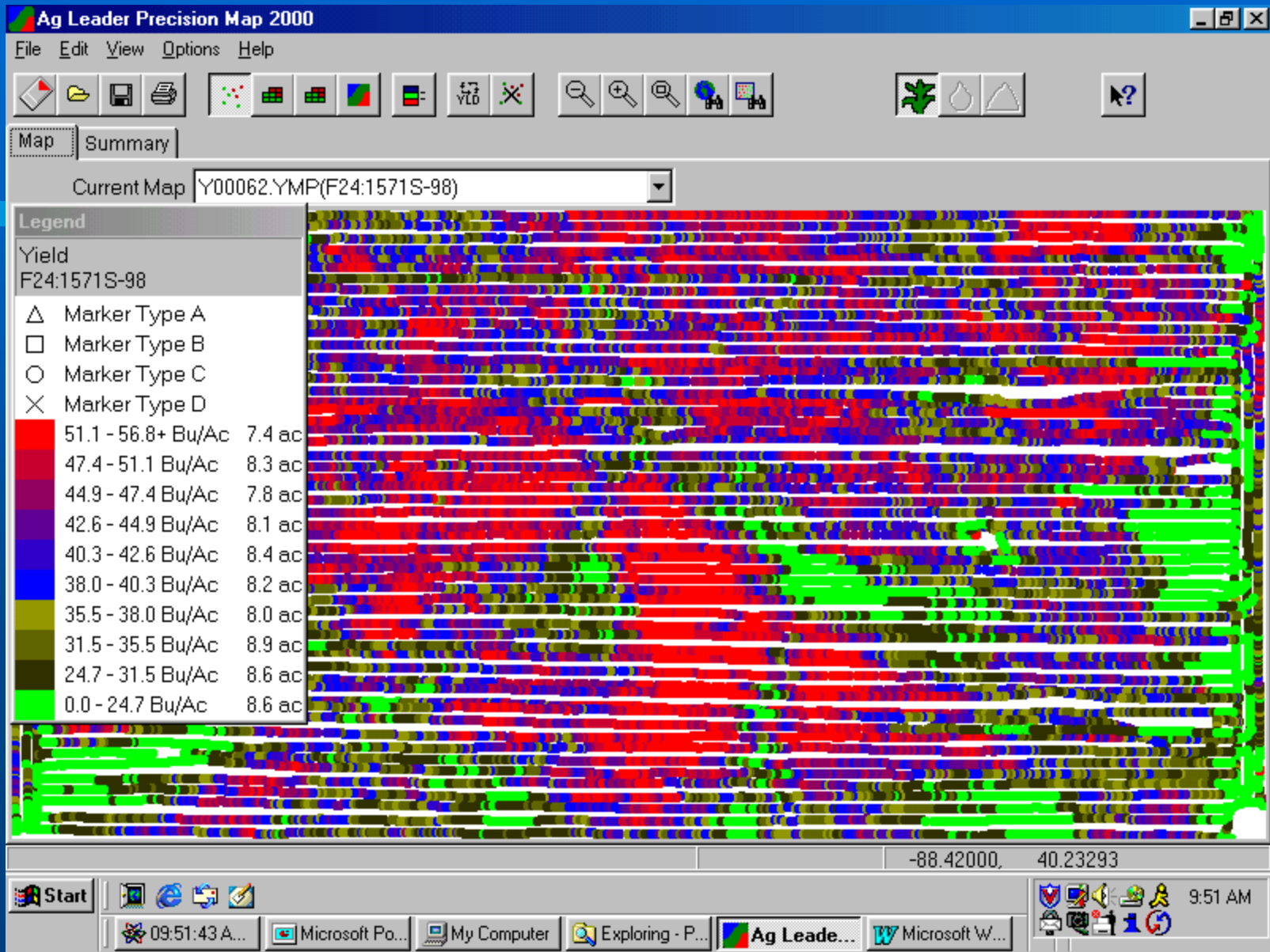
Total area of selected polygons = 0.00

-88.41643, 40.23104

Start | 09:57:47 A... | Microsoft Po... | My Computer | Exploring - P... | Ag Leade... | Microsoft W... | 9:57 AM



# 1998 Soybean yield with average of 42 bushels per acre.



Yield map for 1999 soybean crop average for field was 51 bushels.

File Edit View Options Help

Map Summary

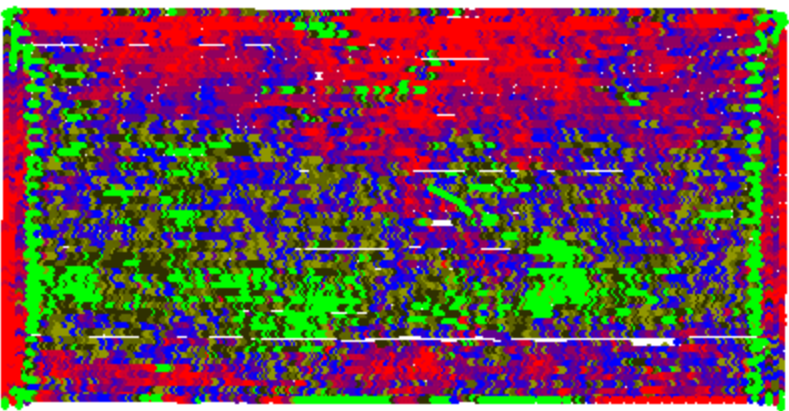
Current Map Y00061.YMP(F20:1571)

**Legend**

Yield  
F20:1571

- △ Marker Type A
- Marker Type B
- Marker Type C
- × Marker Type D

57.4 - 61.4+ Bu/Ac	7.7 ac
53.4 - 57.4 Bu/Ac	9.2 ac
50.4 - 53.4 Bu/Ac	9.3 ac
48.2 - 50.4 Bu/Ac	8.1 ac
46.1 - 48.2 Bu/Ac	8.6 ac
44.2 - 46.1 Bu/Ac	8.0 ac
42.4 - 44.2 Bu/Ac	7.6 ac
39.6 - 42.4 Bu/Ac	8.9 ac
35.9 - 39.6 Bu/Ac	7.7 ac
0.0 - 35.9 Bu/Ac	8.0 ac



Click to select an entity

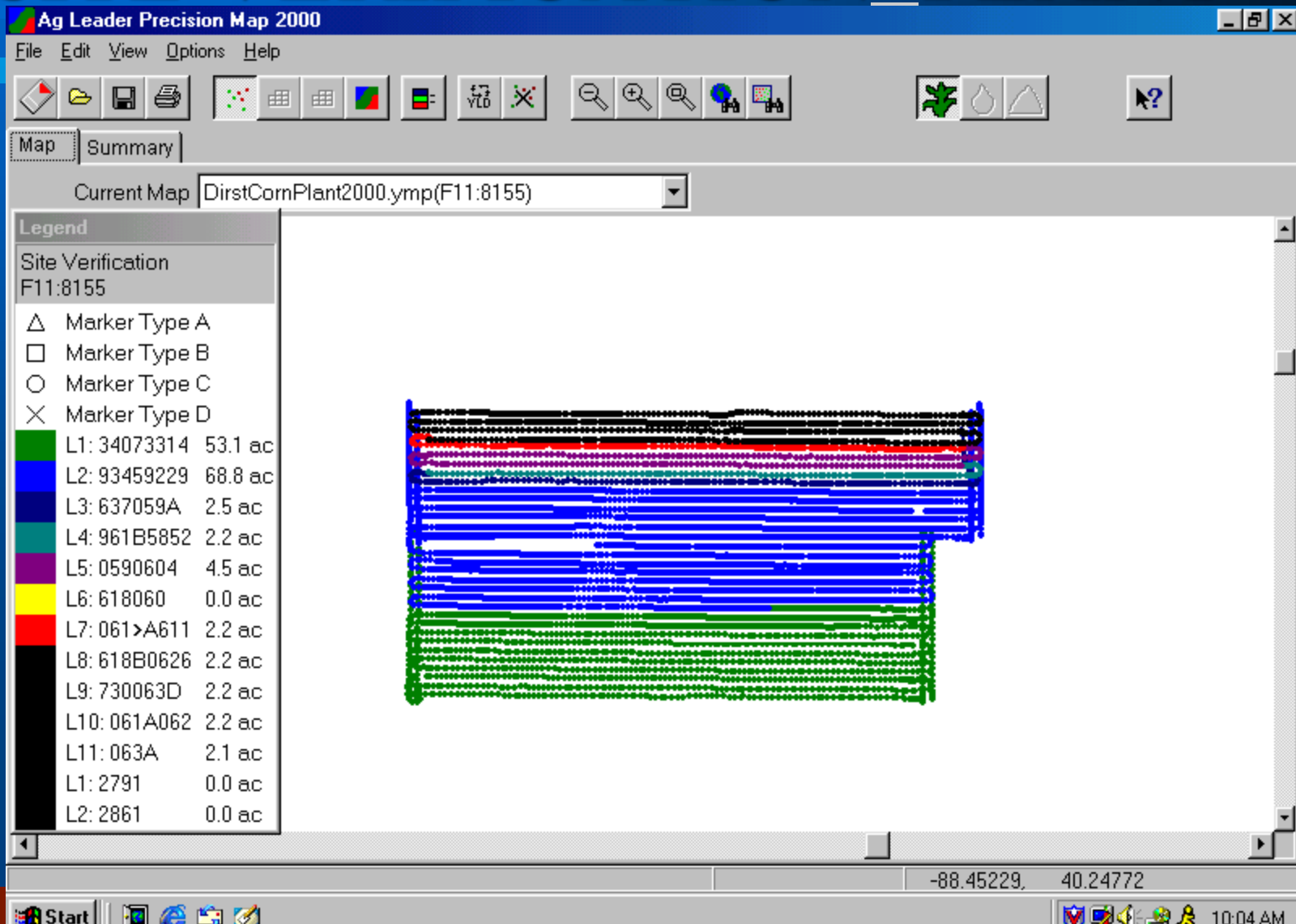
-88.42187, 40.23124

Start

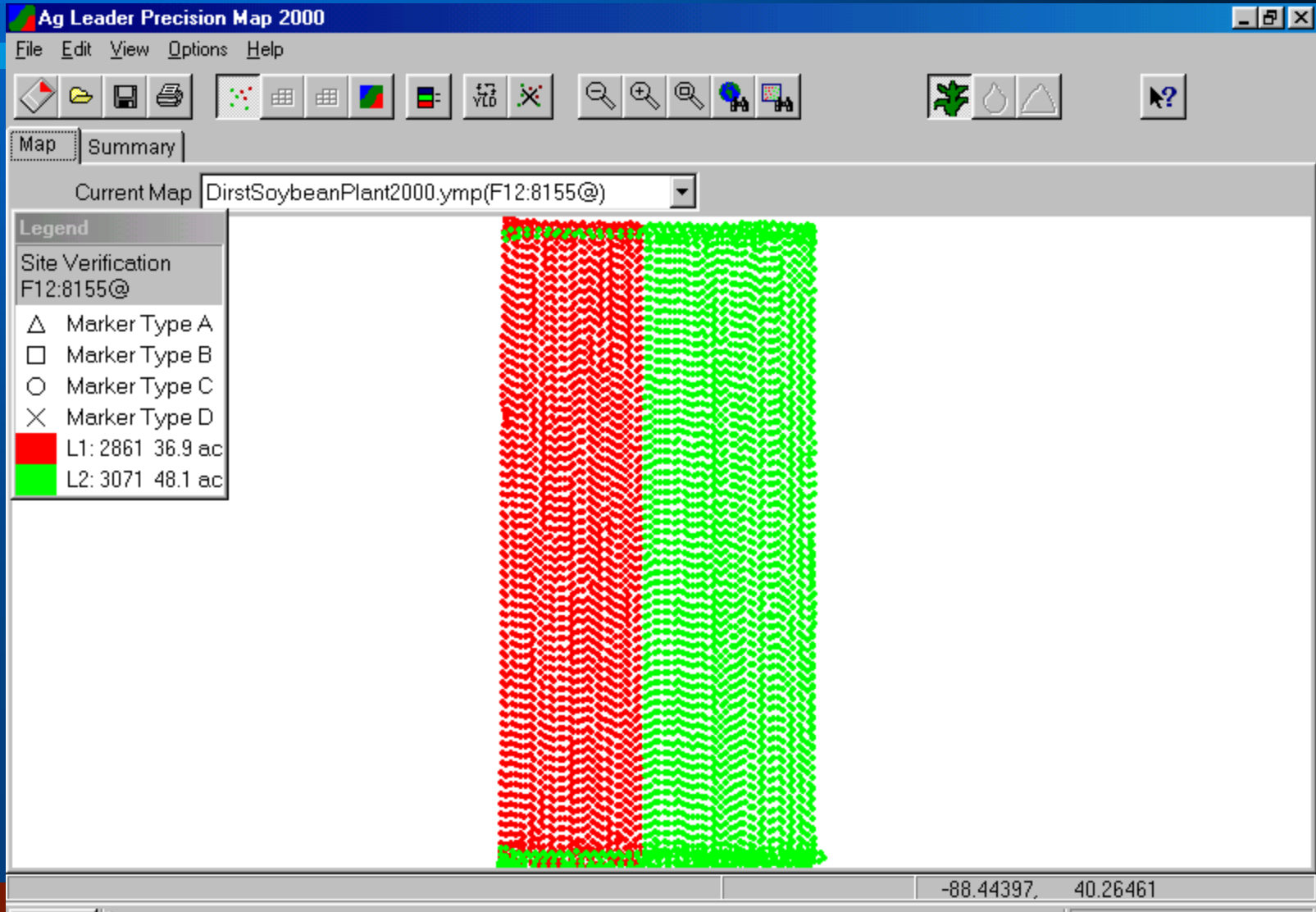
09:49:02 A... Microsoft Po... My Computer Exploring - P... Ag Leade... Microsoft W...

9:49 AM

# SITE VERIFICATION\_PLANT



# SOYBEAN Site Verification



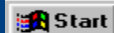
# PESTICIDE DOCUMENTATION

 Pesticide Operation Summary




Pesticide Operation Summary - 2000

Pesticide, Farm, Field, Task	Area (acres)	Quantity Applied	Quantity Loaded
<b>Insecticide : Force</b>			
Begole Farm #487			
Front 42			
Planting	57.83	222.38 fl oz	
Front 42 (Subtotal)	57.83	222.38 fl oz	
Begole Farm #487 (Subtotal)	57.83	222.38 fl oz	
Busey Trust 303#7661			
North			
Planting	53.92	237.58 fl oz	
North (Subtotal)	53.92	237.58 fl oz	
Busey Trust 303#7661 (Subtotal)	53.92	237.58 fl oz	
Dirst Farms #8155			
South			
Planting	70.91	233.86 fl oz	
South (Subtotal)	70.91	233.86 fl oz	
Dirst Farms #8155 (Subtotal)	70.91	233.86 fl oz	
Howe #7703			
North			
Planting	39.86	131.46 fl oz	
North (Subtotal)	39.86	131.46 fl oz	
Howe #7703 (Subtotal)	39.86	131.46 fl oz	
James Farm #473			
North			
Planting	0.00	0.01 fl oz	
North (Subtotal)	0.00	0.01 fl oz	


 Start



 10:11 AM

 10:11:02 AM 05/28/00

 Microsoft PowerPoint ...

 Microsoft Word

 JDmap 4.0



# DOCUMENTATION



AG Leader Monitor with GPS

# DOCUMENTATION



- John Deere Processor
- GPS- 10cm accuracy
- Weather
- Variety
- Pesticide
- Herbicide

# MAPPING OF DATA

The screenshot displays the JDmap 4.0 software interface. The main window shows a map of a field boundary, represented by a dense grid of red lines. The interface includes a menu bar (File, Edit, View, Tools, Setup, Data, Reports, Help) and a toolbar with various icons for file operations, navigation, and data management. The status bar at the bottom indicates the current farm is 'Westchester #3225' and the current field is 'West'. The Layers panel on the right shows five layers, with 'Pesticide Points - Planting - Insecticide - 2000 - c' selected. The Windows taskbar at the bottom shows the Start button, system tray icons, and the time 10:21 AM.

JDmap 4.0

File Edit View Tools Setup Data Reports Help

Current Farm: Westchester #3225 Current Field: West

Layers

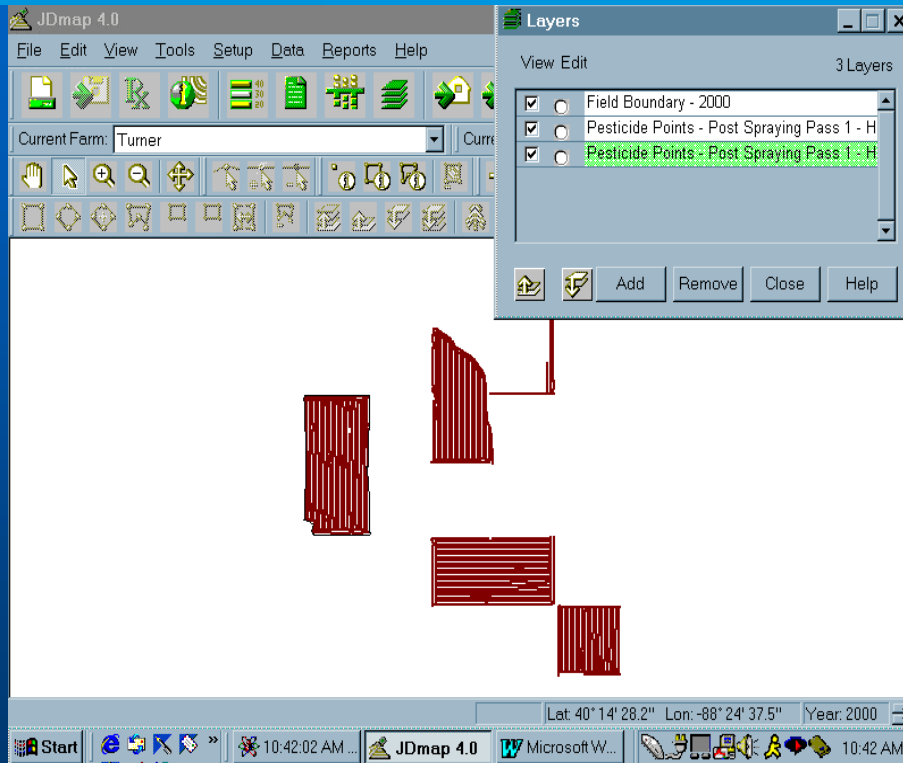
View Edit 5 Layers

- Field Boundary - 2000
- Seeding Points - Planting - Corn - 2000 - rate
- Pesticide Points - Planting - Insecticide - 2000 - r
- Seeding Points - Planting - Corn - 2000 - depth
- Pesticide Points - Planting - Insecticide - 2000 - c

Lat: 40° 14' 38.2" Lon: -88° 31' 2.1" Year: 2000

10:21:41 AM 0... Microsoft Power... Microsoft Word JDmap 4.0 10:21 AM

# Herbicide Documentation



- Sprayer GPS map
- Product applied
- Rate per acre
- Weather

# Herbicide Documentation

Pesticide Operation Summary

Pesticide Operation Summary - 2000

Pesticide, Farm, Field, Task	Area (acres)	Quantity Applied	Quantity Loaded
Jim's Farm			
Post Spraying Pass 1	130.75	8.95 fl oz	
Jim's Farm (Subtotal)	130.75	8.95 fl oz	
Turner (Subtotal)	417.69	8.95 fl oz	
Westchester #3225			
West			
Post Spraying Pass 1	43.39	0.59 fl oz	
West (Subtotal)	43.39	0.59 fl oz	
Westchester #3225 (Subtotal)	43.39	0.59 fl oz	
Herbicide : Aim (Total)	760.69	10.32 fl oz	
<b>Herbicide : Basis Gold</b>			
Turner			
Doug's			
Post Spraying Pass 1	286.94	0.00 fl oz	
Doug's (Subtotal)	286.94	0.00 fl oz	
Jim's Farm			
Post Spraying Pass 1	130.75	8.95 fl oz	
Jim's Farm (Subtotal)	130.75	8.95 fl oz	
Turner (Subtotal)	417.69	8.95 fl oz	
Herbicide : Basis Gold (Total)	417.69	8.95 fl oz	

Close    Customize...    Favorites...    Print...    Export...    Help

Start    10:46:50 AM    JDmap 4.0    Microsoft W...    10:46 AM



# TASK DETAIL REPORT

Task Detail Report

Task Detail Report - 2000

Farm		Field		Task	
Turner		Doug's		Post Spraying Pass 1	
Wed 5/24/2000 1:00 PM	Ken	Tractor: JD 6110		Chisel Plow: JD 610	1.26
Wed 5/24/2000 3:23 PM	Ken	Tractor: JD 6110		Chisel Plow: JD 610	1.14
<b>Total:</b>					4.19

**Weather**

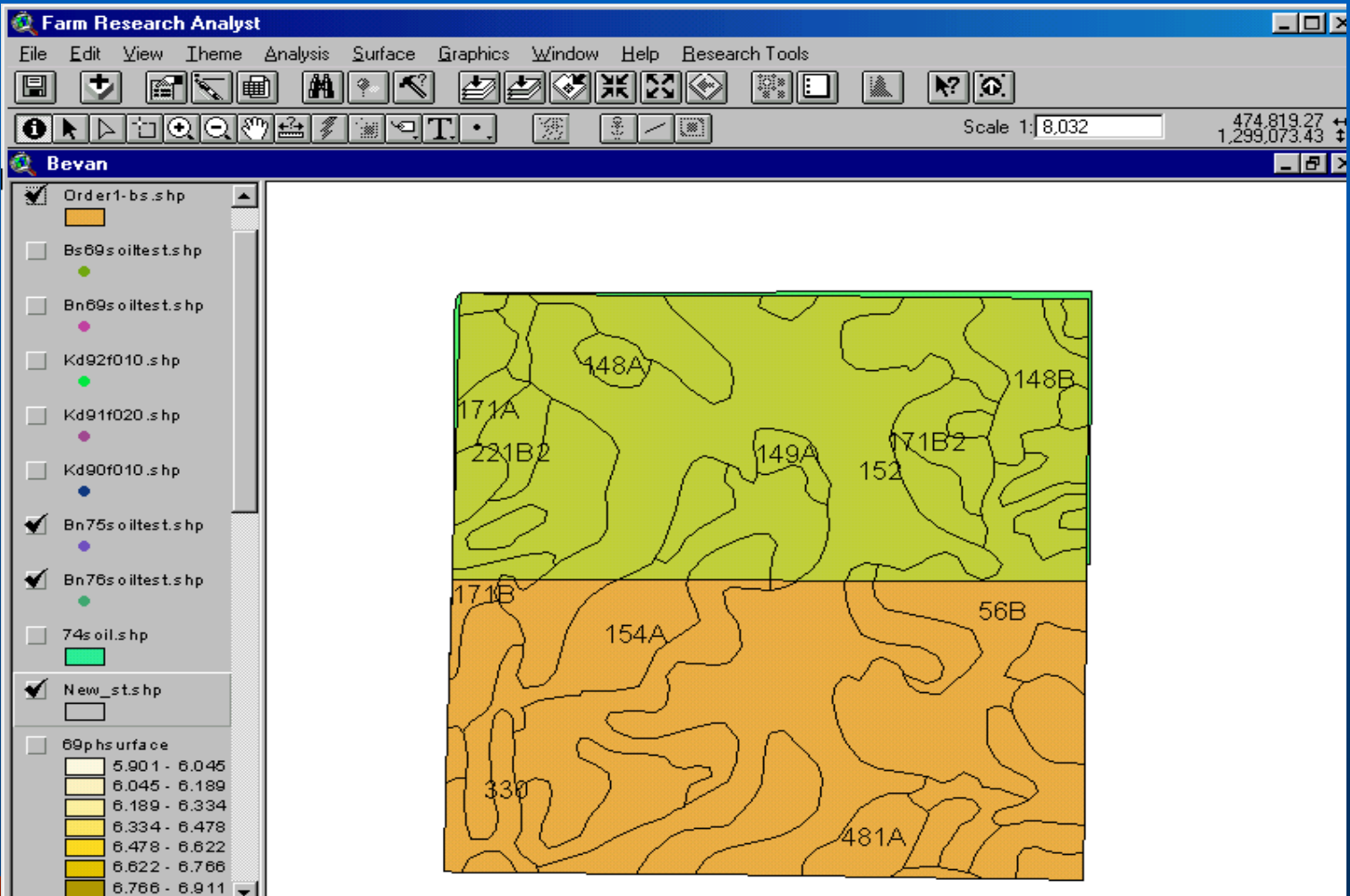
Date/Time	Description	Wind Direction	Wind Speed (mph)	Humidity	Air Temp	Soil Temp
Wed 5/24/2000 7:47 AM	Sunny	W	4.97	80.0%	77.9°F	66.9°F
Wed 5/24/2000 9:25 AM	Sunny	W	4.97	80.0%	77.9°F	66.9°F
Wed 5/24/2000 1:00 PM	Sunny	W	4.97	80.0%	77.9°F	66.9°F
Wed 5/24/2000 3:23 PM	Sunny	W	4.97	80.0%	77.9°F	66.9°F

**Pesticide Operation**

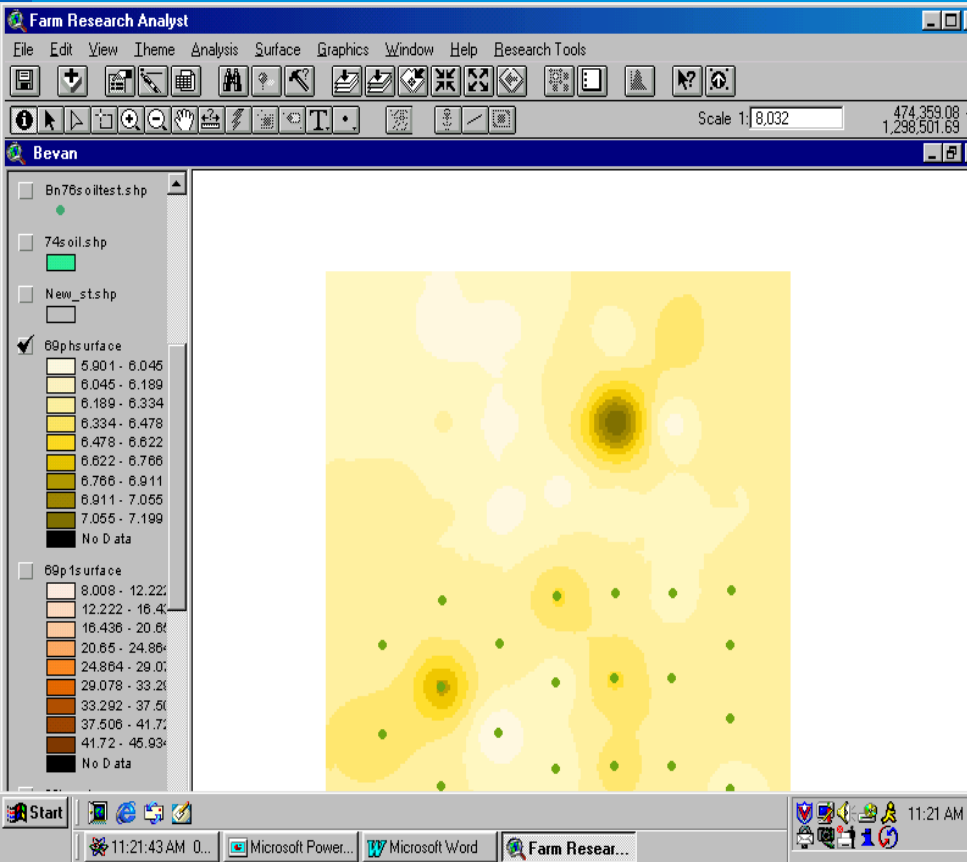
Date/Time	Type	Name	Rate	Depth (in)	Area (acres)	Hours	Quantity Loaded
Wed 5/24/2000 7:47 AM	Herbicide	Basis Gold	14 fl oz/ac	0	44.03	0.65	
Wed 5/24/2000 7:47 AM	Herbicide	Aim	0 fl oz/ac	0	44.03	0.65	
Wed 5/24/2000 9:20 AM	Herbicide	Basis Gold	Off	Off	0.00	0.00	
Wed 5/24/2000 9:20 AM	Herbicide	Aim	Off	Off	0.00	0.00	

Close    Customize...    Favorites...    Print...    Export...    Help

# SOIL TYPES

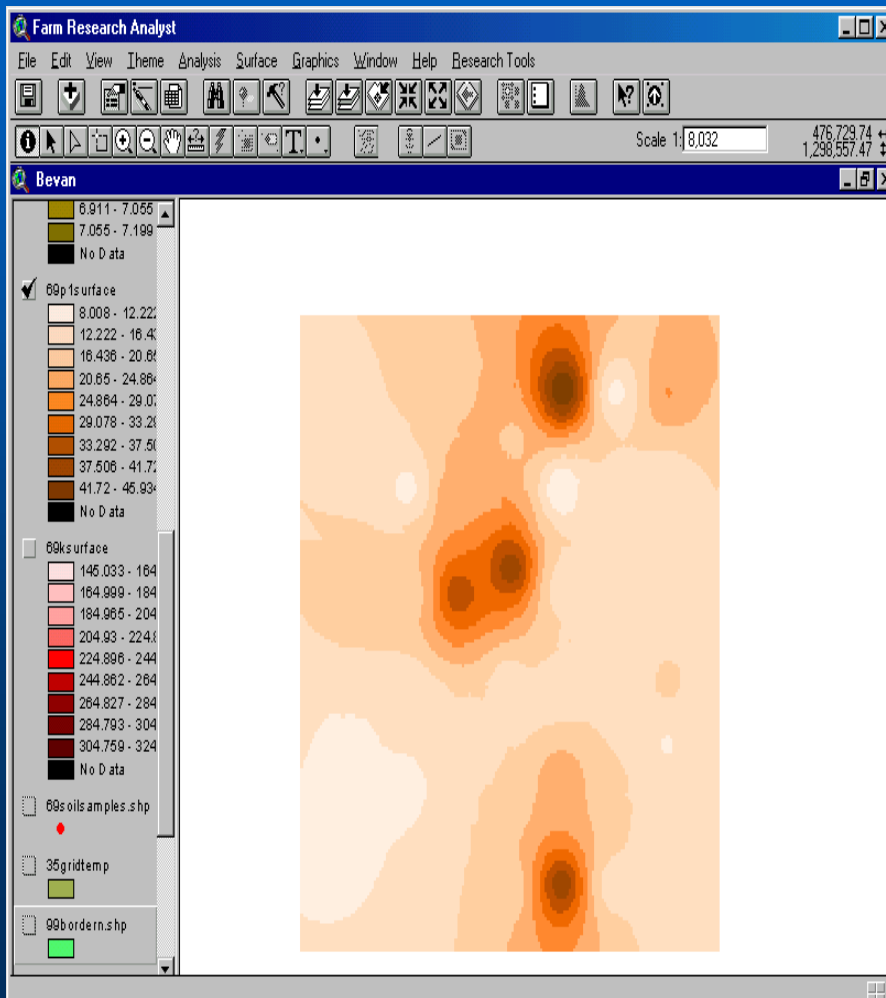


# 1969 pH Map from Soil Test



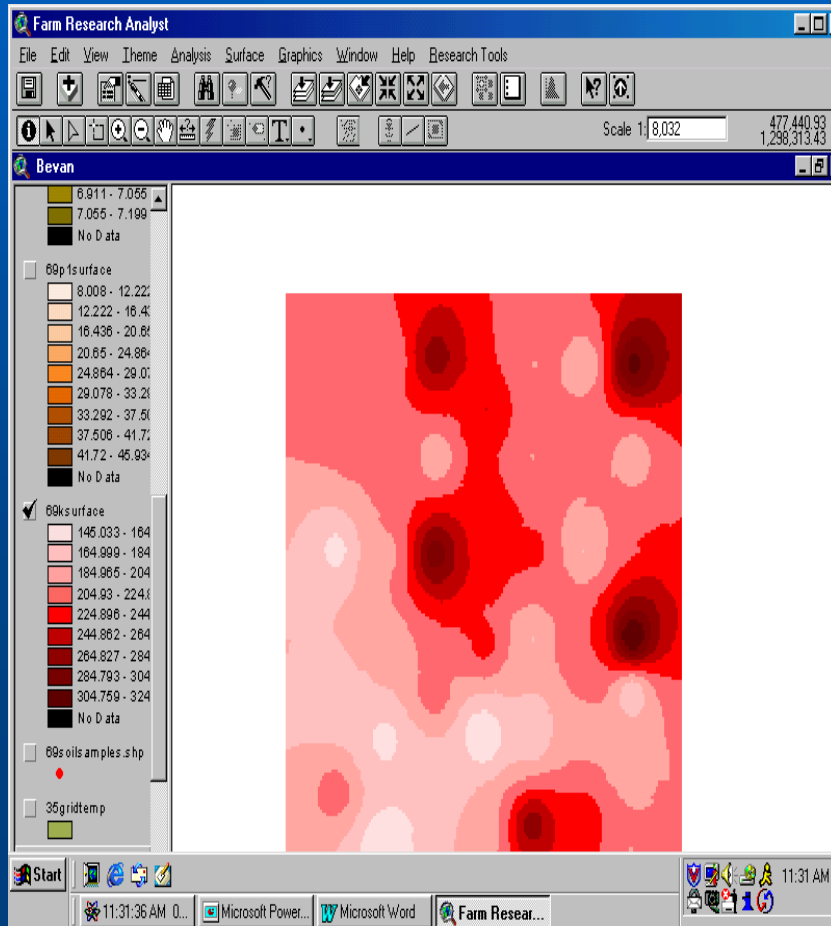
- Early soil test
- Low values
- Need for 4 tons
- Start of build

# 1969 Phosphorus test



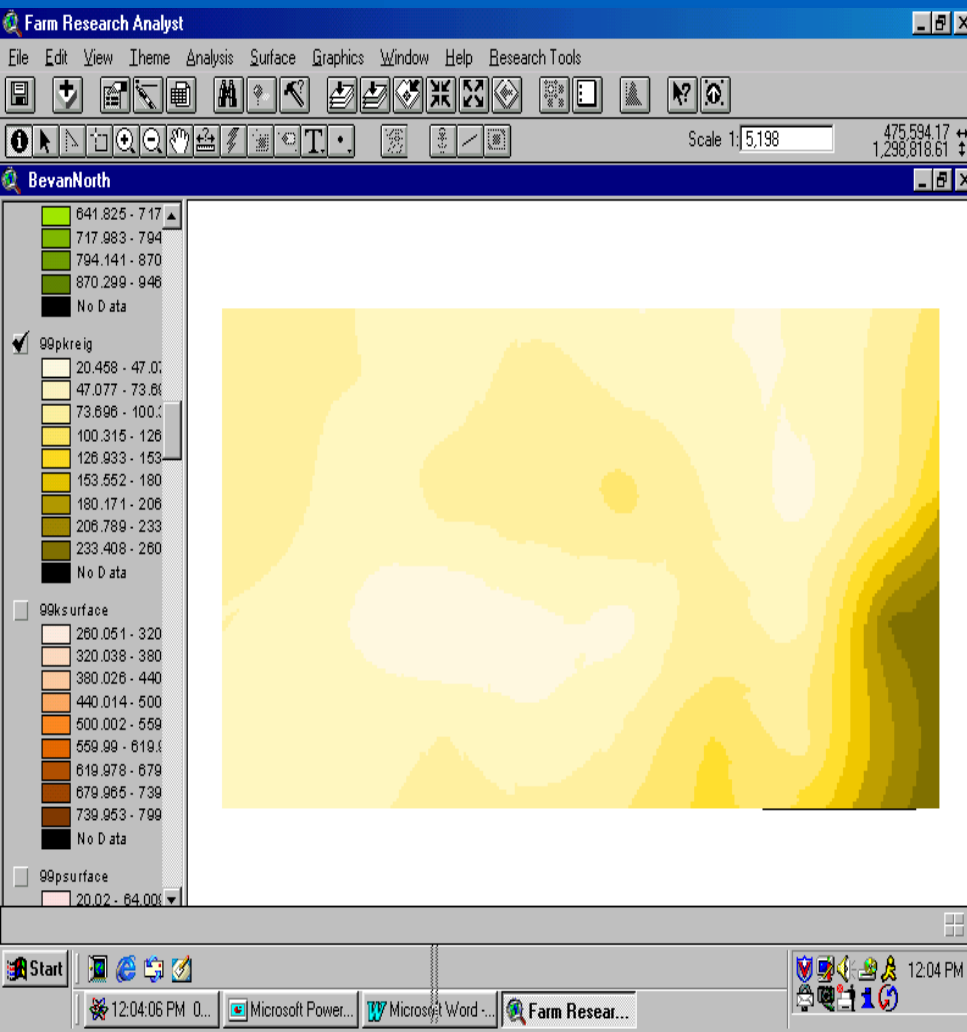
- Low values
- Optimum P1
- 50 Goal

# 1969 Potassium Test



- Optimum Values
- 330- 350
- Need to build
- Long term

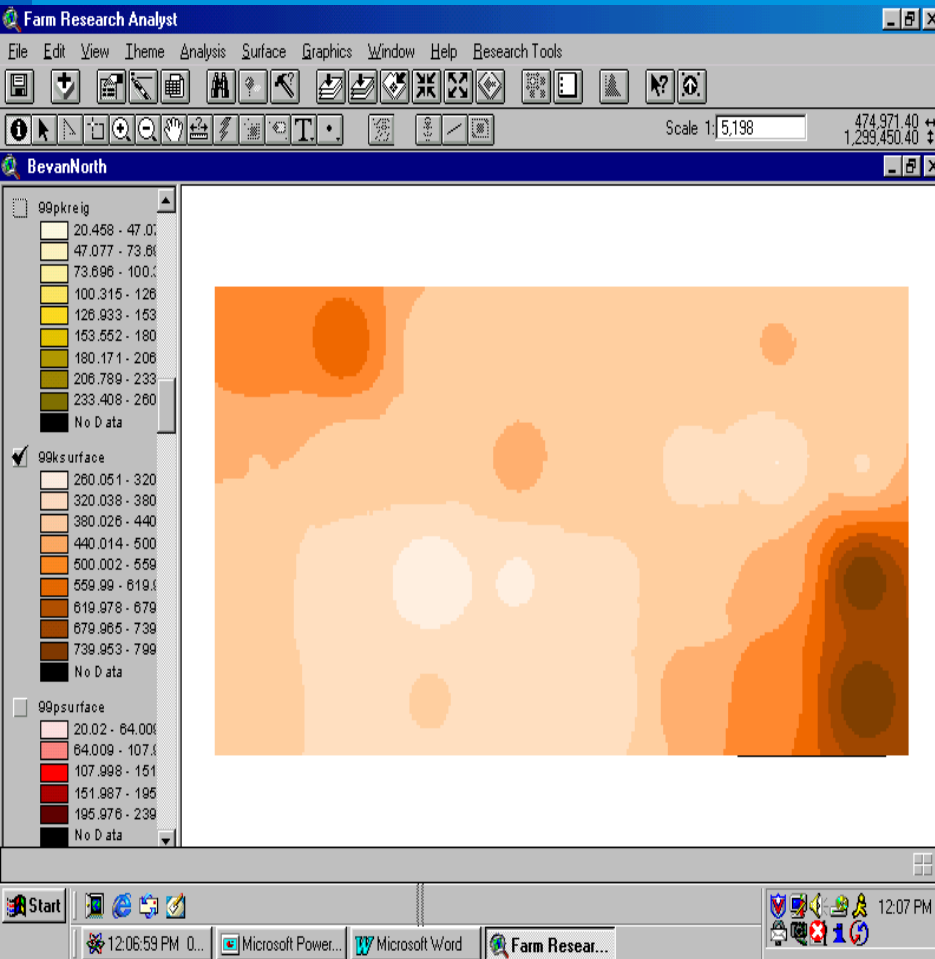
# 1999 Phosphorus Soil Test



- Change over time
- Build to higher
- Meets goals



# 1999 Potassium Test



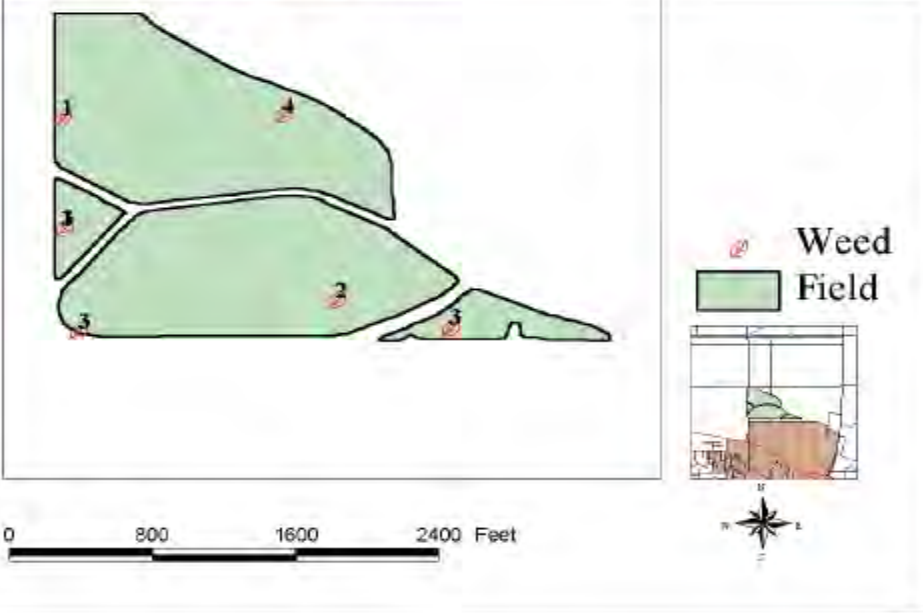
- 30 years of build
- Now meets goal
- Improved yields

# GPS CROP SCOUTING

Acrobat Reader - [siegman.pdf]

File Edit Document View Window Help

Bookmarks Thumbnails



0 800 1600 2400 Feet

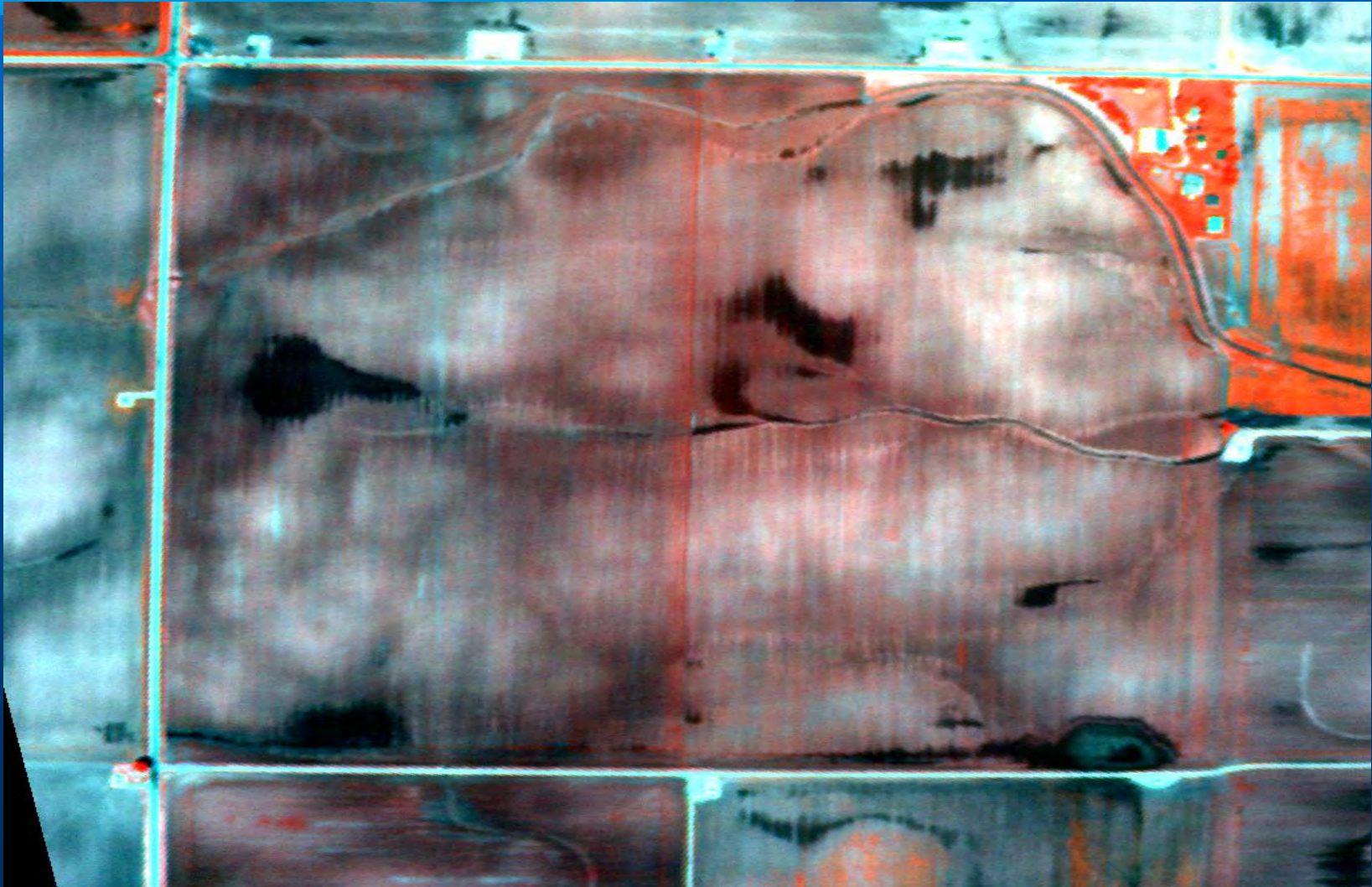
Observations Summary

Site	Acres	Stage	Observed	Date
1		V5 5 Leaves	Hemp Dogbane	05/24/00
1		V5 5 Leaves	Velvetleaf	05/24/00
2		V5 5 Leaves	Field/Hedge Bindweed	05/24/00

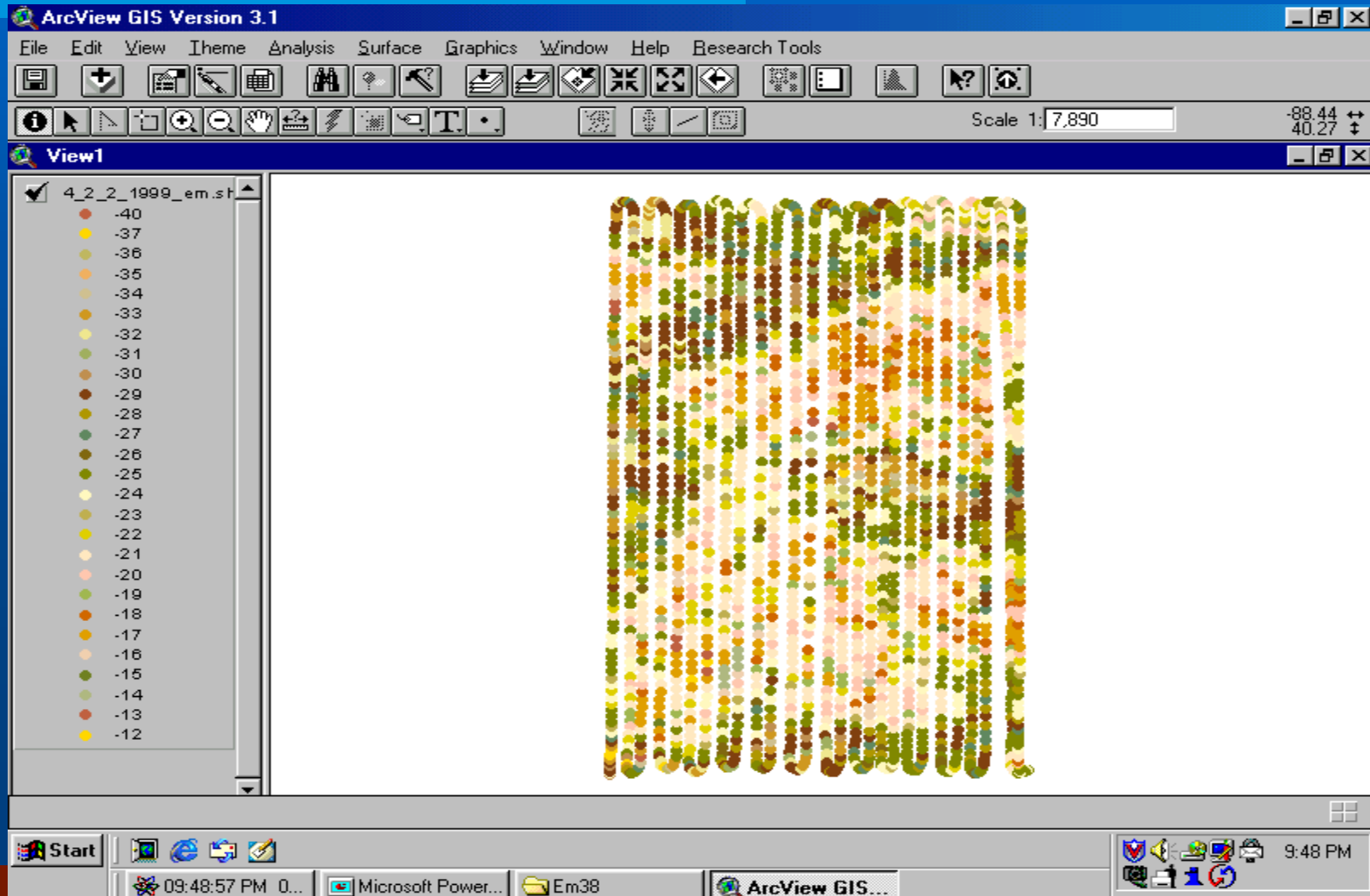
104% 4 of 5 8.5 x 11 in

Start 09:46:03 AM 05/31/00 Eudora Pro - [In] WinZip (Unregistered) Acrobat Reader - ... 9:49 AM

# Aerial Images by Plane



# EM38- Electromagnetic Sensing



# Precision Agriculture

- **Requires more management**
- **Time to analyze**
- **Consult with agronomists**
- **Financial considerations**
- **Plan for future**



File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit RealGuide

Address <http://www.agriculture.com/> Go Links >>



# Smart\_r S\_illing. What's Missing?

Welcome Register Contact us @gShop **New!**

SUCCESSFUL FARMING®

# @griculture Online™

— Voice of the people on the land —

@g Search

agriculture.com

Site reviews, advice, links and more!

[Click here](#)

Name Your Price!

powered by XSAg.com

[Go](#)

**Updates**

- [Markets](#)
- [Weather](#)
- [News](#)
- [@gWorldwide](#)
- [Correspondents](#)

**Interact**

- [Talk](#)
- [@g Poll@](#)
- [Homestead](#)
- [Calendar](#)

## Be a better buyer



The newest feature at @griculture Online, the

## TIPS & TRICKS

### Online shopping for beginners

Reap the benefits of shopping on the Web, and keep your money safe by following a few simple guidelines.

**NEW & IMPROVED**  
New products are introduced to the

**@gShop highlights**

<a href="#">Banvel</a>	\$62.75/gal
<a href="#">Clarity</a>	\$70.38/gal
<a href="#">Command</a>	\$45.90/gal
<a href="#">Glyphosate</a>	\$25.50/gal

Featured seeds  
**Price**

**2-for-1 Savings**

SUCCESSFUL FARMING®

[CLICK HERE](#)

Done Internet

Start

06:12:50 PM 06/11/... HP OfficeJet Status @griculture Onlin... Microsoft Word

6:16 PM





June 11, 2000

- [LOGIN NOW](#)
- [REGISTER NOW](#)
- [AG FINDER SITE GUIDE](#)
- [DAILY MARKET COMMENTS](#)
- [Closing Wrap-Up](#)

**Weather**

- [RADAR](#)
- [FORECAST](#)
- [PRECIPITATION](#)
- [OTHER WEATHER SOURCES](#)

AGWEB CONTENT IS PROVIDED BY:

FarmJournal



**In the Spotlight Now**



9:54 PM - Jun 9, 2000 (Updated 10:02 PM - Jun 9, 2000) CDT

He Won the Truck!

Western Illinois Sweepstakes Winner says he wouldn't mind if his new Dodge Ram pickup got muddy. His crops need the rain.

**Breaking News**

5:13 PM - Jun 9, 2000 (Updated 6:21 PM - Jun 10, 2000) CDT

House passes death tax elimination measure

Senate passage and Clinton approval unlikely, says SCT's Jim

Training Powered by



Our Sponsors

**NEW Cropping System!**  
Get *Two* Crops in One Season!



Question of the Week





**Weather**  
LOCAL FORECAST  
Choose a U.S. location by zip code or city, state  
 go

# Welcome To VantagePoint Network®



See farther.  
Grow smarter.

The agricultural landscape is about to change... and it will happen from your VantagePoint.



## Company Information

The VantagePoint Network is a low cost, easy-to-use information system serving agriculture and the farming community.

**Our Services - Now available!**

HELP ?

**Search4Ag**  
AG SEARCH  
enter keyword(s)  
 go

Local Prices

LDP Rates

News

Members Sign In

Sign Up Now!

Demo Members



"THE BEST AG RESOURCE"



- HOME PAGE
- WEATHER
- MARKETS/CHARTS
- NEWSLETTERS
- MAX ARMSTRONG'S HALL OF FAME
- SEED GUIDE
- US FARMLAND NEWS
- FEATURE ARTICLE
- RESEARCH CENTER
- ARENA OF IDEAS
- INFO BOARD
- MEAT & POTATOES
- FEEDBACK



HOME PAGE

CUSTOMIZE YOUR FARMPAGE

## *"First Look" at Today's Grain Markets*

POST REPORT COMMENTS>>> US Wheat production numbers slightly higher than expected. Yet, supportive world wheat numbers. Corn 2000-01 carryout was lowered a surprising 125 mil bushels. Bean info was neutral. Come see more "post report" comments...

No Audio 9:05 A.M. Update [help](#) [Extended](#)

The 9:05 Update will be available after 9:05 A.M. CST on trading days.  
Note: You need to RealPlayer 7 to listen to Audio. [Click Here](#) to get it.

## *From the Weather Office...*

Updated 6:00 AM CDT 6/10/00

\* This weekend on U.S. Farm Report...a look at next week's weather...will there be more heat & less rain than anyone thinks?? Check you local listings for time and channel.

**Register Now!**

### Farmpage.com Highlights

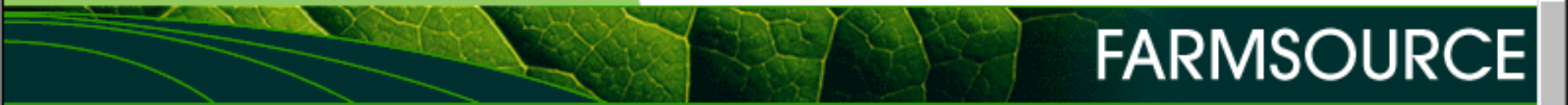
Order your collectible Max Armstrong tractors online - now!

**MAKE FARMPAGE.COM YOUR HOME PAGE!**  
[CLICK HERE](#)

**AGROBYTE** True or False.  
Approximately 25 percent of the flowers or pods produced by a soybean plant fail to develop. [Answer](#)

### ARENA OF IDEAS **Hot Topics**

- [Re: Re: Re: World Wheat Stocks/Sat Weather](#)
- [Re: Re: World Wheat](#)



**PRODUCT UPDATE** [more](#)  
[888 Growers Win Monsanto Save-A-Bundle Sweepstakes](#)

**INDUSTRY NEWS** [customize](#)  
*You can customize the news providers you see by clicking on customize*

**DAILY SPOTLIGHT**

**[Drought Monitor: Midwest dry area shrinking](#)**

*By Pro Farmer Editors 06/09/2000 04:44 AM CST*

The latest update of the U.S. drought monitor shows that the dry area in the Midwest continues to shrink, but there's still the Southeast U.S. to be concerned about. Clearly, this is not an outlook which will help market bulls, especially with the near-term forecast still containing above-normal rains in the Midwest. And, traders

**WHAT'S HOT** [more](#)  
[Roundup Ultra with TranSorB](#)  
Three Times the Power

**YOUR WEATHER** [customize](#)  
Last Updated: 6/10/00

Tomorrow's Forecast  
**Piatt County**  
**Rain**

Sunshine Hours	11
Morning Wind Speed	6
Afternoon Wind Direction	W
Afternoon Wind Speed	4
Frost Intensity/Dryoff Time	LIGHT-DEW-6AM



[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from the University of California



# 2000 Illinois Agricultural Pest Management Handbook

[Front Matter](#)

[Insect Pest Management for Field and Forage Crops](#)

[Weed Control for Corn, Soybeans, and Sorghum](#)

[Weed Control for Small Grains, Pastures, and Forages](#)

[Waterhemp Management in Illinois Agronomic Crops](#)

[Plant Disease Management for Field Crops](#)

[Controlling Rodent Damage in Conservation Tillage Systems](#)

[Insect Pest Management for Stored Grain](#)

[Insect Pest Management for Livestock and Livestock Buildings](#)

[Insect Pest Management for Commercial Vegetable Crops](#)

- [Weed Control for Commercial Vegetable Crops](#)
- [Plant Disease Management for Commercial Vegetable Crops](#)
- [Brush Control in Illinois](#)



[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from the University of California

[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from

# Index to CORN Diseases:

## Seed and Seedling Diseases

- [Seed Rot](#)
- [Seedling Blight](#)

## Leaf Diseases

- [Gray Leaf Spot](#)
- [Anthracnose Leaf Blight](#)
- [Common Corn Rust](#)
- [Southern Corn Rust](#)
- [Northern Corn Leaf Blight](#)
- [Northern Leaf Spot](#)



[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from the University of California

[Common Weeds in No-Till](#)

Nice resource focused weed control in no-till production systems

[Insecticide Treatment for RowCrops](#)

Simple and direct insecticide treatment recommendations organized by crop

[California Weed Guide:](#)

Weed pest. ID and resource guide focused on the California region, from

# Index to SOYBEAN Diseases:

## Leaf And Stem Diseases

- [Bacterial Blight](#)
- [Brown Spot](#)
- [Pod and Stem Blight](#)
- [Downy Mildew](#)

## Root and Lower Stem Diseases

- [Phytophthora Rot](#)
- [Rhizoctonia Stem Rot](#)
- [Sclerotinia Stem Rot](#)





Keyword Search for Cropnet site:

Find It

- |                                     |                               |                             |                          |                         |                         |
|-------------------------------------|-------------------------------|-----------------------------|--------------------------|-------------------------|-------------------------|
| <a href="#">CPM Magazine Online</a> | <a href="#">Resources</a>     | <a href="#">Labels/MSDS</a> | <a href="#">Weeds</a>    | <a href="#">Disease</a> | <a href="#">Insects</a> |
| <a href="#">Crop Consultants</a>    | <a href="#">Ask an Expert</a> | <a href="#">Talk</a>        | <a href="#">Site Map</a> | <a href="#">Email</a>   | <a href="#">Home</a>    |

Select one of the following shortcuts or scroll down for Weed Identification information.

[Weed Identification](#)

[Weed management by weed](#)

[Weed management by crop](#)

[Herbicides: General Information](#)

# Crop Status



- Early dry spring
- Rain June
- Moderate temperatures
- Tassel this week

# Corn as of June 24



- **Research plot**
- **38000 population**
- **3 x maintenance**
- **300 # nitrogen**
- **3 applications**
- **Goal of 300 bushels**
- **Pioneer 34B23**

# Soybeans on June 24



- **Research plots**
- **Weather stations**
- **225,000 planter per acre**
- **Asgrow 2704STS**
- **3 x maintenance**
- **Ph of 6.5**



# Economics

## ● Soybeans

COST PER HECTARE FOR SOYBEANS			
Seed beans at 500,000 per acre		48	
Burndown herbicide			
Authority 2.3oz x 2.5		10,5	Roundup Ready
Canopy XL 2.6oz x 2.5		16,25	Seed 500,000
Exchange 4oz x 2.5		1,55	Technology fee
Post Emergence herbicide			5 liters Roundup
Synchrony .5oz x 2.5		10,63	.5 liters 2,4-D
Poast Plus 24oz x 2.5		24	
Exchange 4oz x 2.5		1,66	Machinery
Border Plus 1# x 2.5		2,5	Real Estate Taxes
LIME 2.5 tons		35	Land Charge
Potash 168kg 0-0-60		31,88	
Machinery			3.3 tons
Spray herbicide 2x		8,75	Expenses
Combine		55	NET
Haul		5,4	
Real Estate Taxes		70	3.6 tons
Land /charge \$7000@5%		350	Expenses
			NET
	TOTAL COST	671,01	
3.3tons per hectare @273.00		682,5	4.2 tons
minus expense		671,01	Expenses
NET		11,5	NET
3.6tons per hectare @294.84		737,1	
minus expense		671,01	
NET		66,1	
4.2tons per hectare @316.68		791,7	
minus expense		671,01	
NET		120,7	

# Economics

## ● Corn

COST PER HECTARE			
SEED CORN		200,000 seeds per acre	70
FERTILIZER	224kg.	18-46-0	66,25
	224kg.	0-0-60	42,5
NITROGEN	180kg.	82-0-0	49,5
N/SERVE		nitrogen stabilizer	18,75
FORCE	insecticide	8.7pounds	35,5
Fultime	7.7liters		57,2
Aatrex	1.5liters		2,7
Crop Oil	1.5liters		1,3
		Total Variable	343,7
Machinery			
	NH3 application		15
	Tillage		18,75
	Plant		23,75
	Spray herbicide		8,75
	Combine		67,5
	Haul		15
		Total Machinery	138,75
REAL ESTATE TAXES			
			70
	Land Charge \$7000@5%		350
		Total Land	420
		TOTAL COST	902,45
9.9 tons corn at 2.15		849,25	
Government payment		91,16	
	TOTAL INCOME	940,41	NET 36
11.67 tons corn at 2.15		999,75	
Government payment		91,16	
	TOTAL INCOME	1090,91	NET 188,5

Bt corn will add 102.50 expense if used.

# Thanks for the opportunity.

- **Farmer to Farmer experience**
- **Living in a different environment**
- **World markets for all**
- **Finding Value for all products**
- **Genetically modified products**