

Q:

How Do
You Know
if Precision Ag
Really Pays?



Taking
Precision
Farming
to Your
Bottom Line

A:

Ag Leader[®]
Technology

E X A M P L E S F R O M T H E R E A L W O R L D

Greetings,

We at Ag Leader Technology are proud to present to you our second edition of how precision agriculture has paid for many of our users. Over the past 12 years we have heard many examples of how Ag Leader products have improved growers bottom line. This book is intended to illustrate some of these examples given to us. Each page is a specific example beginning with a question like: How does Planting Speed Affect Yield? Followed by a paragraph explaining the situation & a "Bottom Line" totaling the savings involved. The page also contains pictures that in many cases show the actual calculations of the savings provided.

Many of these examples provide proof that collecting the data is the first essential step of the process. The second essential step is reading the data & establishing "real" numbers from the data. For example: "Does Variable Rate Planting Pay?" Yes, if you do the following:

- ▶ Collect the different rates planted
- ▶ Collect the harvest data
- ▶ Analyzing the data in the software

The final step is often overlooked to determine the better rate or more profitable rates used for the season. This information will give you an informed indication of rates to plant for the following year.

We invite you to read these examples and consider some questions you have about your farm that you would like to begin to answer.

Feel free to contact our Technical Support group for questions you have concerning this booklet.

Enjoy your copy of "How Do You Know if Precision Ag Really Pays"!



Which Hybrid Yields Better?

You identify a corn hybrid that yields 5 bu/acre better in the 60 acres of lowland in your field.

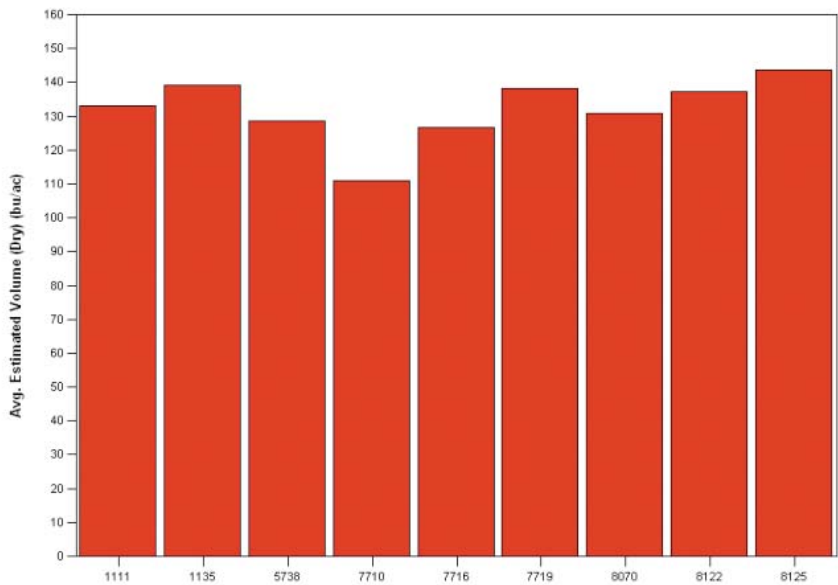
5 bu.
X 60 acres
X \$2.50 corn
= \$750

Bottom Line:

\$750



Corn Yield by Variety



SMS can give you a quick report of yields by variety on each field for accurate comparison

Corn Yield By Variety

Analysis Description	
Compare attributes/properties	
C & G Farms Rented South 120 2003 Grain Harvest CORN (ALL) (ALL)	
Analysis Results- Estimated Volume (Dry), Moisture	
Classified By- Planting : Dataset - Name	



Dataset - Name	Avg. Estimated Volume (Dry) bu/ac	Avg. Moisture %	Area ac	Total Estimated Volume (Dry) bu
1111	133.00	13.52	0.534	71.07
1135	139.20	13.89	0.537	74.73
5738	128.68	13.86	29.75	3,828.8
7710	111.02	13.47	1.943	215.75
7716	126.73	13.48	0.508	64.42
7719	138.13	13.64	0.509	70.36
8070	130.95	13.27	3.060	400.76
8122	137.14	14.06	23.16	3,176.0
8125	143.61	13.92	0.390	56.02
(ALL)	131.76	13.89	60.40	7,957.9

How Does Planting Speed Affect Yield?

Planting analysis shows that when planting at a speed greater than 5 mph, your yield decreased by 22 bushels over 10 acres.

22 bu/acre

X 10 acres

X \$2.50 corn

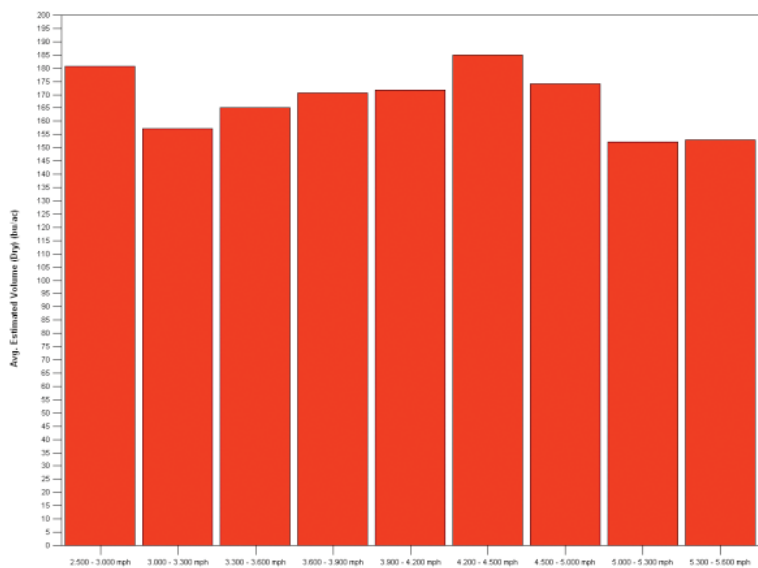
= \$550.00

Bottom Line:

\$550.00



Yield by Planting Speed



Analysis Description

Compare attributes/properties

Don & Bonnie Farms | Boender Farm | East Boender | 2002 | Grain Harvest | (ALL) | (ALL) | (ALL)

Analysis Results- Estimated Volume (Dry)
Classified By- Planting : Speed



Speed	Avg. Estimated Volume (Dry) bu/ac	Total Estimated Volume (Dry) bu	Min. Estimated Volume (Dry) bu/ac	Max. Estimated Volume (Dry) bu/ac
2,500 - 3,000 mph	164.44	11.04	125.41	193.00
3,000 - 3,300 mph	146.28	29.73	125.41	175.33
3,300 - 3,600 mph	164.96	58.17	134.95	188.37
3,600 - 3,900 mph	165.55	127.19	118.70	197.93
3,900 - 4,200 mph	161.85	226.76	90.77	196.40
4,200 - 4,500 mph	167.11	772.80	71.53	204.64
4,500 - 5,000 mph	168.63	13,795	71.53	219.32
5,000 - 5,300 mph	169.56	689.93	90.77	219.32
5,300 - 5,600 mph	165.36	40.77	142.87	184.19
Other	151.55	8,126	138.85	163.06
(ALL)	168.39	15,760	71.53	219.32

Does Variable Rate Planting Pay?

On farm trials indicate your better soils can support a higher corn population, increasing your yield in these 60 acres by 10 bu/acre. You also discover by lowering the planting rate on lower potential soils, your yield can be held the same with less seed costs on those acres.

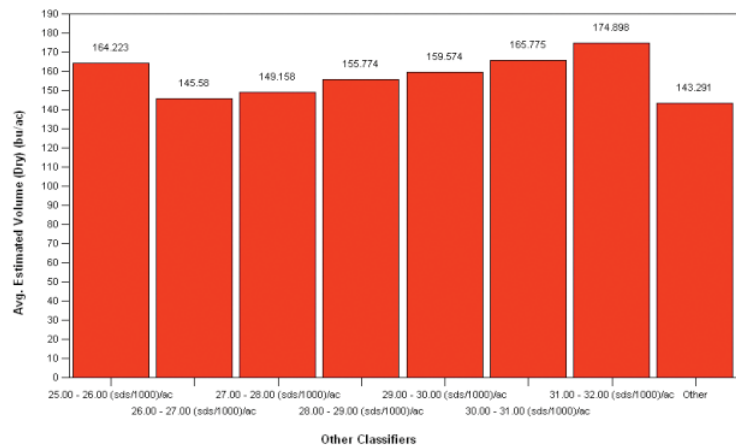
10 bu/acre
X 60 acres
X \$2.50 corn
= \$1,500.00

Bottom Line:

\$1,500.00



Yield grouped by Planting Rates



Analysis Description
Compare attributes/properties
Don & Bonnie Farms Boender Farm West Boender 2003 Grain Harvest (ALL) (ALL) (ALL)
Analysis Results- Estimated Volume (Dry), Moisture Classified By- Planting : Rate Applied(Count)



Rate Applied(Count)	Avg. Estimated Volume (Dry) bu/ac	Total Estimated Volume (Dry) bu	Min. Estimated Volume (Dry) bu/ac	Max. Estimated Volume (Dry) bu/ac	Avg. Moisture %
25.00 - 26.00 (sds/1000)/ac	164.22	6,785	151.82	176.63	15.29
26.00 - 27.00 (sds/1000)/ac	145.58	767.44	56.61	201.51	21.82
27.00 - 28.00 (sds/1000)/ac	149.16	3,165.3	29.15	228.30	16.86
28.00 - 29.00 (sds/1000)/ac	155.77	660.33	36.11	211.94	17.23
29.00 - 30.00 (sds/1000)/ac	159.57	2,183.1	26.14	216.31	20.39
30.00 - 31.00 (sds/1000)/ac	165.77	2,333.0	16.74	214.91	15.53
31.00 - 32.00 (sds/1000)/ac	174.90	2,459.7	34.75	232.89	18.71
Other	143.29	31.26	92.66	187.71	18.42
(ALL)	159.42	11,607	16.74	232.89	18.01

How Do You Track Where You Planted Each Hybrid?



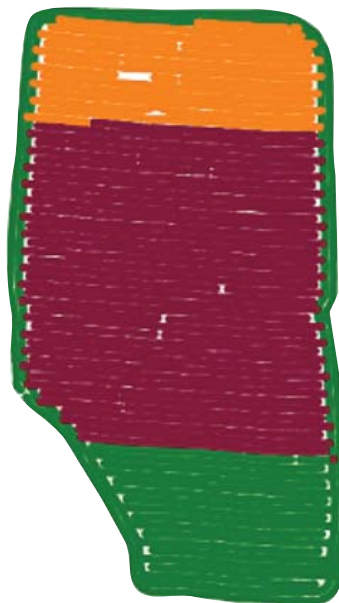
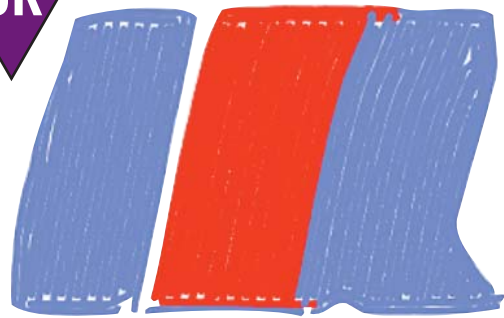
A Using the old “flags and bags” method of tracking variety changes in your field? Ag Leader monitors can record exact locations of each variety planted. With this information, you can make better hybrid decisions. Planting a hybrid that yields just 10 bu/acre more because of better information can have a huge impact on your bottom line.

	10 bu/acre
X	180 acres
X	\$2.50 corn
=	\$4,500.00

Bottom Line:

\$4,500.00

OR



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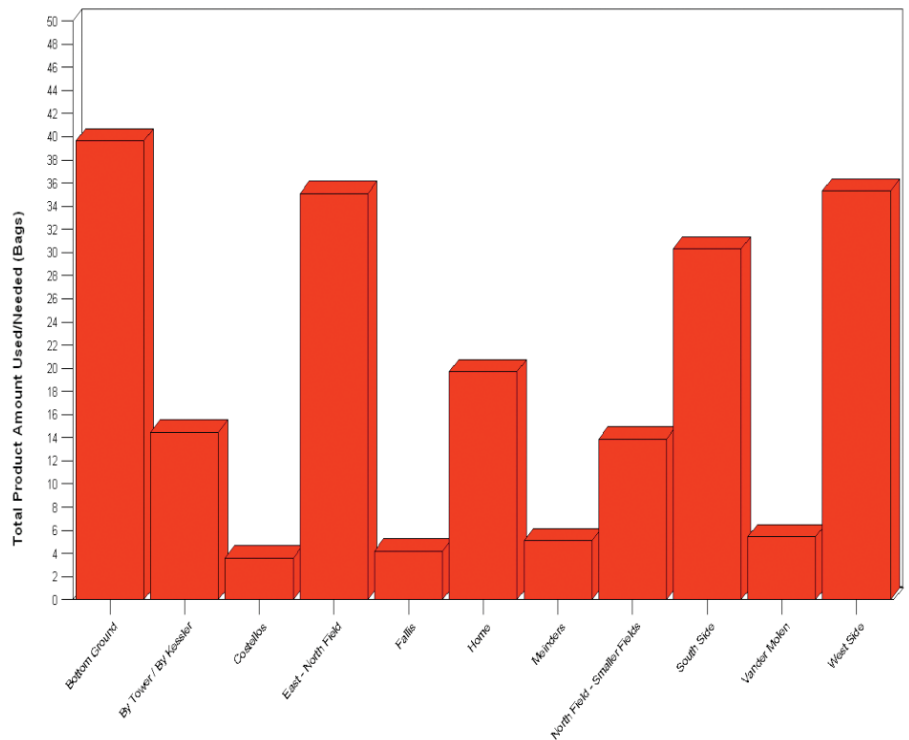
How Much Seed Should You Order?

A SMS Software can help you and your crop advisor determine how much seed should be delivered to each field. If you have a number of fields and varieties/hybrids, you can eliminate overestimating seed needs and time cleaning out the planter between fields.

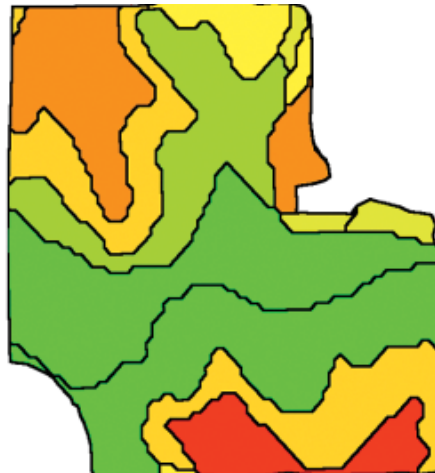
Bottom Line:

Better organization of field operations for better efficiency.

Number Bags Needed Per Field



Q Which Soil Type Yields Best?



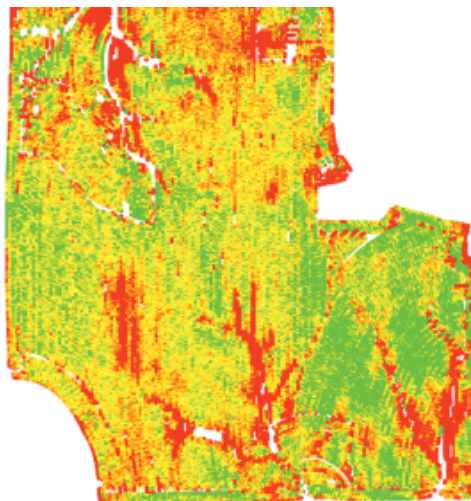
- OTLEY
- MAHASKA
- GIVIN
- NIRA
- CLARINDA

A After a few years of yield data, you can begin to see yield trends that follow soil zones. This information gives you the power to create variable prescriptions for seeding across your fields. This leads to better hybrid selection for each field – and an overall increase of 15 bu/acre across 80 acres.

15 bu/acre
X 80 acres
X \$2.50 corn
= \$3,000.00

Bottom Line:

\$3,000.00



Yield by Soil Type

Analysis Description	
Yield By Hybrid By Soil Type	
Don & Bonnie Farms McMains East McMains 2003 Grain Harvest (ALL) (ALL) (ALL)	
Analysis Results- Estimated Volume (Dry), Moisture Classified By- Soils : Soil Type	



Soil Type	Avg. Estimated Volume (Dry) bu/ac	Total Estimated Volume (Dry) bu	Min. Estimated Volume (Dry) bu/ac	Max. Estimated Volume (Dry) bu/ac	Avg. Moisture %	Area ac
CLARINDA	161.82	1,645.9	14.53	304.13	16.99	10.17
CLINTON	169.79	2,929.2	18.63	278.23	15.35	17.25
FAYETTE	176.73	1,783.0	10.34	286.09	14.87	10.09
GIVIN	188.85	441.78	63.74	249.15	17.36	2.339
HEDRICK	154.35	1,091.5	10.29	243.34	15.35	7.072
LADOGA	179.77	1,357.5	58.88	241.78	15.03	7.551
LINDLEY-KESWICK COMPLX	146.65	34.84	60.90	249.95	14.34	0.238
MAHASKA	180.54	5,614.4	12.28	288.83	14.50	31.10
NIRA	172.84	2,055.4	16.31	318.58	17.28	11.89
OTLEY	179.86	2,649.4	24.07	311.79	15.94	14.73
(ALL)	174.35	19,603	10.29	318.58	15.52	112.43

How Can You Put a Value on Your Land Based on Productivity?

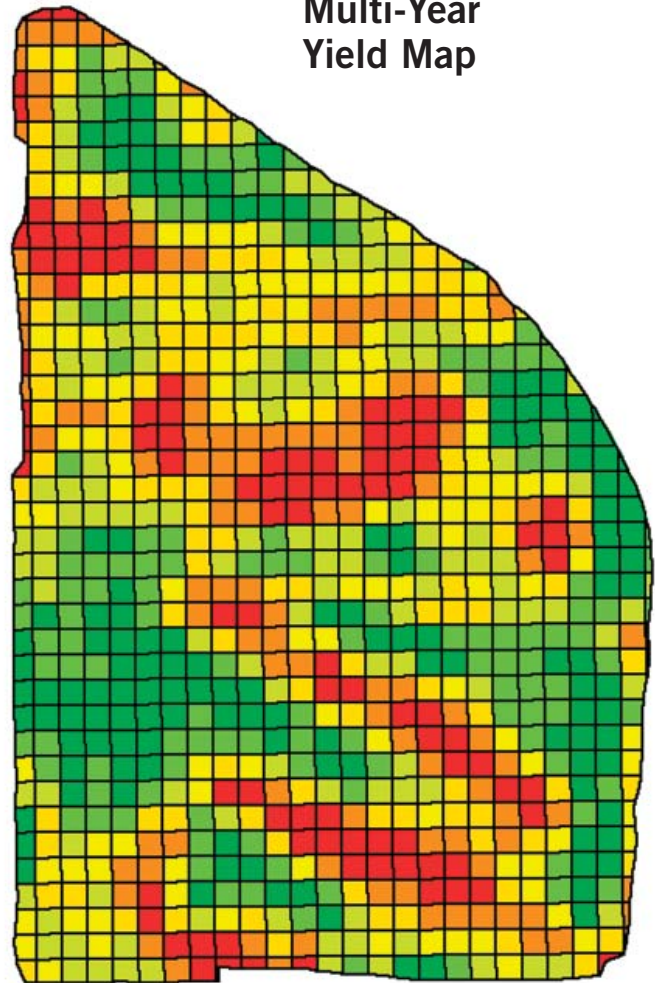
Local farmland is selling for \$1,500 per acre. Your historical records allow you to demonstrate to your buyer that your land is consistently yielding on average 10% more than those around you allowing you to sell your land for a 5% premium. Total premium for your 300 acres: \$22,500.

Bottom Line:

5% land premium



Multi-Year Yield Map



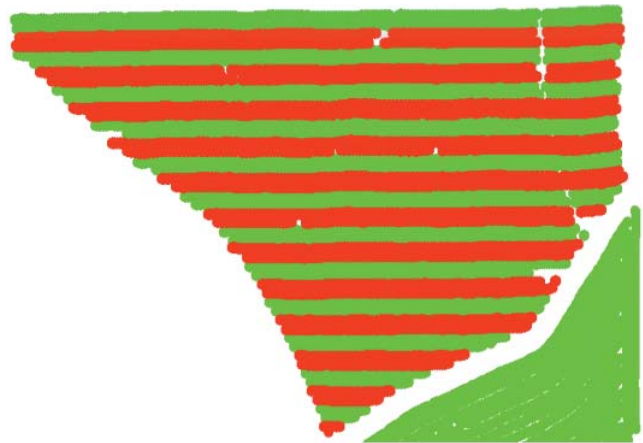
**Estimated Volume (Dry)
(bu/ac)**

Dark Green	175.27 - 187.47
Medium Green	168.23 - 175.27
Light Green	161.43 - 168.23
Yellow-Green	152.81 - 161.43
Yellow	141.33 - 152.81
Orange	127.65 - 141.33
Red	84.09 - 127.65

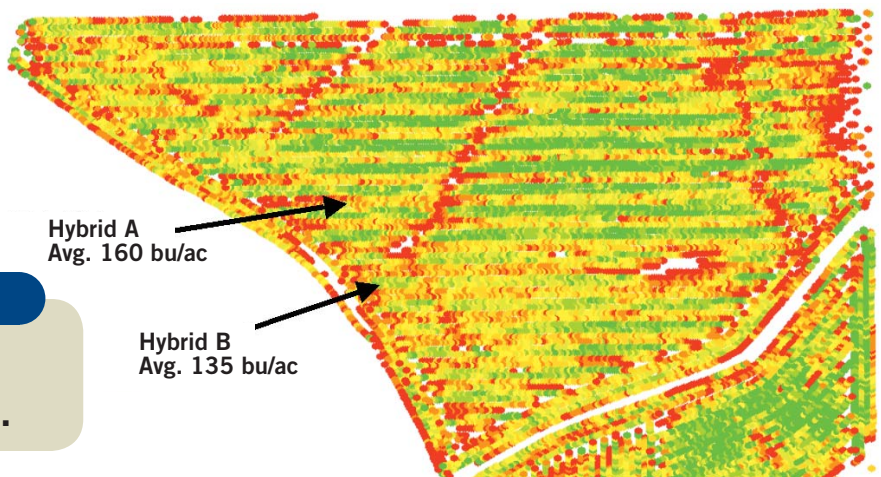
How Do You Record Split Planter Farming?



Most seed companies recommend hybrid diversity as part of your planting strategy to ensure that you don't put "all your eggs in one basket". By recording each hybrid by row, you can better track each hybrid's performance to help you make better hybrid selections in the future.



	25 bu.
X	60 acres
X	\$2.50 corn
=	\$3,750.00



Bottom Line:

Better hybrid decisionmaking.



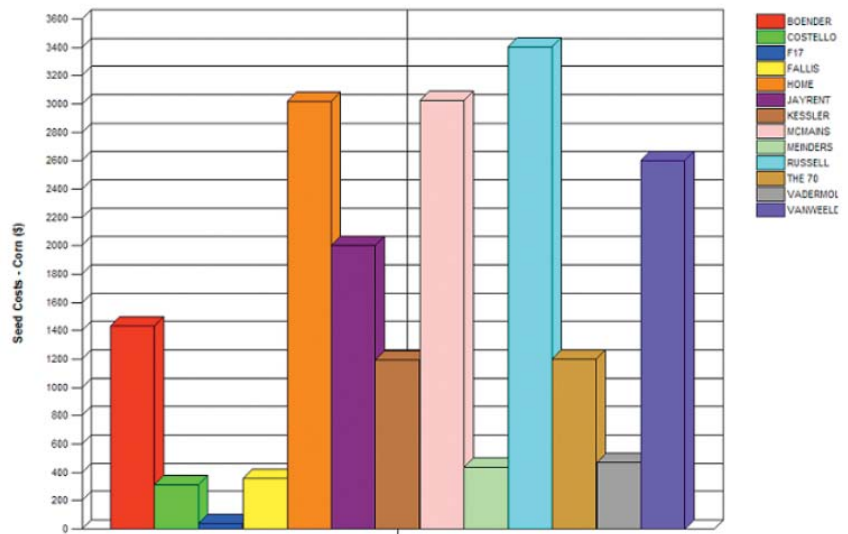
How Do You Track Planting Input Costs?

It's not always yield that determines what you should plant next year. As more seed treatments, traits and technologies are offered, the cost of your inputs – and the chemicals used with them increases. By knowing what you're paying for your planting inputs, you can make better planting decisions.

Bottom Line:

Better cost control

Seed Costs - Corn



Can an Auto-Steer Interface Improve Your Bottom Line?

Ag Leader is proud to provide an Auto-Pilot Interface, which will automatically guide you through your fields. Auto-Pilot will virtually eliminate skips & overlaps. Ag Leader's Insight display is not only capable of recording your planted hybrids and rate of planting, but can simultaneously steer your machine through the field.

Bottom Line:

Insight = Endless Capabilities



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Does Variable Rate Fertilizer Application Pay?

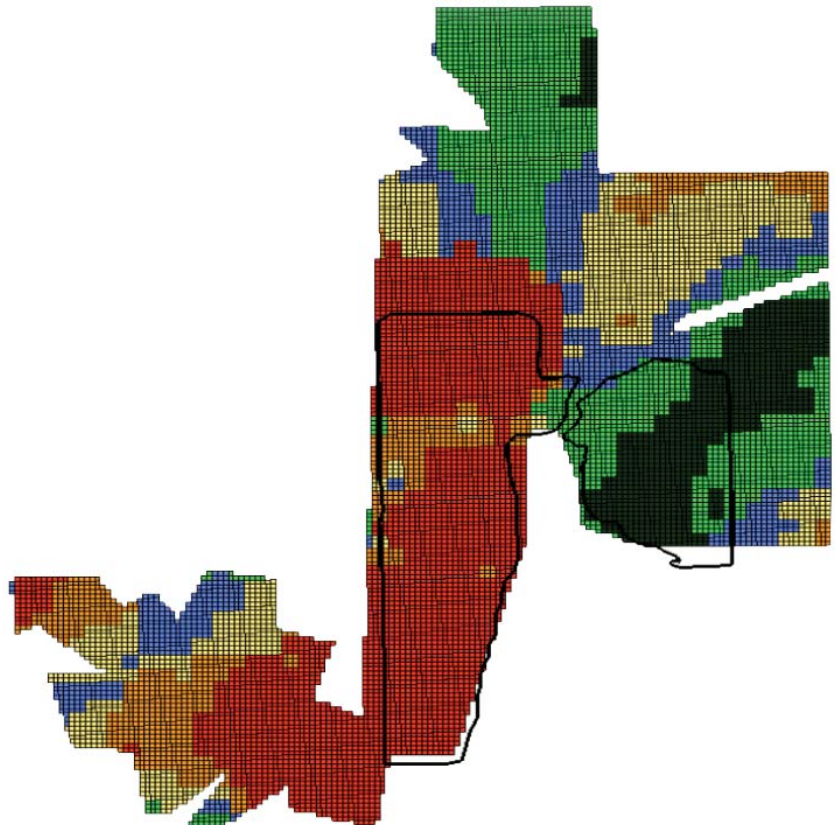
The cost of “blanket” fertilization across your field is \$4,985 (\$4,610 fertilizer, \$375 application). By switching to variable rate application, you save significantly by decreasing the amount of fertilizer needed.

Variable rate application:

Fertilizer cost	\$2,615
Soil samples	\$790
TOTAL:	\$3,450

Bottom Line:

\$1,580.00



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How Do You Tell Your Ag Supplier Where Your Field is Located?

A By showing your ag supplier a map of your field locations for custom application, you eliminate problems associated with miscommunication and/or misapplication.



Print your field in poster size for display in your office.

Bottom Line:

**Better communication
with your ag supplier.**

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How Can You Reduce Overlaps and Skips in Your Fields?

Many applicators overlap 18-36 inches on a 60 ft boom. Over 2,000 acres you have about 66 acres of overlap. By using an Ag Leader Light Bar, overlaps are reduced to an average of 6 inches, saving you the extra costs associated with wasted chemicals.

\$10/ac (Chemical cost)
X 66 acres
= \$660 Savings

Bottom Line:

\$660.00



OR



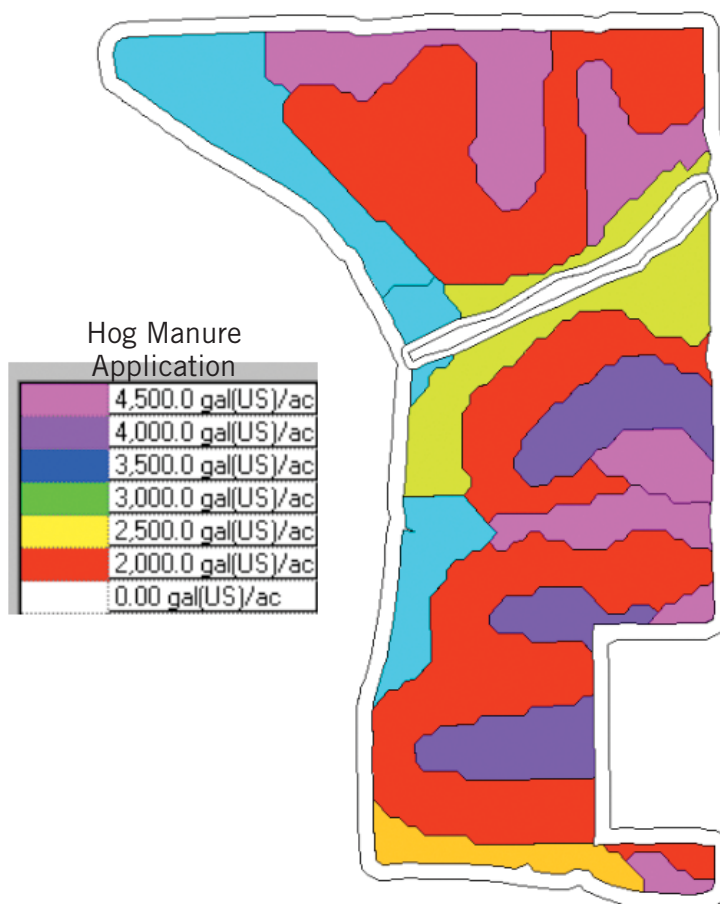
Use the Pause/Resume Feature

How Do You Demonstrate Environmental Compliance?

As environmental regulations get tighter, it is more important than ever to not only adhere to these regulations, but also to prove it. With Ag Leader SMS software, you can easily apply buffer areas around waterways to avoid problems from manure, fertilizer or chemical applications. And because you can record your field activities with GPS, you can prove that you're in compliance.

Bottom Line:

Avoid fines

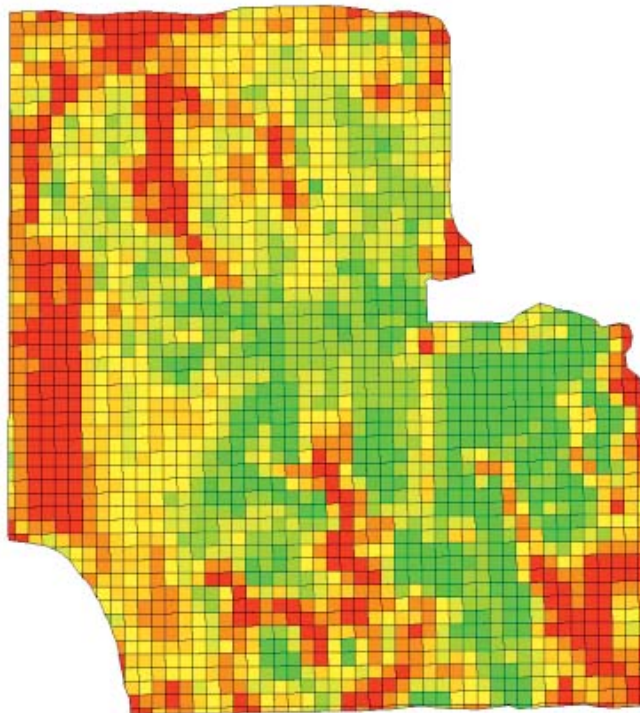


120 Ft Buffer Around Waterways
and Edge of Field

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Can You Use Yield Maps to Spread Fertilizer Based on Removal Rates?

Using your yield map, Ag Leader SMS software can help you write prescriptions and spread fertilizer based on actual yield removal rates. That means reduced fertilizer usage compared to “blanket” rate coverage.



Bottom Line:

Avoid overapplication of fertilizer

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Define Result Equation(s)

Define equations for expressions for the selected output results to generate an analysis result dataset.

Select Output Result: DAP Prescription

Description:

Equation Components:

Component Types:

- Comment
- Constant
- Operators
- Symbols

Constant:

Data Format: Decimal Number

Selection List Type: Enumerated Value

Enter Value: 375

Date Value: 2/17/2004

10:59:23 AM

Enter Component(s) Manually

Add To Equation

Result Equation:

RESULT = [Estimated Volume (Dry)] * 0.375

< Back Finish Cancel Help

Does Your Field Need Lime?

Soil tests show low pH levels in some areas and your yield maps verify it with low yield areas. You apply lime on your 464 acre field at a cost of \$25/ton (515 ton total). Yield increases by 15 bu/acre.

Lime Cost:

\$25/ton

X 515 tons

= \$12,875

Yield Profit:

15 bu/acre

X 464 acres

X \$2.50 corn

= \$17,400

Bottom Line:

\$4,525.00



Product:	Lime
Year:	2003
Operation:	Fertilizing Prescription



Grower	Farm	Field	Area ac	Estimated Amount lb	Average Target Rate lb/ac
Don & Bonnie Farms	Home	Center and Contour Boundary	78.71	74,060	940.90
		Corner Home	25.76	10,559	409.86
	Kessler	East Kessler	35.06	1,341.9	38.27
		North Kessler	27.40	11,044	403.05
	McMains	West McMains	86.29	70,291	814.61
	The 70	70 Center	23.79	3,684.1	154.83
70 Outside		29.71	7,366.3	247.98	
Michael & Leah	East Side	M East North	131.77	147,366	1,118.4
	West Side	M Hog Shed	39.61	36,371	918.22

Totals	478.10	362,083	757.34
			Average

How Much K, P Is Right for Your Soybeans/Corn?

With Ag Leader SMS software, you are able to show a relationship between yield levels and fertilizer levels to help determine the most economic nutrient levels. Over 5 years, yield has increased by one bu/acre across your 77 acre field (385 total acres over 5 years).

1 bu/acre
X 385 acres
X \$6.00 beans
= \$2,400.00

Bottom Line:

\$2,400.00



Yield by Soil K Levels

Analysis Description					
Compare attributes/properties					
Don & Bonnie Farms McMains West McMains 2003 Grain Harvest (ALL) (ALL) (ALL)					
Analysis Results- Estimated Volume (Dry) Classified By- Soil Sampling : Soil K					



Soil K	Avg. Estimated Volume (Dry) bu/ac	Total Estimated Volume (Dry) bu	Min. Estimated Volume (Dry) bu/ac	Max. Estimated Volume (Dry) bu/ac	Area ac
100.00 - 130.00 ppm	37.35	666.29	5.689	82.99	17.84
130.00 - 140.00 ppm	36.34	606.02	7.041	71.59	16.67
140.00 - 150.00 ppm	32.39	151.07	15.37	53.22	4.664
150.00 - 160.00 ppm	32.20	332.88	6.629	59.41	10.34
160.00 - 170.00 ppm	36.07	462.11	5.510	76.52	12.81
170.00 - 180.00 ppm	37.43	111.95	20.69	58.39	2.991
180.00 - 190.00 ppm	35.87	15.75	24.09	43.30	0.439
190.00 - 200.00 ppm	39.50	218.91	16.21	58.06	5.542
200.00 - 240.00 ppm	41.09	231.68	6.290	75.69	5.638
(ALL)	36.35	2,796.7	5.510	82.99	76.94

Yield grouped by P Fertility Levels

Analysis Description					
Compare attributes/properties					
Don & Bonnie Farms McMains East McMains 2003 Grain Harvest (ALL) (ALL) (ALL)					
Analysis Results- Estimated Volume (Dry) Classified By- Soil Sampling : Soil P1					



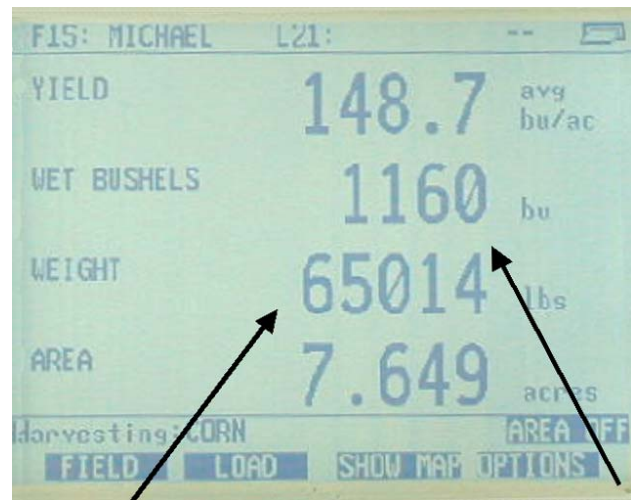
Soil P1	Avg. Estimated Volume (Dry) bu/ac	Total Estimated Volume (Dry) bu	Min. Estimated Volume (Dry) bu/ac	Max. Estimated Volume (Dry) bu/ac	Area ac
8.000 - 12.00 ppm	171.32	735.31	10.34	242.92	4.292
12.00 - 16.00 ppm	172.12	1,535.6	22.30	239.56	8.922
16.00 - 20.00 ppm	172.64	2,235.4	12.28	269.28	12.95
20.00 - 24.00 ppm	173.03	3,358.6	16.31	318.58	19.41
24.00 - 28.00 ppm	174.83	3,726.3	14.19	311.79	21.31
28.00 - 32.00 ppm	175.56	2,063.2	13.43	286.09	11.75
32.00 - 36.00 ppm	176.24	2,223.4	10.29	255.80	12.62
36.00 - 40.00 ppm	170.03	1,331.2	32.19	278.23	7.829
40.00 - 44.00 ppm	185.54	719.69	51.01	272.21	3.879
44.00 - 200.00 ppm	183.52	1,143.2	14.75	226.44	6.229
(ALL)	174.67	19,072	10.29	318.58	109.19

How Do You Fill Your Grain Holding Containers?

Knowing how many bushels you're delivering to your bin helps you keep track of when you need to move to the next bin. If your empty bins are several miles away, knowing this can eliminate extra time and expense in hauling your grain. And, that means your harvester doesn't have to stop running while it waits to unload.

Bottom Line:

Fewer hours in the field and lower transportation costs.



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How Can Tracking Historical Yield Results Improve Your Bottom Line?

Historical data of just 4-5 years can give you insights into how you can manage your farm to get the best yield and profit. Having 5 years of yield results can help you with selecting the best variety for your fields, gauging fertilizer and chemical needs, etc. Over 1,000 acres, even 2 bu/acre adds up.

2 bu/acre

X 1,000 acres

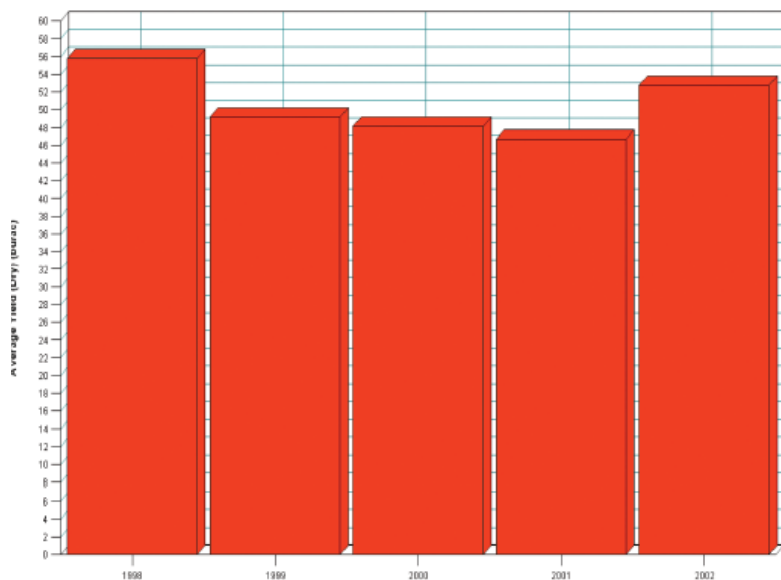
X \$2.50 corn

= \$5,000.00

Bottom Line:

\$5,000.00 from improved yield.

Bean Yield Avg Per Year



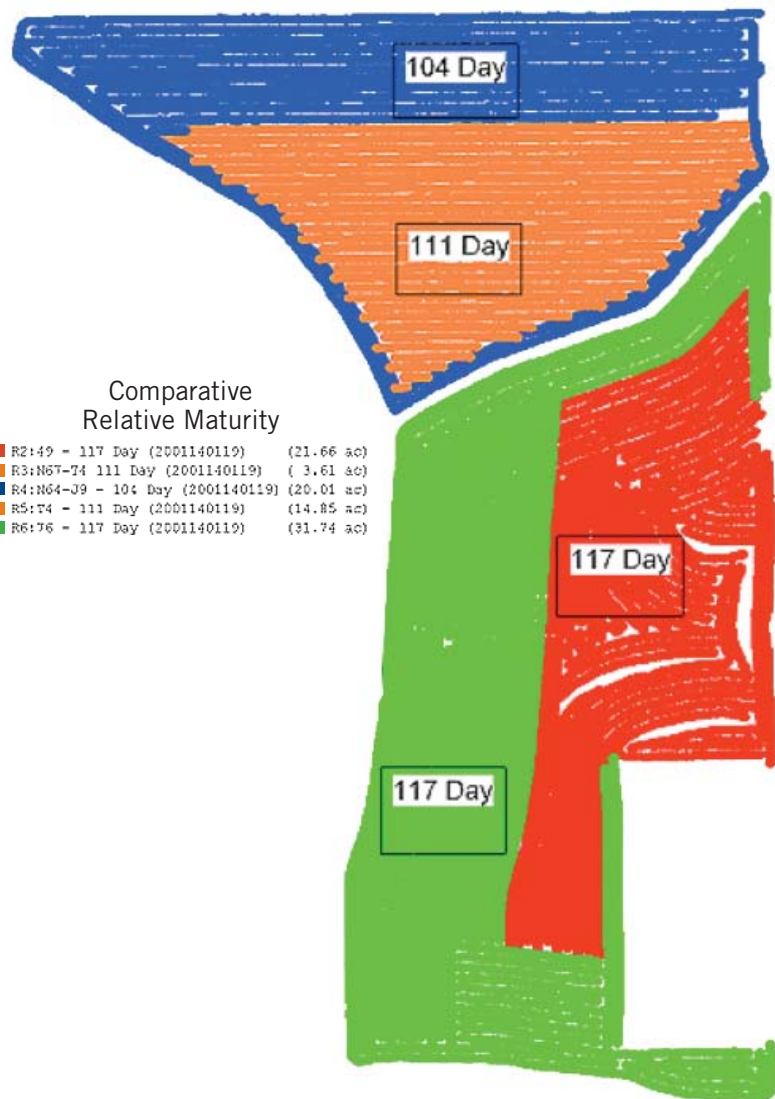
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Which Part of the Field Should You Harvest First?

By knowing exactly where you planted each hybrid, you can harvest each hybrid closest to its ideal maturity date, so you get the best moisture level for each hybrid in your field.

Bottom Line:

Less Drying Cost



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How Do Your Soil Types Affect Yield?

By matching the right variety to your soil types, you can help improve yield without increasing fertilizer. If you're planting corn over 115 acres and can squeeze 10 more bushels per acre out of your field from matching variety to soil type, you can pay for your soil testing and pocket the rest.

10 bu/acre
X 115 acres
X \$2.50 corn
= \$2,875.00

Bottom Line:

\$2,875.00

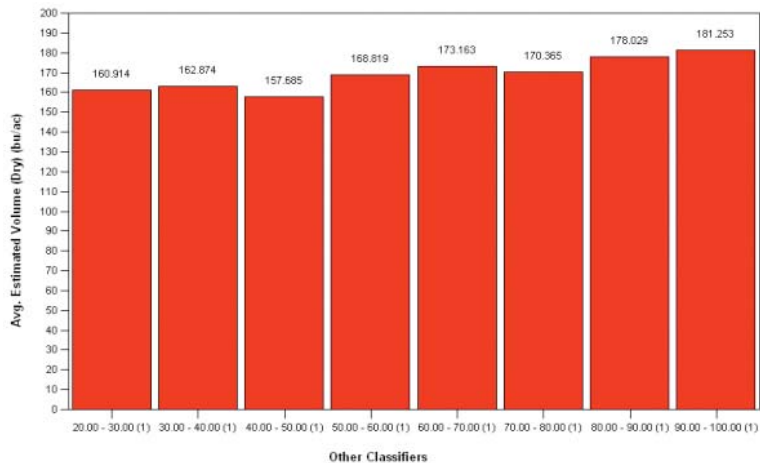


Yield grouped by Soil Productivity Level

Analysis Description	
Yield By Hybrid By Soil Type	
Don & Bonnie Farms McMains East McMains 2003 Grain Harvest (ALL) (ALL) (ALL)	
Analysis Results- Estimated Volume (Dry), Moisture Classified By- Soils : CSR	



CSR	Avg. Estimated Volume (Dry) bu/ac	Total Estimated Volume (Dry) bu	Min. Estimated Volume (Dry) bu/ac	Max. Estimated Volume (Dry) bu/ac	Avg. Moisture %	Area ac
20.00 - 30.00 (1)	162.64	562.54	14.53	256.62	16.85	3.459
30.00 - 40.00 (1)	160.08	568.16	16.70	304.13	17.44	3.549
40.00 - 50.00 (1)	159.11	1,799.0	10.29	252.16	15.31	11.31
50.00 - 60.00 (1)	168.72	1,759.1	13.43	286.09	15.72	10.43
60.00 - 70.00 (1)	172.28	2,160.1	10.34	272.21	16.37	12.54
70.00 - 80.00 (1)	170.70	992.90	16.31	318.58	16.06	5.817
80.00 - 90.00 (1)	178.11	4,124.0	13.58	265.81	15.55	23.15
90.00 - 100.00 (1)	181.05	7,637.1	12.28	311.79	14.91	42.18
(ALL)	174.35	19,603	10.29	318.58	15.52	112.43



How Can Real-Time Yield Mapping Impact Your Bottom Line Performance?

Yield monitors are great for gathering data, but yield maps tell you visually what happened in the field. Real-time yield mapping lets you see yield variations immediately and do a visual inspection to determine what really is affecting your yield (insects, drainage, weeds, etc). And, real time mapping lets you pinpoint where your problems are so you can make changes to improve yield.

Bottom Line:

Real-time human insights not possible before

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Technology



How Do You Divide Your Crop Share Land?

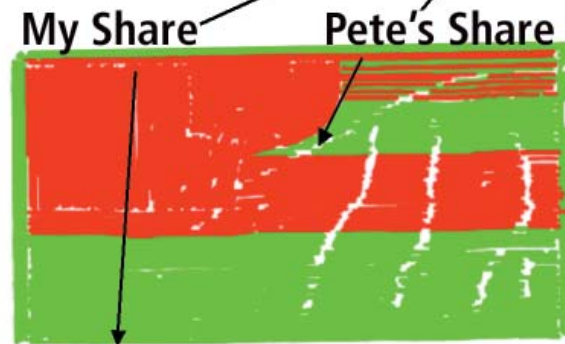
A Crop share land can create complicated problems. Are you dividing the land by acreage or by yield (or some other calculation)? How do you track time? Inputs? (By using Ag Leader precision farming equipment, you can divide your land by acreage using Ag Leader GPS systems.) You can track yield with your yield monitor. And, you can track every cost and all activity associated with the land.

Bottom Line:

Well-managed and documented crop-sharing arrangements

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Dataset	Area	Avg. Moisture	Est. Dry Bushels	Avg. Yield
L1:MY SHARE (2001140119)	40.21 ac	20.37 %	5,727.4 bu	142.44 bu/ac
L2:PETE'S SHARE (2001140119)	35.18 ac	19.95 %	5,645.7 bu	160.48 bu/ac



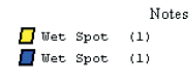
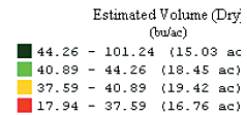
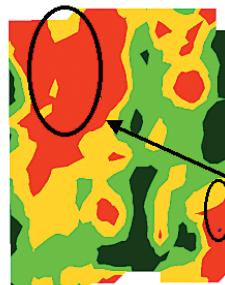
Q Where Should I Tile?

A Poor drainage can cause significant yield loss in low-lying croplands. By tiling and developing other moisture management strategies, you can get better yield out of zones that historically provide low-yields. By laying tile to help provide better drainage to a 40 acre area, a 15 bu/acre increase in corn yield was achieved.

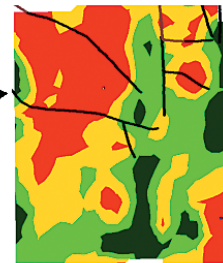
	15 bu/acre
X	40 acres
X	\$2.50 corn
=	\$1,500.00

Bottom Line:

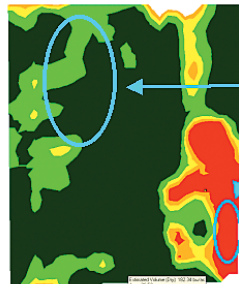
\$1,500.00



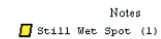
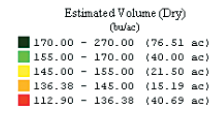
These Two Wet Spots Yielded 30-35 bu/ac Soybeans in 2001



Tile Installed in the Fall of 2001

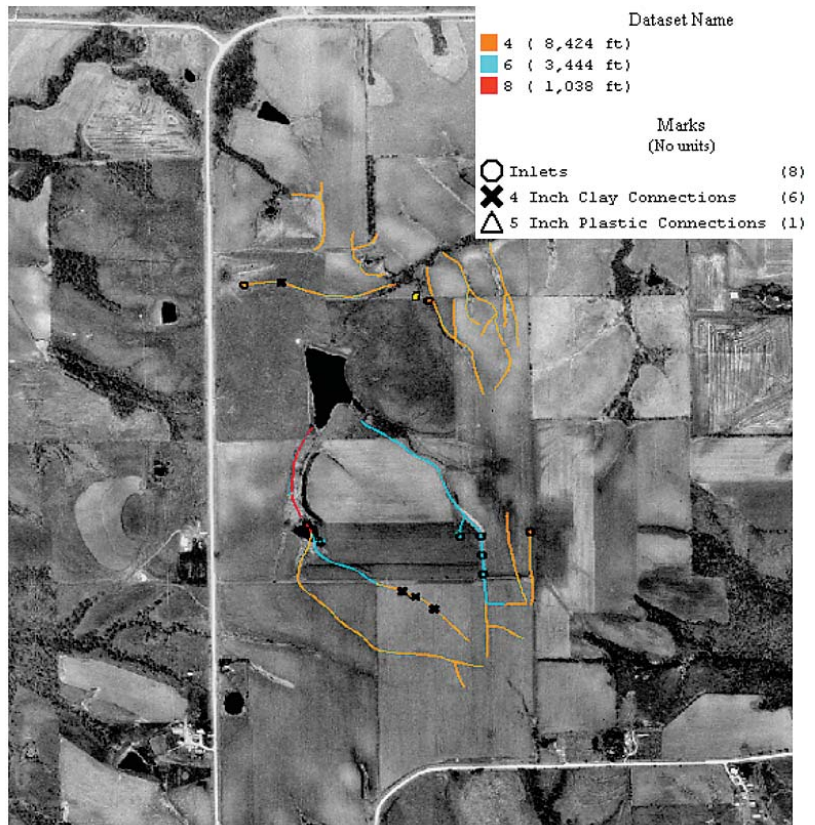


Tiled Spot Yielded 45 bu/ac More Corn



Do You Know Exactly Where Your Tile Runs?

Using GPS and satellite imagery from SMS software, you can easily see exactly where you've laid new tile. This makes it easier to adjust tile lines if needed in the future.



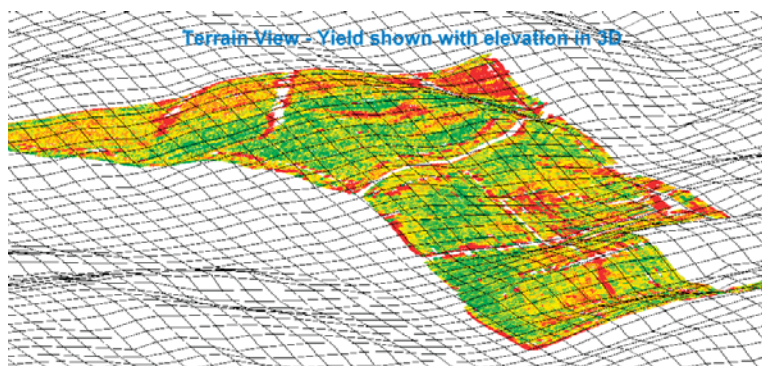
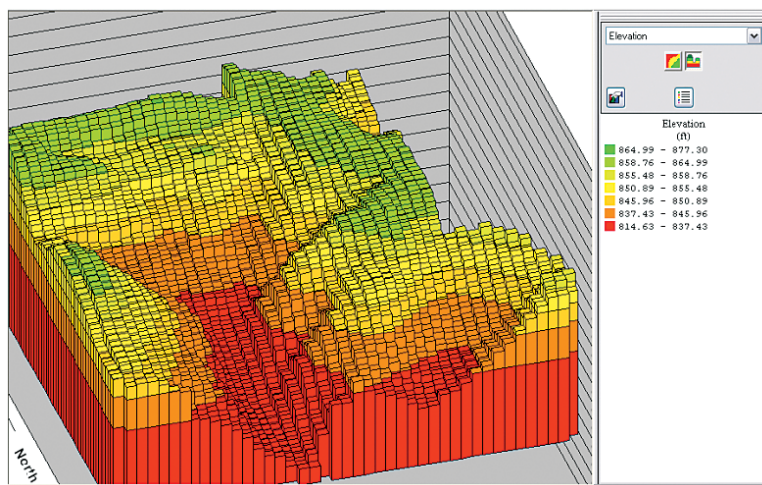
Bottom Line:

Better field moisture management

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Technology

Q How Do You Conduct Tile Planning ?

A Elevation maps created from your SMS software allow you and your crop advisor to look at your field layout from the desk. This can help identify field drainage issues and identify other issues related to elevation variances across the field.



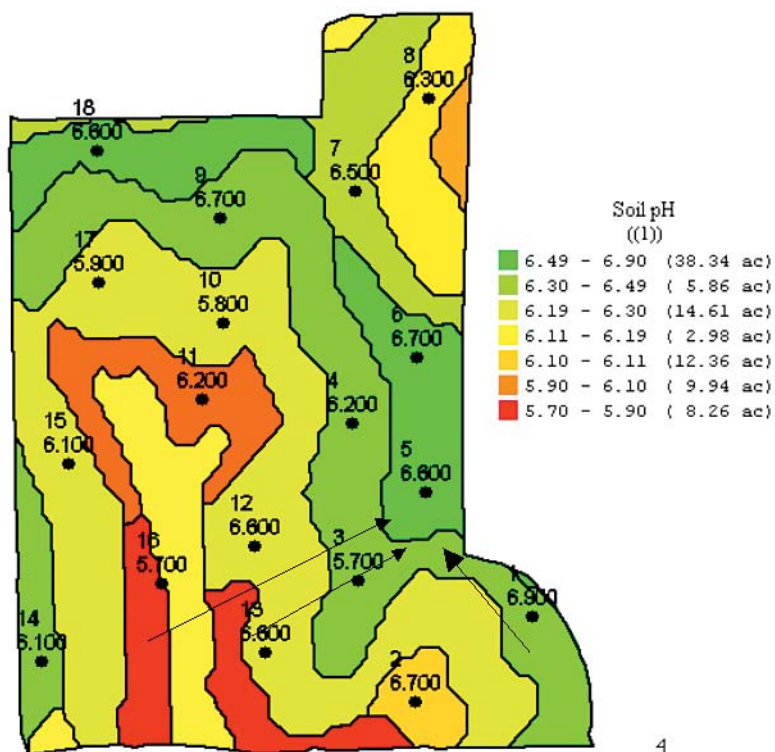
Bottom Line:

Better understanding of field layout

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Technology

How Can Grid Soil Sampling Help You Make Better Decisions?

Using grid or zone soil testing, you can map where soil fertility is best and where it needs help. Knowing the right amount of fertilizer to spread and lime to apply will help improve yield.



Bottom Line:

Improved yield

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Technology

How Many Bushels Have You Put in the Bin?

Having an accurate read on your actual yield results gives you the upper hand in planning your storage needs as well as an opportunity to plan your marketing strategies.

Area ac	Average Moisture %	Estimated Weight (Wet) lb	Estimated Volume (Dry) bu	Average Yield (Dry) bu/ac
86.34	18.33	902,606	16,118	186.68
8.891	19.60	95,731	1,709.5	192.27
20.19	15.93	197,143	3,520.4	174.36
21.46	17.29	212,287	3,790.8	176.66
74.50	18.97	722,383	12,900	173.14
11.75	19.54	111,374	1,988.8	169.25
34.42	19.94	376,515	6,723.5	195.33
76.82	17.88	705,411	12,597	163.98
334.37	18.40	3,323,450	59,347	177.49
Average				Average

Bottom Line:

Better grain management and marketing



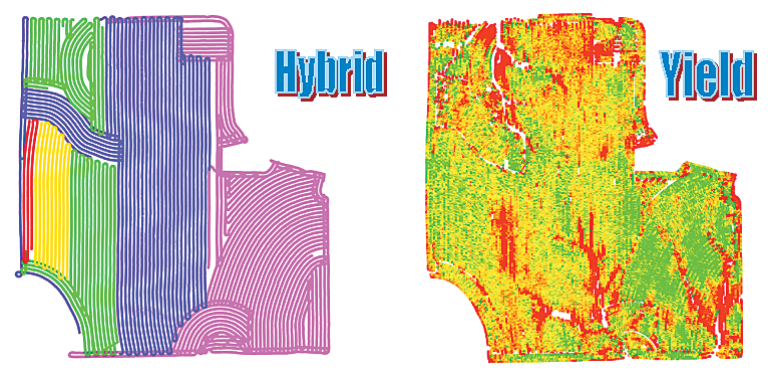
Can You Show Your Dealer Which Hybrid is Better?

By showing your seed dealer which seed hybrids yield best in your operation, you can help them tailor hybrid selection to those that fit your field. By knowing yield performance by hybrid, you have more leverage in choosing the best hybrids for the following year.

15 bu/acre
 X 81 acres
 X \$2.50 corn
 = \$3,037.50

Bottom Line:

\$3,037.50



Yield by Hybrid Seed Companies

Analysis Description	
Compare attributes/properties	
Smith Grower Van Weelden VW North 2003 Grain Harvest Crows (ALL) (ALL)	
Analysis Results- Estimated Volume (Dry), Moisture Classified By- Planting : Product - Name	



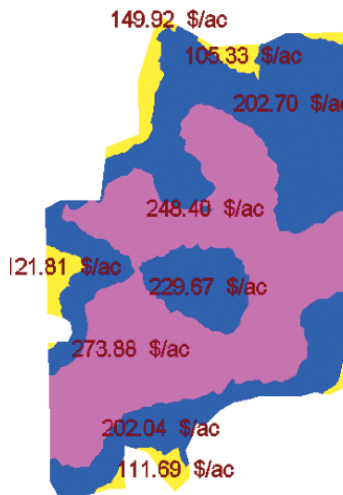
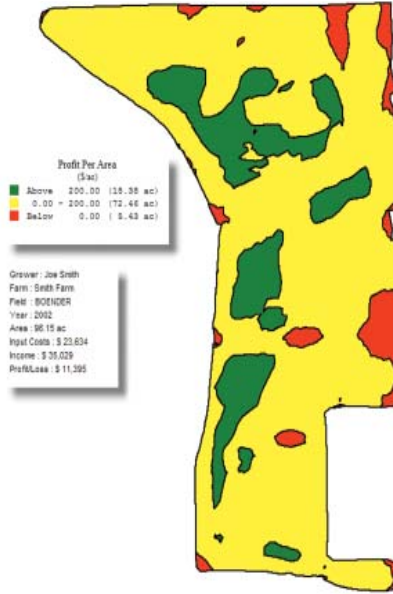
Product - Name	Avg. Estimated Volume (Dry) bu/ac	Total Estimated Volume (Dry) bu	Min. Estimated Volume (Dry) bu/ac	Max. Estimated Volume (Dry) bu/ac	Avg. Moisture %
Agri Gold	169.34	10,777	29.36	286.65	16.64
Asgrow	186.59	157.08	142.05	209.12	17.07
Crows	156.28	680.08	10.31	228.36	16.22
Dekalb	182.00	167.32	109.32	208.42	17.69
Garst	168.92	146.57	120.78	196.97	19.52
Golden Harvest	177.68	146.83	93.32	217.84	19.34
Hawkeye Hybrids	189.59	167.44	145.50	215.08	17.33
Mycogen	170.93	1,185.6	36.36	326.16	17.44
Pioneer	201.24	182.93	142.10	229.62	19.54
Wyffles	171.90	167.80	128.24	213.32	18.75
(ALL)	169.79	13,778	10.31	326.16	16.83

Yield is Not King, Profit is.

By using GPS and a complete precision farming system like SMS software, you can track all input costs and related yield results across your land. This allows you to see where your field is profitable and where you've invested more than you got out of it. Knowing this can help you make decisions on where you should concentrate your efforts and where you should consider moving land into CRP, hay production or other less-intensive production.

Bottom Line:

Profit-based decisionmaking



Generate Profit/Loss Dataset

Layer On

Profit/Loss

Transparency - 100%

Profit/Loss (\$/ac)

- 250.00 - 390.00
- 150.00 - 250.00
- 50.00 - 150.00
- 50.00 - 50.00

Generate Profit/Loss Report

Analysis Description
Generates a Profit/Loss report for a selected field and year.

Year	Expense/Income Type	Expense/Income Entries	Avg. Expense/Income per Unit	Total Amount	Profit/Loss \$
2003	Commodity Sales	Michael Bean Sales	6.49 \$/bu	7,355.5 bu	47,767
		Michael Corn Sales	2.54 \$/bu	35,044 bu	89,011
		(ALL)			136,778
	Field Level Expenses	Crop Inputs (except corn planting)	-42.86 \$/ac	429.28 ac	-18,599
		FSA Farm Payment	-12.21 \$/ac	429.28 ac	-5,099
		FSA Farm Payment	-27.15 \$/ac	429.28 ac	-11,655
		Insurance	-3.02 \$/ac	429.28 ac	-1,297.7
		NRE Cost	-11.98 \$/ac	429.28 ac	-5,143.7
		Taxes	-19.69 \$/ac	429.28 ac	-4,452.5
	Tilling & Terrace Expense	-38.10 \$/ac	429.28 ac	-16,355	
	(ALL)			-92,500	
	Field Level Income	Corn Stalks Rent	2.49 \$/ac	429.28 ac	1,063.0
		Crow's Payment	44.53 \$/ac	429.28 ac	19,116
		Hay Bale Sales	3.34 \$/ac	429.28 ac	1,432.5
House Rent Income		7.04 \$/ac	429.28 ac	3,020.8	
Pasture Rent Income		6.51 \$/ac	429.28 ac	2,725.4	
(ALL)			27,432		
Operational Expense	Machinery Cost	-50.53 \$/ac	411.27 ac	-20,782	
	(ALL)			-20,782	
Product Purchases	Corn Planting	-104.15 \$/l	67.21	-6,999.6	
	(ALL)			-6,999.6	
(ALL)	(ALL)	(ALL)	(ALL)	44,129	

How Precision Ag Pays – Be able to map true profit & loss. Do high yields always mean, higher profit?

As a Service Provider, Do You Want to Write Many Different Prescriptions for Many Different Variables?

A SMS gives you the power to create more in-depth prescriptions based on any variable. With the equation writer, you can create prescriptions that are tailored to each customer's preference. Using equations to spread to yield goals or removal rates is now easy.

Bottom Line:

**Any prescription
for any variable**

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Define equations for expressions for the selected output results to generate an analysis result dataset.

Select Output Result: Lime

Description: 1800 ECCE

Equation Components

Component Types: Comment, Constant, Operators, Symbols

Operators

Base Operators: IF, THEN, ELSE IF, ELSE, RESULT=, BEGIN, END

Logic Operators: AND, OR, >, ==, !=, >=, <, <=, NOT

Math Operators: +, -, *, /, ^, Parentheses: (,)

Result Equation

```

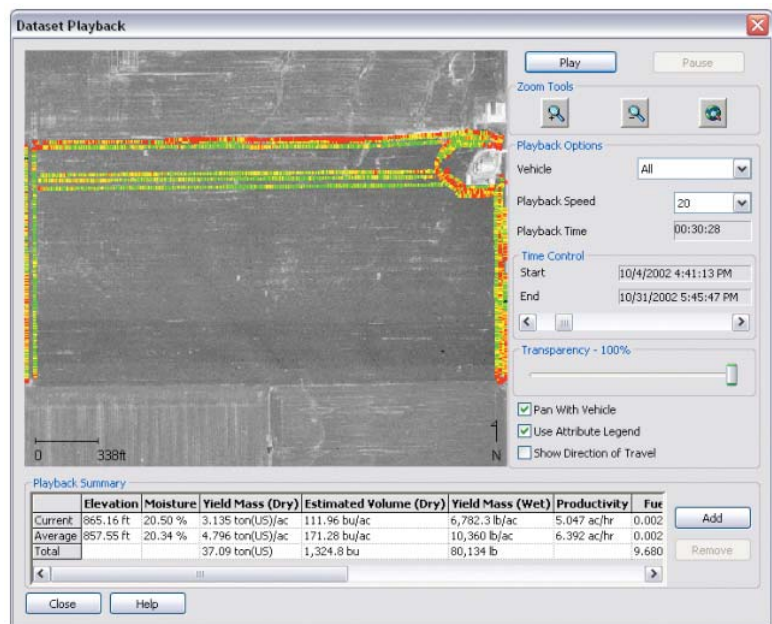
RESULT= 0.00
End
Else If { [Soil BpH] <= 6.800 } Then
Begin
RESULT= 2.522.5
End
Else
Begin
RESULT= ( ( 7.000 * [Soil BpH] ) * 9,000.0 ) / 0.775
End

```

< Back Finish Cancel Help

How Can You Monitor Field Activities by Reviewing them as a “Movie Reel”

A SMS Advanced features a dataset playback function that allows users to “play” or see the order in which a field was sprayed, planted or harvested. This is a great tool to check efficiency of application or path of application – or even help determine the causes of yield drops (from high planting speed, for example).



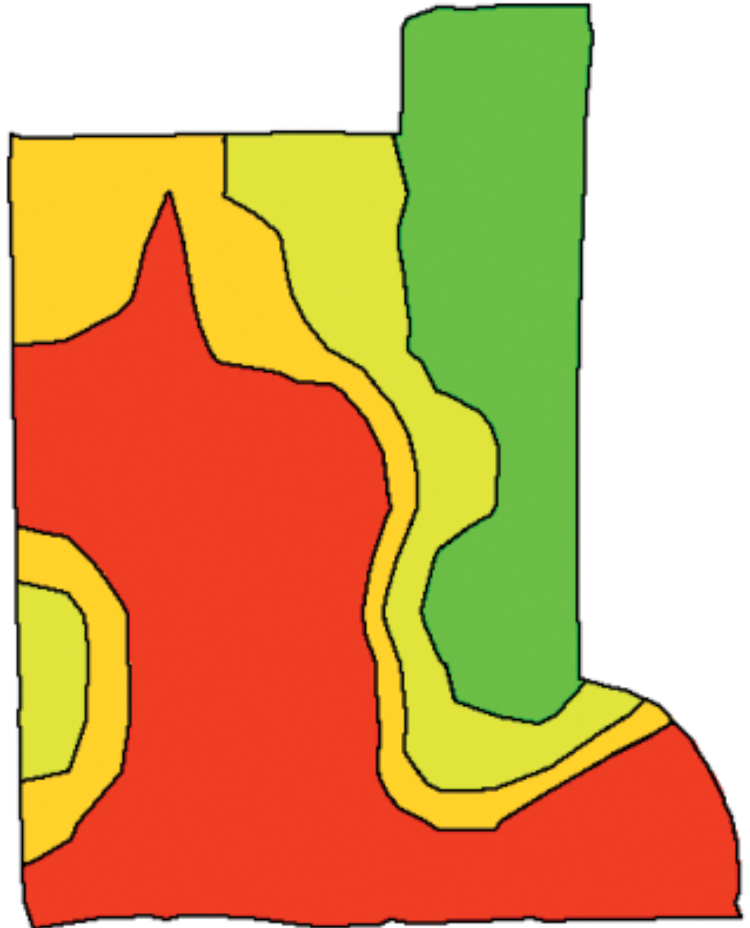
Bottom Line:

Ability to rewind and play field activities

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Technology

Can You Create Management Zones From Your Multiple Years of Yield Maps?

A Having historical data and mapping can help you break your field into specific management zones. This map shows 6 years of yield maps averaged together into one map, helping you identify zones that are not affected by potentially broad one-year swings.



Bottom Line:

Better understanding of field zone trends

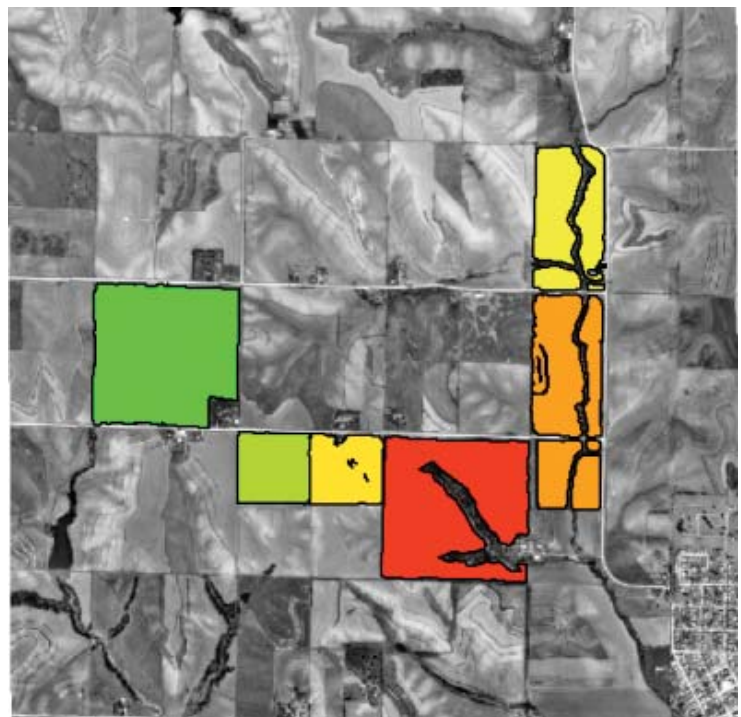
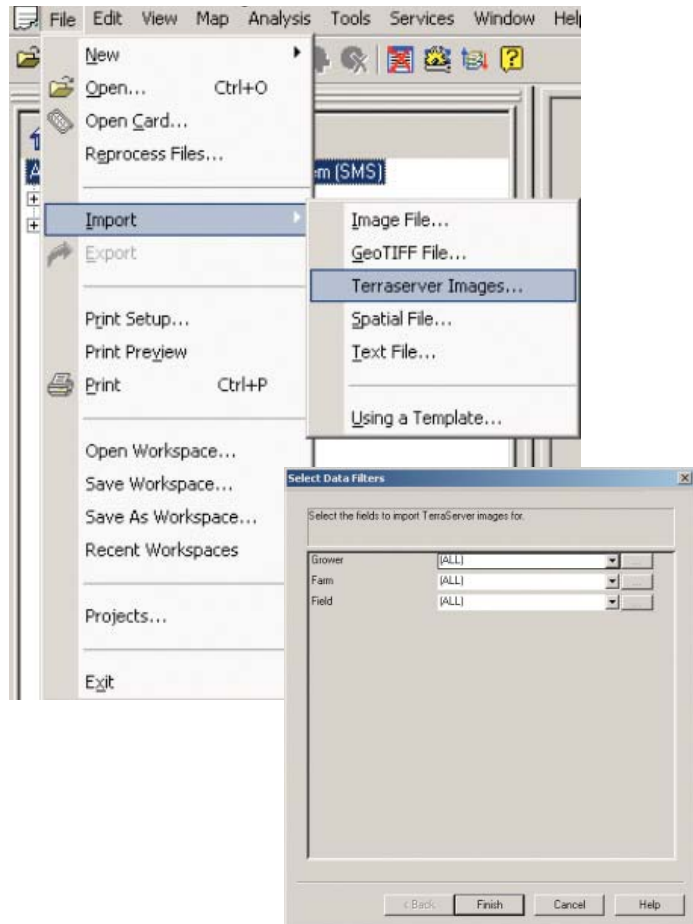
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How Can Satellite Images of Your Field Help You Make More Profitable Decisions?

Satellite images can display location of field(s) easily so custom applicators and others can easily identify your fields. Satellite images can also show locations of streams, roads, towns, etc. in relation to your fields. SMS automatically identifies your fields and downloads them for you.

Bottom Line:

Better communication with field service providers



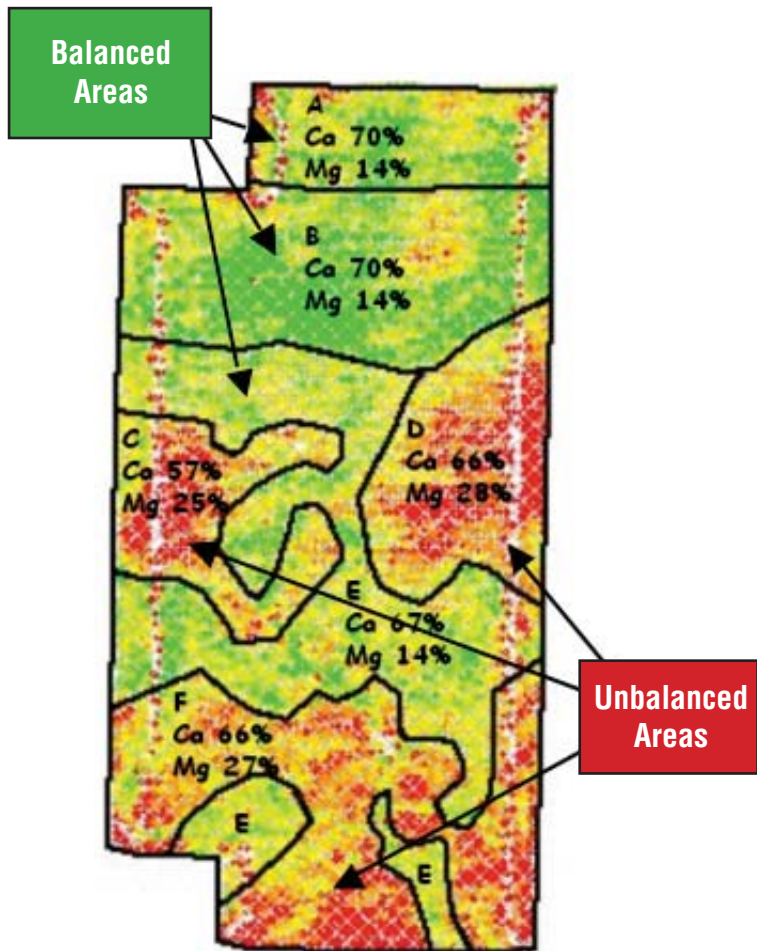
Can Calcium/Magnesium Balanced Soils Increase Yield?

A By establishing zones within a field based on calcium/magnesium balance, you see significant yield decrease of 12.2 bu/acre in unbalanced areas. By identifying unbalanced areas, you can easily justify the cost of fertilizing in the unbalanced zones to increase yield.

12.2 bu/acre
X 40 acres
X \$6.00 beans
= \$2,928.00
- \$1,000.00 (Cost of Fertilizer over 40 acres)

Bottom Line:

\$1,928.00



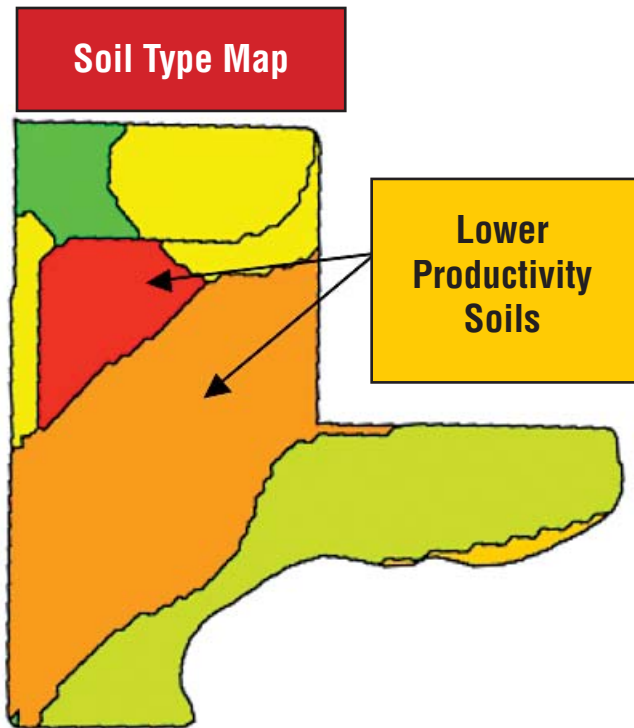
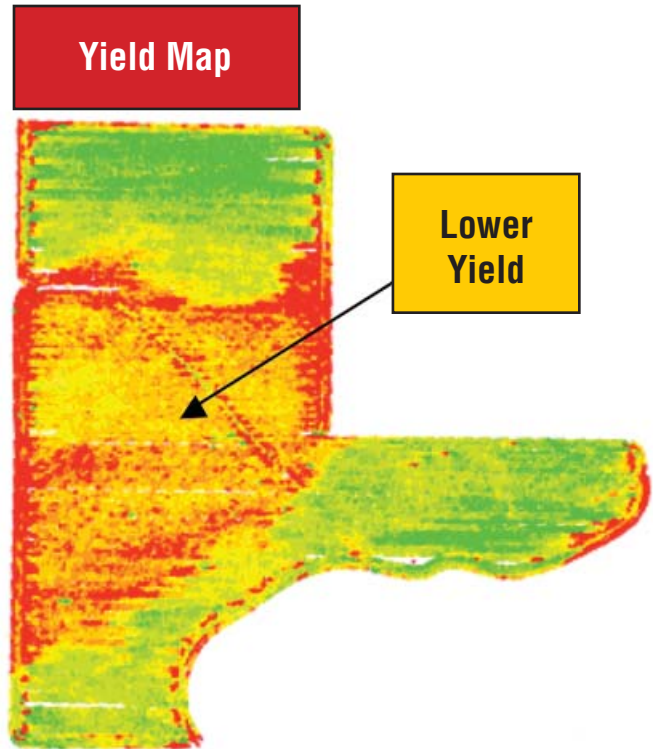
Data source: Joe Nester, Nester Ag Management, Bryan, Ohio

Should You Fertilize Over Your Low-Potential Soils?

Some soils cannot produce high yields no matter how much fertilizer is applied. By establishing zones of low productivity using soil and yield maps, inputs can be reduced on soils with lower yield goals with no reduction in yield.

Bottom Line:

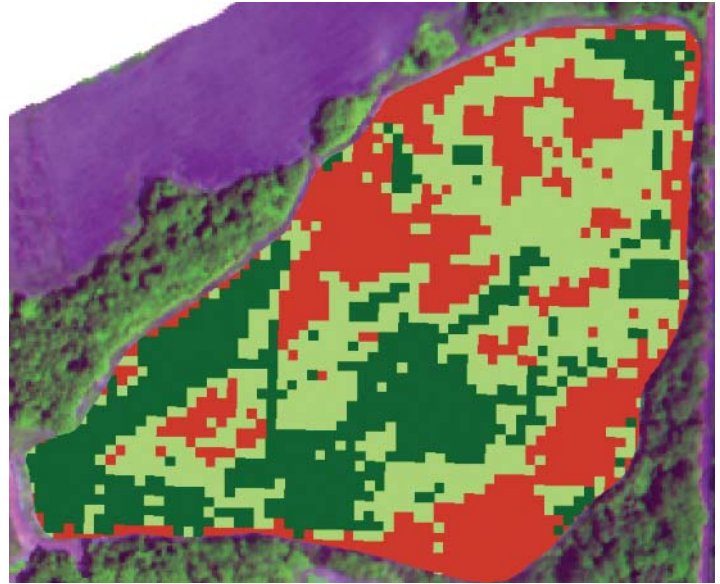
Input cost savings of \$10-\$30 per acre



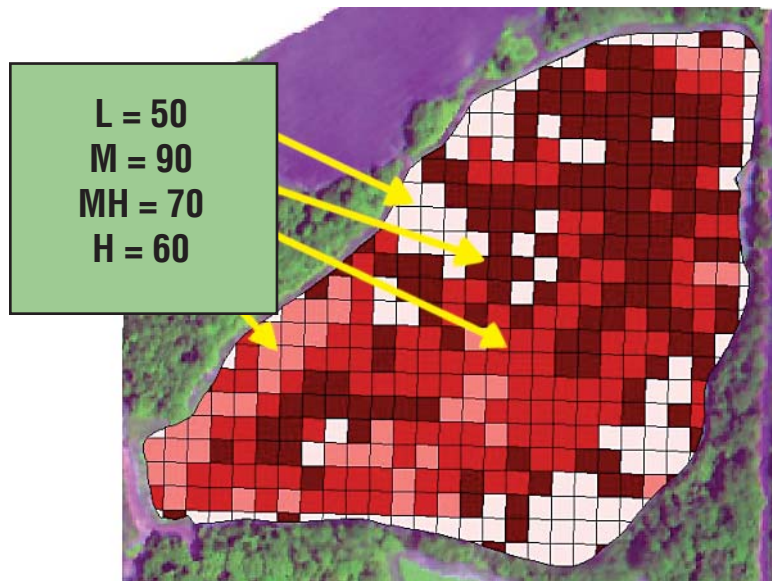
Data sources: Dave Wilcox, Farmway Coop, Beliot, Kansas
Lance Scott, CropWatch Scouting Service, Avoca, Iowa

How Do You Establish Productivity Zones in a Field?

Using NDVI images to establish productivity zones to develop a variable rate application program for cotton.



By using NDV images to create application zones for variable rate nitrogen and insecticide in your cotton operation, input costs can be greatly reduced while maintaining or increasing cotton yields.



Variable rate nitrogen plan based off NDVI Image.

Bottom Line:

\$75-\$90 input cost savings per cotton acre



Data source: Tim Sharp, Jackson State Community College, Jackson, Tennessee

How Do You Trace Your Grain From Planting to the Bin to the Market?

Many Ag Leader users have proven compliance by providing recorded planting maps. This ability to record planting information & harvest information has proven to give producers better control over the rising issues of GMO traits. It has also given many Ag Leader producers the ability to easily determine how much grain is available for sale at each specific storage location.

Bottom Line:

Better control



Product Name

- Corn 51 - Refuge (36.37 ac)
- Corn 70 - Refuge (16.80 ac)
- BT GMO (28.96 ac)



Area ac	Average Moisture %	Estimated Weight (Wet) lb	Estimated Volume (Dry) bu	Average Yield (Dry) bu/ac
86.34	18.33	902,606	16,118	186.68
8.891	19.60	95,731	1,709.5	192.27
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21.46	17.29	212,287	3,790.8	176.66
74.50	18.97	722,383	12,900	173.14
11.75	19.54	111,374	1,988.8	169.25
34.42	19.94	376,515	6,723.5	195.33
76.82	17.88	705,411	12,597	163.98
334.37	18.40	3,323,450	59,347	177.49
Average				Average



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