

# A Soil Fertility Tool for Crop Management Solutions

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# **Soil Fertility**

Soil Sampling is one of the basic tools Consultants use to pinpoint problem areas in a client's field... What happens after that?

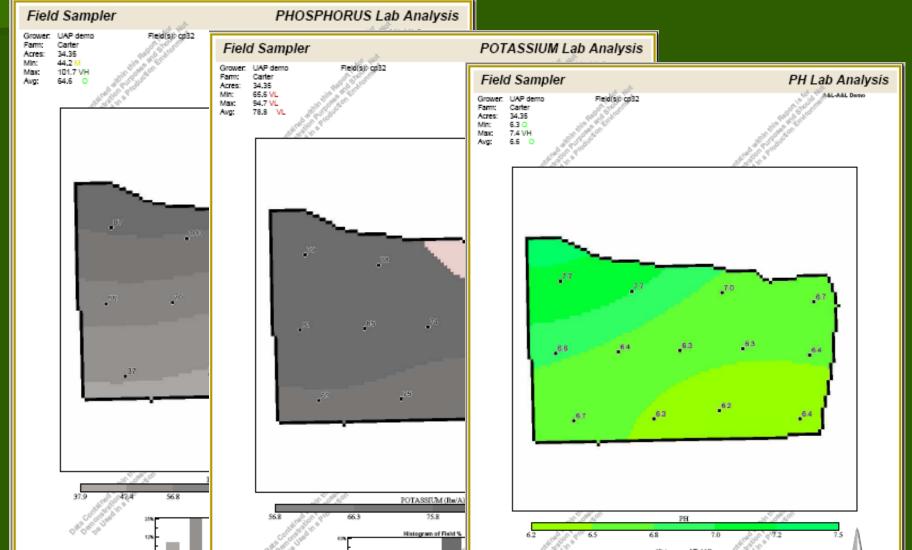
## **Soil Fertility**

Using AgFleet, a GIS application, Consultants can easily utilize the data collected in a field to make more efficient management decisions on how to distribute fertilizers as well as any other applications

# What is AgFleet?

AgFleet is an innovative, easy to use, modular web-based suite of GIS applications to aid in the practical and efficient management of cropland

# Nutrient Analysis Data is used for VRT fertilizer files

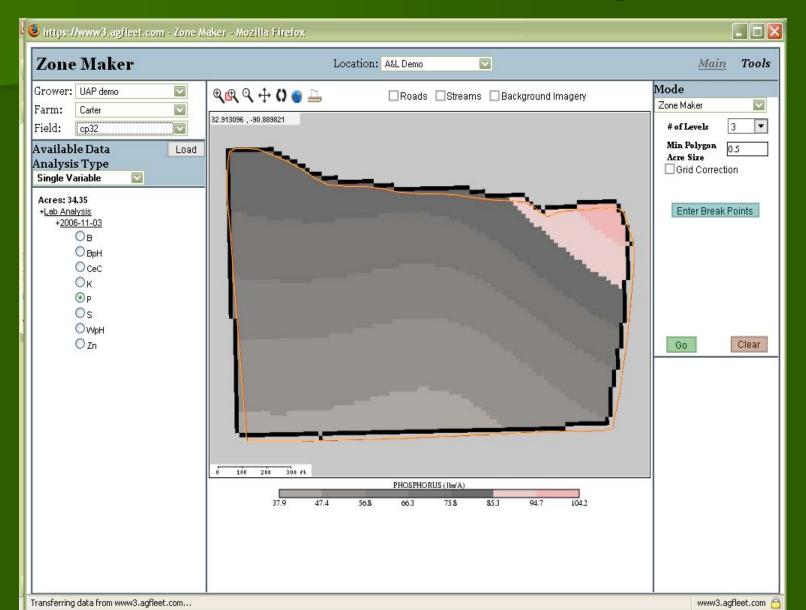


# Fertilizer files can be created based on Recommendations

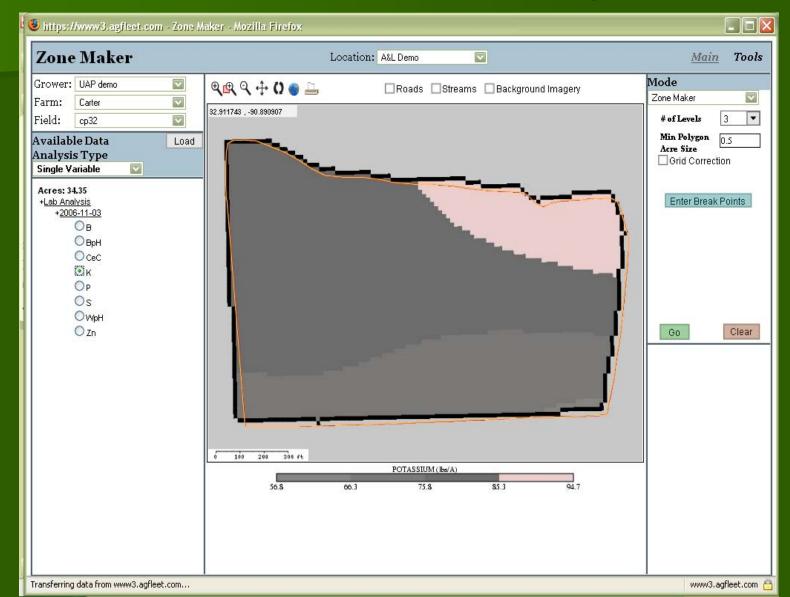
E	ield San	npler															Re	cor	nn	nen	dat	tior	ı S	um	ma	ry
	GROWER: Brand FARM: Carlyle FIELD: Cottor	e Farm					CROP: YIELD G TGT pH:		Cotton 1000 6.5							SAM	L PERIOD PLE RAN L METHO	GE:	AII 8	-02-28 ample M lethodis	iumbera		A&L-M	Idsout	h F.C.	
II.—								Anab	alav											Fe	rtillzer	Recon	mend	ations		
	Sample Number	r Lab	P	к	Mg	Ca	8	в	Zn	Mn	88	NN	ом	pН	Buffer	ENR	CeC	Ca	Ν	P206		Zn	в	Mg	8	Mn
	ARM Carlyle Farm	<b>1</b> 1-	(Ibs/A)	(Ibs/A)	(Ibs/A)	(bsA)	(bs/A)	(Ds(A)	(bs(A)	(Ibs/A)	(Ibs/A)	(Ibs/A)	(%)			(meq)	(meq)	(ons/A)	(Ds/A)	(IDS/A)	(Ds/A)	(DSIA)	(IDR/A)	(IDE/A)	(bs(A)	(IDSIA)
<u> </u>	FIELD Cotton 1		(3)																							
1.	123	ASL	86	240	200	1768	18	1.2	4.2	254			1.5	6.7	7.8		7.1	0.00	100	25	83	0.0	0.8	0	11	0.0
2.	124	ASL	98	316	142	1730	16	1.2	4.6	258			1.2	6.6	7.8		6.8	0.00	100	25	62	0.0	0.8	0	12	0.0
3.	125	ASL	158	318	132	1764	16	1.4	6.0	324			1.7	6.5	7.8		6.9	0.00	100	25	61	0.0	0.6	0	12	0.0
4.	126	ASL	156	322	108	1768	18	1.2	6.0	430			1.4	6.7	7.8		7.0	0.00	100	25	59	0.0	0.8	14	11	0.0
6.	127	ASL	178	362	116	1682	14	1.2	6.8	364			1.2	6.0	7.7		8.0	0.75	100	25	40	0.0	0.8	11	13	0.0
8.	128	ASL	118	290	96	1212	12	0.8	4.0	284			0.9	6.6	7.8		5.2	0.00	100	25	72	0.0	1.2	16	14	0.0
7.	129	ASL	78	284	222	1978	12	1.0	4.4	288			1.1	7.0	7.8		6.3	0.00	100	27	74	0.0	1.0	٥	14	0.0
8.	130	ASL	130	358	134	1884	16	1.0	5.8	408			1.0	6.6	7.8		7.2	0.00	100	25	40	0.0	1.0	٥	12	0.0
9.	131	ASL	82	268	224	1794	14	1.0	3.8	278			1.1	6.9	7.8		7.0	0.00	100	25	78	0.0	1.0	0	13	0.0
10.	132	ASL	76	262	310	1788	18	1.0	3.4	282			1.4	6.1	7.6		9.1	1.00	100	28	79	0.0	1.0	0	11	0.0
11.	133	ASL	128	306	142	1712	16	1.0	4.6	294			1.2	6.5	7.8		6.9	0.00	100	25	67	0.0	1.0	0	12	0.0
12.	134	ASL	154	316	120	1628	14	1.0	4.8	356			1.4	6.6	7.8		6.6	0.00	100	25	62	0.0	1.0	9	13	0.0
13.	135	ASL	116	344	124	1676	14	1.2	5.6	368			1.7	6.2	7.8		6.7	0.50	100	25	44	0.0	0.8	6	13	0.0
14.	136	ASL	110	342	132	1760	16	1.2	6.8	386			1.7	6.6	7.8		7.2	0.00	100	25	46	0.0	0.8	0	12	0.0
16.	137	A&L	142	314	124	1746	18	1.6	6.8	504			1.5	6.4	7.6		8.2	0.75	100	25	63	0.0	0.6	6	11	0.0
16.	138	ASL	136	332	138	1646	18	1.4	5.0	346			1.3	6.8	7.8		6.5	0.00	100	25	53	0.0	0.6	٥	11	0.0
17.	139	ASL	76	204	134	1400	16	1.4	4.0	264			1.1	6.7	7.8		5.8	0.00	100	28	92	0.0	0.6	٥	12	0.0
18.	140	ASL	100	284	176	1910	14	1.4	5.2	376			1.1	6.6	7.8		7.4	0.00	100	25	74	0.0	0.6	٥	13	0.0
19.	141	ASL	100	244	144	1646	14	1.2	5.2	366			1.2	6.7	7.8		6.9	0.00	100	25	83	0.0	0.8	٥	13	0.0
20.	142	ASL	80	304	192	2410	14	1.4	5.2	370			1.3	7.3	7.8		7.3	0.00	100	25	68	0.0	0.6	٥	13	0.0
21.	143	ASL	70	254	242	2474	14	1.2	4.2	314			1.3	7.4	7.8		7.6	0.00	100	34	81	0.0	0.8	٥	13	0.0
22.	144	ASL	66	288	304	2754	16	1.4	3.6	332			1.5	7.3	7.8		8.6	0.00	100	38	73	0.0	0.6	0	12	0.0
23.	145	ASL	66	322	294	2700	28	1.6	3.6	374			1.4	7.1	7.8		8.5	0.00	100	38	59	0.0	0.6	0	10	0.0
24.	146	A&L	66	328	442	2958	34	1.8	4.0	332			1.3	6.5	7.6		13.1	0.00	100	38	79	0.0	0.0	٥	9	0.0
26.	149	ASL	40	230	512	2202	34	0.8	2.4	214			0.7	6.2	7.8		9.9	0.50	100	64	86	2.0	1.2	0	9	0.0
28.	150	ASL	66	206	226	1716	14	1.0	2.8	250			0.9	6.6	7.8		7.2	0.00	100	38	91	2.0	1.0	٥	13	0.0
27.	151	ASL	34	152	482	1582	40	0.8	1.6	144			0.6	5.5	7.6		9.8	1.50	100	70	105	2.4	1.2	٥	9	0.0
28.	152	ASL	46	594	584	3146	20	1.2	2.2	148			0.7	7.4	7.8		11.2	0.00	100	58	0	2.0	0.8	0	11	0.0
29.	153	ASL	24	212	562	1822	50	0.6	1.6	110			0.8	5.5	7.6		10.4	1.50	100	80	104	2.4	1.4	0	0	0.0
30.	154	ASL	32	208	530	2010	32	0.8	2.4	200			1.8	5.5	7.6		10.8	1.50	100	72	105	2.0	1.2	0	9	0.0
31.	158	A&L	60	338	442	2134	18	2.8	3.4	230			0.9	6.6	7.8		9.0	0.00	100	44	49	0.0	0.0	0	11	0.0
32.	159	ASL	52	294	436	2914	34	2.0	4.2	264			0.9	6.4	7.8		11.3	1.75	100	52	85	0.0	0.0	0	9	0.0

Data Layers can also be analyzed in the module **Zone Maker** and correlations between them can be used for additional target management

# **Phosphorus Analysis**



# **Potassium Analysis**



#### **Zone Maker P & K Correlation**

🕘 https://www3.agfleet.com - Zone M	aker - Mozilla Firefox			
Zone Maker	I	Location: A&L Demo		<u>Main</u> Tools
Grower: UAP demo	Image: Contract of the second seco	Roads Str	eams Background Image	ery Mode Zone Maker I G # of Levels 3 I Grid Correction Enter Break Points Go Clear
🔒 start 🛛 😻 AgFleet V 3.0 - Mozill	https://www3.agflee	LACA Soil Fertility Pre	LACA Emerging Tech	🕢 🔽 🛃 🚊 6:37 AM

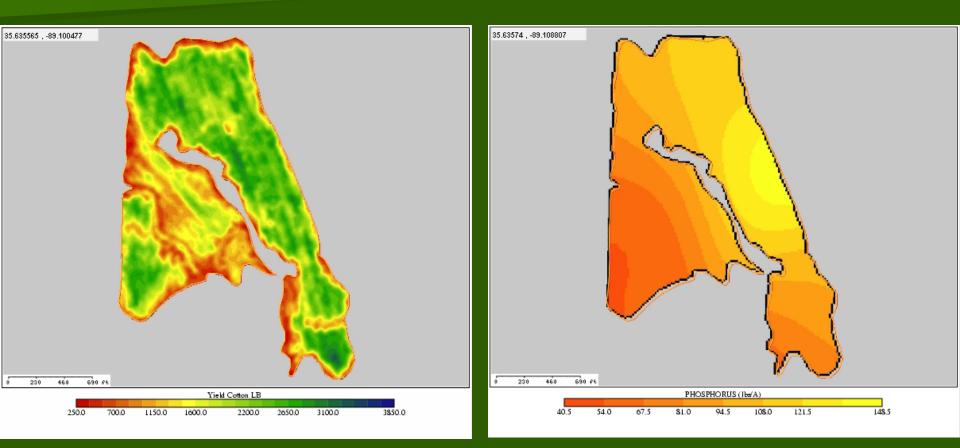
## Zones for VRT based on P & K Correlations

🕲 https://www3.agfleet.com - Zone A	laker - Mozilla Firefox			
Zone Maker	Lo	cation: A&L Demo 💟		<u>Main</u> Tools
Grower: UAP demo	€ 🕂 < 🕂 () 🌍 🚢 32.911193 , -90.889937	🗌 Roads 🔲 Streams 🔲	Background Imagery	Mode Zone Maker # of Levels 3
Field: cp32				# of Levels     3       Min Polygon     0.5       Acre Size     0.5       Grid Correction   Enter Break Points
□s □wpH □zn	0 100 200 300 ft			GoClearZone AnalysisDate: 2006-11-03Element: K~LABANALYSIS# of Zones: 3Min Ac: 0.5Vertices: 101
Transferring data from www3.aofleet.com	-50 -25	5 0	25 50	Ac. Range Zone 1 12.3 5.0 - 29.8 Zone 2 11.1 29.8 - 66.6 Zone 3 10.7 66.6 - 99.8 Export File Save Zones

#### Other data layers can also be correlated this way:

Veris
Yield
Imagery
Plant Tissue Analysis
Nematode Analysis

# **Yield & Phosphorus data**



# Correlation Between P & Yield

Zone Maker	Location: Midsouth F.C.	<u>Main</u> Tools
Grower: Brandon Hughes	Roads       Streams       Background Imagery         35.634031, -83.100767       Image: Contract of the stream of	Mode Zone Maker # of Levels 3 Min Polygon 0.5 Acre Size Grid Correction Enter Break Points Go Clear

# **Plant Tissue Analysis**

The final verification tool which proves that the fertilizer put into the soil has accomplished its goal of helping to transfer the proper required nutrients to the plant's tissue for optimum growth

# **Plant Tissue Analysis**

- Helps ensure that essential nutrients are present in the plant
- Helps prevent problem areas by targeting them for future crop management
- Can also be used as a data layer in AgFleet for additional fertilizer applications

### www.agfleet.com

GAJEQT



#### www.allabs.com