bs FIELD CORN

TEST LAB	Waters Lab		TEST DATE	01/14/11		DATE	03/03/11		CUSTOMER NAME			
Field I.D.	FLD: 1A & 2B					CROP	FIELD CORN		JD Dairy			
Base Ca	Base Mg	Base K	Ca	Mg	K	P Lb/A	S Lb/A	B Lb/A	Zn Lb/A	Mn Lb/A	Fe Lb/A	Cu Lb/A
0.80	0.10	0.005	Calculated Using Base Sat.			204	16	0.62	27.5	13.0	26.0	48.91
Gypsum	Hi Cal	Dolomite	Ca	Mg	K	P	S	B	Zn	Mn	Fe	Cu
			(282.2)	42.9	113.4	(103.5)	28.0	0.38	(21.5)	13.0	(6.0)	(48.11)
CEC	pH	CEC $\mathcal{E}$.	Base Saturation % vs CEC			CCS	ENTER LB/AC			FIELD CORN YIELD		
4.8	7.2	1.0	Ca	Mg	K		NITROGEN OVERRIDE		218	BUSHEL/AC		230
			0.65	0.14	0.035		POTASSIUM OVERRIDE		143	PHOSPHORUS OVERRIDE		
			Production Nutrient Requirements in Lbs/Ac Per Year						CCS		LCD	21.5
NUTRIENTS		N	P_2O_5	K_2O	Ca	Mg	S	B	Zn	Mn	Fe	Cu
SOIL BASE NEEDS		40	(237)	136	(282)	42.9	28.0	0.380	(21.47)	13.00	(6.00)	(48.11)
CROP FACTOR		218	105	143	40	29	27	0.200	1.00	2.00	2.00	0.20
TOTAL REQUIRED		258	(66)	279	(243)	72.0	54.9	0.580	(20.5)	15.0	(4.0)	(47.91)
LB/AC	ANALYSIS	12.0		13.0		3.4	2.6	0.027		0.70		
70	3-18-18 St. PopUp L	2.1	12.6	12.6								
16,000	DAIRY MANURE	47.1	11.1	17.9	18.8	3.31	6.67		0.26	0.21	0.65	0.10
120	32-0-0	38.4										
1	MAP D	0.11	0.52									
10	FOLIAR-CAL				1.0			0.002	0.005			
1,900	9-0-13 S SD 1&2	171		247		19.0	47.5	0.665		14.82		
TOTAL ADDED NUT.		259	24	277	19.8	22.3	54.2	0.7	0.3	15.0	0.6	0.10
TOTAL NUTRITNE STATUS		(1)	(90)	2	(262.5)	49.7	0.7	(0.087)	(20.73)	(0.03)	(4.65)	(48.01)
NOTE	ST=Starter, F=Foliar, SD=Sidedress, L=Liquid, D=Dry, PLT=At Planting, D=Dry, Pop-Up = Starter, S = Suspension									If P_2O_5 starter enter 1		1
	Depending on previous crop, Nitrogen suggestions may be adjusted at planting or during side dress applications.											

If substituted materials are used adjust the rates to meet the nutrient goals for the target corn yield. The base saturation calcium is very important, especially if higher yields are expected.

Base Saturation Calcium is fine for these fields. Magnesium levels are low and it will be added to the 9-0-13 Suspension Blend. Other trace minerals will also be added to this blend. The 3-18-18 Starter (pop-up) fertilizer should be applied side-dressed along with seeding to provide the young plant nutrients to establish the initial seminal and first primary roots. The 9-0-13 can then be applied in two additional applications. The 32-0-0 UAN solution can be side-dressed to maximize plant growth at the last practical time capable of side-dressing the corn.

DATE	3/3/2011	FERTILIZER BLEND ANALYSIS FROM CALCULATION SHEET										PAGE 2
TEST DATE	1/14/2011	Field I.D.	FLD: 1A & 2B					CUSTOMER	JD Dairy			
TOTAL REQUIRED		N	P_2O_5	K_2O	Ca	Mg	S	B	Zn	Mn	Fe	Cu
		258	(66)	279	(243)	72	55	0.580	(20.47)	15.00	(4.00)	(47.905)
LB/AC	ANALYSIS	12		13		3.4	2.6	0.027		0.70		
	9-24-0 L PLT	9%	24%				3.0%	0.040%				
70	3-18-18 St. PopUp L	3%	18%	18%								
	9-24-4 St. L	9%	24%	4%				0.040%				0.020%
	5-0-20 KTS F	5%		20%			13.0%					
16,000	DAIRY MANURE	0.295%	0.069%	0.112%	0.118%	0.021%	0.042%		0.002%	0.001%	0.004%	0.001%
	TIGER 90						90.0%					
	Poultry Lit	1.9%	0.7%	2.1%	0.35%	0.12%	0.10%		0.011%	0.013%		0.013%
120	32-0-0	32%										
	APP L ST	11%	37%									
	Tech Mangam D						17.0%			25.00%		
	0-0-21 SPM D			22%		11.0%	21.5%					
	3-18-18 F	3%	18%	18%								
	8-0-8 SD L	8%		8%		0.6%		0.040%	0.20%	0.30%	0.20%	
	DAP D	18%	46%									
	TSP D		46%									
1	MAP D	11%	52%									
10	FOLIAR-CAL				10.0%			0.020%	0.05%			
1,900	9-0-13 S SD 1&2	9.00%		13.00%		1.00%	2.50%	0.035%		0.78%		
NUTRIENTS FROM BLENDS		259	24	277	20	22	54	0.667	0.27	15.03	0.65	0.103
COMBINED NUT. STATUS		(1)	(90)	2	(263)	50	1	(0.087)	(20.73)	(0.03)	(4.65)	(48.008)
NOTES	NUTRIENTS	N	P_2O_5	K_2O	Ca	Mg	S	B	Zn	Mn	Fe	Cu

PART I - Calcium levels are fine, therefore, no limestone or gypsum is needed. 3-18-18 is recommended at 70 lb/ac as a starter pop-up material to provide the young corn seedling sufficient nutrients to establish the seminal and first set of primary roots. **The 9-0-13 Suspension should be applied in split applications with the first application when the corn plants are 5 - 6" tall and then again in three weeks.** The 32-0-0 UAN can be applied as a final application to increase biomass for ensilage. The Foliar Cal can be used if the corn stand is exceptional to increase grain content. If the first tissue test shows adequate calcium and boron this application is not needed. The Dairy Manure nutrient credits were provided by inclusion of the current analysis with application of 8 tons of manure. If more is applied, we need to adjust this information in the program. The total nutrients are provided to support ~ 230 bushels of corn/acre or ~ 22 - 25 Tons of ensilage (35% Dry Matter content) per acre. Plant population should be ~ 28 - 33 thousand/acre for optimum yields.

No express or implied guarantee or warranty is made with this program. It is strongly suggested that seasonal soil and tissue testing be conducted to insure crop nutrient levels are adequate. Irrigation testing will also help prevent/solve problems.

NO LIMING MATERIAL IS NEEDED

Average pH of the soil is 7.2 and Tiger-90 is needed for this

! DON'T FORGET IRRIGATION SUITABILITY TESTING !

PART II - Initiate tissue testing when corn plants have 4 - 6 leaves and again pre tassel. Foliar apply at 1.0 gal/acre the FOLIAR-CAL +Zn prior to tassels peaking above the whorl for silage or grain production, and repeat in two weeks if the crop will be harvested for grain. Foliar Manganese, Iron and other T.M.'s should be made if tissue testing indicates. Additional nutrients may be required based on environmental conditions, corn projected yield and variety. It is very important to initiate tissue testing timely to meet plant needs. **IF DAIRY MANURE HAS BEEN ADDED TO THE SOIL, ADJUST THE INPUTS OF THE SUGGESTED BLENDS ACCORDINGLY. FOLLOW BMP GUIDELINES TO PREVENT LEACHING AND GROUND WATER CONTAMINATION.**

LB/AC	1			LAB	Waters Lab		Summary Soil Test Dated				01/14/11			CROP	FIELD CORN					Page 4
CCS	Customer		JD Dairy				Test Taken By			Buford Creech, CCA				Tested Area	FLD: 1A & 2B					
No.	SAMPLE	P1	P2	K	Mg	Ca	Na	Ph	CEC	%K	%Mg	%Ca	%Na	S	Zn	Mn	Fe	Cu	B	Ds/M	O.M. %
1	NO 1 A	224	224	16	149	1897	22	7.0	5.8	0.4	10.6	81.3		19	29.4	13	23	52.1	0.9		2.0
1	NO 2 B	183	183	18	92	1208	19	7.4	3.8	0.6	9.9	78.1		13	25.5	13	29	45.7	0.3		2.0
MEASUREMENTS		P1	P2	K	Mg	Ca	Na	Ph	CEC	%K	%Mg	%Ca	%Na	S	Zn	Mn	Fe	Cu	B	Ds/M	O.M. %
2.0	Total	407	407	34	241	3105	41	14.4	9.6	0.9	21	159		32.0	54.93	26.00	52.00	97.81	1.24		4.00
	Avg. ppm	102	102	9	60	776	10	3.6	2.4	0.2	5.1	39.9		8	14	7	13	24.45	0.31		1.00
	Lb/Ac	204	204	17	121	1553	21	7.2	4.8	0.5	10.3	79.7		16.0	27.5	13.0	26.0	48.91	0.62		2.00
	STDEV	21	21	1	29	345	1.5	0.2	1.0	0.1	0.4	1.6		3.0	1.93		3.00	3.18	0.30		
	STD/AVG	0.20	0.20	0.12	0.47	0.44	0.15	0.06	0.41	0.51	0.07	0.04		0.4	0.14		0.23	0.13	0.97		
	FLAG	✓	✓		✓	✓			✓	✓				✓			✓		✓		
Ammend Flag		YES	YES		YES	YES			YES	YES				YES			YES		YES		
Highest Value		224	224	18	149	1897	22	7.4	5.8	0.6	10.6	81.3		19.0	29.39	13.00	29.00	52.08	0.92		2.00
Smallest Value (SV)		183	183	16	92	1208	19	7.0	3.8	0.4	9.9	78.1		13.0	25.54	13.00	23.00	45.73	0.32		2.00
LOOK AT IF (SV) <		136	136	11	80	1035	14	4.8	3.2	0.3	6.9	53.1		10.7	18.31	8.67	17.33	32.60	0.41		1.33

CCS

NUMBERS IN RED INDICATE LOW LEVELS AND THOSE IN BLUE HIGH LEVELS. ADJUSTMENTS WILL PROBABLY BE MADE DURING THE SEASON BASED ON TISSUE TESTING, STAND VIGOR AND WATER/RAINFALL.

CALC. AVG. " N " RELEASE FROM O.M./AC/YR	20.0
EST. AVG. % N RELEASE/YR. FROM O.M. ~(1-4%)/YR.	2
(This release varies with moisture & temp.)	

ADDITIONAL COMMENTS

No Dolomitic Limestone is required for this program. The Manure rate of 16,000 lb/ac was included. See the Dairy Manure Availability chart for information on available nutrients from Dakin Dairy sample as submitted on the report heading. Environmental conditions, irrigation water and overall nutrient status of the corn will determine the effective utilization rates/efficiencies of applied materials. It is very important to not apply materials (especially Nitrogen and Phosphorus) above rates to support the corn silage crop in question. Refer to the "WHEN TO FERTILIZE CORN" worksheet for optimum timing of the side-dress 9-0-13 and 32% UAN. The 3-18-18 starter pop-up application should provide the young corn seedlings sufficient Nitrogen, Phosphorus and Potassium to reach the fourth leaf stage with no issues. First side-dressing should be timed when the corn plants are ~ 5 - 6 inches tall. The "CORN NUTRIENT GRAPH" will also show optimum timing for fertilizers to maximize yields.