



LandMark Implement's Nitrogren Management Plot Book



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			LEXING	ror	N TEST PLOT			
Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation		Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation
ExactEmerge 1	90.1%	2.05	30.0%		Customer Planter 1	99.3%	1.40	22.6%
ExactEmerge 2	93.5%	1.71	26.0%		Customer Planter 2	99.3%	1.78	28.7%
ExactEmerge 3	100.0%	0.56	9.0%		Customer Planter 3	102.0%	1.03	17.1%
ExactEmerge 4	95.6%	1.38	21.5%		Customer Planter 4	101.1%	1.08	17.7%
ExactEmerge 5	90.5%	2.43	35.7%		Customer Planter 5	102.3%	1.27	21.1%
ExactEmerge 6	97.5%	1.43	22.7%		Customer Planter 6	96.8%	2.12	33.4%
ExactEmerge 7	97.2%	1.21	19.2%		Customer Planter 7	100.7%	1.74	28.6%
ExactEmerge 8	97.3%	1.33	21.1%		Customer Planter 8	96.0%	1.79	28.0%
ExactEmerge 9	96.7%	1.46	23.0%		Customer Planter 9	94.8%	1.69	26.1%
ExactEmerge 10	98.3%	0.85	13.6%		Customer Planter 10	92.0%	2.00	30.0%
ExactEmerge 11	93.5%	1.45	22.0%		Customer Planter 11	102.2%	1.31	21.8%
ExactEmerge 12	87.2%	2.48	35.1%		Customer Planter 12	96.2%	1.70	26.6%
Average Target Population	94.8% 34000	1.53	23.2%		Average Target Population	98.6% 34000	1.58	25.1%

			BEATR	ICE	TEST PLOT			
Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation		Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation
ExactEmerge 1	96.6%	1.69	21.0%		Customer Planter 1	85.0%	3.81	41.8%
ExactEmerge 2	104.3%	1.60	21.5%		Customer Planter 2	92.2%	2.79	33.2%
ExactEmerge 3	96.2%	1.52	18.9%	j l	Customer Planter 3	99.9%	1.28	16.5%
ExactEmerge 4	103.3%	2.69	35.9%		Customer Planter 4	97.6%	2.20	27.8%
ExactEmerge 5	100.1%	0.73	9.4%		Customer Planter 5	100.4%	2.33	30.2%
ExactEmerge 6	99.5%	0.85	10.9%	j I	Customer Planter 6	100.1%	2.70	35.0%
ExactEmerge 7	101.6%	0.83	10.9%	j I	Customer Planter 7	92.5%	2.63	31.4%
ExactEmerge 8	96.6%	1.91	23.9%	j I	Customer Planter 8	97.2%	1.47	18.5%
ExactEmerge 9	97.5%	2.23	28.1%	j I	Customer Planter 9	94.9%	3.37	41.3%
ExactEmerge 10	98.7%	0.98	12.5%	j I	Customer Planter 10	96.9%	3.16	39.6%
ExactEmerge 11	96.6%	2.20	27.5%		Customer Planter 11	97.6%	3.53	44.4%
ExactEmerge 12	99.9%	0.91	11.8%	j l	Customer Planter 12	93.8%	2.66	32.2%
Average	99.2%	1.51	19.4%	[Average	95.7%	2.66	32.7%
Target Population	27000				Target Population	27000		

			HEBRO	Л
	% Population	Standard	Coefficient	
Planter Type and Rep #	Desired Vs	Deviation	of	
	Actual	Deviation	Variation	
ExactEmerge 1	89.0%	3.46	50.6%	
ExactEmerge 2	94.2%	1.59	24.5%	
ExactEmerge 3	88.9%	2.39	34.8%	
ExactEmerge 4	90.4%	2.36	35.0%	
ExactEmerge 5	96.0%	1.45	22.8%	
ExactEmerge 6	91.6%	1.95	29.3%	
ExactEmerge 7	93.7%	1.79	27.5%	
ExactEmerge 8	93.4%	1.65	25.3%	
ExactEmerge 9	96.2%	1.39	21.9%	
ExactEmerge 10	89.9%	2.06	30.4%	
ExactEmerge 11	96.2%	1.28	20.1%	
ExactEmerge 12	95.3%	1.53	23.9%	
Average	92.9%	1.91	28.8%	
Target Population	34300			

BRU	ЛИ	IEST PLOT			
ent on		Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation
5		Customer Planter 1	95.4%	1.53	23.9%
5		Customer Planter 2	94.0%	1.69	26.0%
Ś		Customer Planter 3	95.8%	1.70	26.7%
ś		Customer Planter 4	96.6%	1.98	31.4%
ģ		Customer Planter 5	85.9%	2.70	38.1%
ò		Customer Planter 6	88.9%	2.76	40.2%
,		Customer Planter 7	93.7%	2.85	43.7%
5		Customer Planter 8	91.3%	2.05	30.7%
ò		Customer Planter 9	82.5%	3.54	47.9%
'n		Customer Planter 10	94.1%	2.68	41.4%
5		Customer Planter 11	100.8%	0.96	15.9%
5		Customer Planter 12	98.4%	1.58	25.6%
		Average	93.1%	2.17	32.6%
		Target Population	34300		

			HASTIN	IGS	S TEST PLOT			
Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation		Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation
ExactEmerge 1	106.2%	1.50	25.9%		Customer Planter 1	93.9%	1.79	27.3%
ExactEmerge 2	96.5%	1.16	18.2%		Customer Planter 2	94.5%	3.04	46.7%
ExactEmerge 3	96.0%	1.39	21.8%		Customer Planter 3	93.6%	1.85	28.2%
ExactEmerge 4	88.0%	2.25	32.2%		Customer Planter 4	84.9%	2.62	36.2%
ExactEmerge 5	96.6%	2.22	34.9%		Customer Planter 5	82.5%	4.06	54.5%
ExactEmerge 6	93.5%	1.62	24.6%		Customer Planter 6	100.7%	1.21	19.8%
ExactEmerge 7	96.5%	1.77	27.8%		Customer Planter 7	95.5%	2.32	36.1%
ExactEmerge 8	97.4%	1.89	29.9%		Customer Planter 8	87.3%	2.73	38.8%
ExactEmerge 9	96.6%	1.62	25.5%		Customer Planter 9	87.5%	2.47	35.2%
ExactEmerge 10	95.0%	1.95	30.2%		Customer Planter 10	97.3%	1.58	25.0%
ExactEmerge 11	82.2%	2.80	37.4%		Customer Planter 11	98.4%	1.77	28.3%
ExactEmerge 12	88.1%	2.30	32.9%		Customer Planter 12	96.8%	1.77	27.8%
Average Target Population	94.4% 34000	1.87	28.4%		Average Target Population	92.7% 34000	2.27	33.7%

			SMITH CE	NT	ER TEST PLOT			
Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation		Planter Type and Rep #	% Population Desired Vs Actual	Standard Deviation	Coefficient of Variation
ExactEmerge 1	97.9%	3.02	29.7%		Customer Planter 1	97.7%	2.54	28.5%
ExactEmerge 2	100.4%	4.21	42.4%		Customer Planter 2	95.3%	4.25	46.5%
ExactEmerge 3	99.9%	0.85	9.8%		Customer Planter 3	100.5%	3.16	36.4%
ExactEmerge 4	103.9%	2.37	24.8%		Customer Planter 4	103.1%	1.02	12.1%
ExactEmerge 5	98.2%	2.41	23.7%		Customer Planter 5	92.4%	3.36	31.2%
ExactEmerge 6	96.9%	1.53	14.9%		Customer Planter 6	97.1%	3.39	33.1%
ExactEmerge 7	99.6%	1.63	18.7%		Customer Planter 7	93.4%	2.33	25.0%
ExactEmerge 8	100.6%	0.78	9.0%		Customer Planter 8	99.0%	3.02	34.3%
ExactEmerge 9	101.4%	2.29	26.7%		Customer Planter 9	91.7%	3.58	37.7%
ExactEmerge 10	90.2%	2.70	27.9%		Customer Planter 10	91.9%	3.03	31.9%
ExactEmerge 11	93.5%	2.54	27.2%		Customer Planter 11	104.9%	1.68	20.2%
ExactEmerge 12	92.0%	2.65	28.0%		Customer Planter 12	91.2%	3.06	32.1%
Average Target Population	97.9% 21000/24000	2.25	23.6%		Average Target Population	96.5% 21000/24000	2.87	30.7%

Hastings Test Plot

Irrigated Overview: The west half of the plot was planted with a John Deere ExactEmerge 1725 CCS mounted vertical fold planter which used the 360 Yield Center Bandit fertilizer system. The customer planted the east half. The field had manure applied in prior years. The field was growing wheat when planted as a cover crop and corn was chopped for silage the prior year. Other than the Nitrogen applications, both sides were managed in a similar fashion.

Previous Crop: Corn for silage and growing wheat as a cover crop at planting.

Tillage Practice: No-Till

Target Population: 34,000 seeds per acre

Customer side (west side) of the plot fertilizer applications:

• Side Dress Application: 63.5 gallons of 32-0-0

John Deere / 360 Yield Center (east side) of the plot fertilizer applications:

- 32-0-0 at Planting with 360 Bandits
 - 34 gallons
- 32-0-0 applied between V10 and VT (pre tassel)
 - Y-dropped on at 22.9 gallons per acre with John Deere R4038

Observations / Potential changes if we were to duplicate this in the future:

- On 23.3 less pounds of total actual Nitrogen we are producing 8 more bushels
- Nitrogen Efficiency was 0.796 # applied per bushel verses 0.917 #
- With less nitrogen applied we achieved an additional \$17.40 per acre profit

					500											
84					Boron ppm B			nge	0141- 0141-	14	+					
97583 - 97584 621213	018	018			Copper ppm Cu			Cation Exchange	acity	73						
97583 - 621213	06/25/2018	06/26/2018					_	on E	Capi	9						
97 62	90	90			Manganese ppm Mn			Cati	010 010	2	+	_	ų,			
	ä	ED:	NGS		lron ppm Fe			F		, 		=	21			
ÖN	CEIVE	PORT	HASTII	DTPA	Zinc ppm Zn	2.8			Ū	-						
LAB NO: INVOICE NO:	DATE RECEIVED:	DATE REPORTED:	ION: H				_	Щ	Ca	0	+					
LAB	DAT	DAT	FIELD IDENTIFICATION: HASTINGS	Mehlich 3 ICP	n Sodium ppm Na	44		R ACF	· · · ·							
			ENTIF	Acetate	Magnesium ppm Mg	295		T PEF	MgO	0	+					
st Dr. 58902	5	20	D ID	Ammonium Acetate	Calcium ppm Ca	2616		RIEN	5							
169 NE 6	509 1522 63.81	0000	FIEI	-			_	LUN -	M							
1602 Park West Dr. PO Box 169 Hastings, NE 68902	0.557.7 2.463.3 2.463.3	402,4		сь	Sulfur m Ib. S/A	43		POUNDS ACTUAL NUTRIENT PER ACRE	ø	0				ation.		
<u> 2</u> 6년	800	Ď		Mehlich 3 ICP	mqq	12		DS AC	Z	0				menda	tent.	
	es ,	=		Σ	Potassium ppm K	397		INNO	К К	0	8			ecomi	er con	
		idos.con		lich 3		0		Ē	P ₂ O ₅	c				Je N r	: matt	
- C	OLO IN			c-Mehlich 3	Phosphorus ppm P	50			z	250				king th	ganic	
d L	lab	www.36		ction	rogen b. N/A	25	25			+	+	_		n mak	soil or	
				Cd Reduction	Nitrate-Nitrogen ppm Ib. N/A	2	7		aise pH to	0.3				sed in	d for s	
J	2					-			ons/A to I	0.0				n (s)e	justec	
[(I)IOT	% Organic Matter	2.4			Lime, ECC Tons/A to raise pH to:	0.0				ample	en ad	
				(I) XSL(I)	Excess Lime	No			μ	+	+	_		rrate s	ve be	
			RK	1:1 Water-Soil	-	0.15			Yield Goal	250 hii			NS:	soil nit	ins ha	
ENT	49		LANDMARK			-							STIO	Sub	Indatio	
	л 88 88 2 Ш			Sikora	Buffer	6.9		SNO:	To				UGGE	TION	omme	
JUSTIN ATWOOD LANDMARK IMPLEMENT	915 BREWSTER RU HOLDREGE, NE 68949		SOIL ANALYSIS RESULTS FOR:	1:1 Water-Soil	Soil PH	6.2		FERTILIZER RECOMMENDATIONS	Crop To Be Grown				SPECIAL COMMENTS AND SUGGESTIONS:	b Number(s):97583 NITROGEN RECOMMENDATION: Subsoil nitrate sample(s) used in making the N recommendation.	b Number(s): 97583 CORN: Nitrogen fertilizer recommendations have been adjusted for soil organic matter content.	
IDMAF	DREC		<u>SUL1</u>		Sample Depth	0 - 12	12 - 24	MME		NGCC			NTS A	S83 OMM	583 fertiliz	
JUS	10H		IS RE	ö				ECO					MME	s): 975	s): 975 ogen	,
		_	ALYS	METHOD USED:	Sample ID	TOP	SUB	ER R	Sample	a C F	5	SUB	CO -	Lab Number(s): 97583 NITROGEN RECOM	Lab Number(s):97583 CORN: Nitrogen fert	
CLIENT: 38770			LANA	THOD	_	m	4	TILIZ		0	2	4	ECIAL	Nur VITRO	o Nun CORN	
ъ С			sol	MET	Lab Number	97583	97584	FER	Lab	07602	50.00	97584	SP	Lat	Lat	

Samples are retained 30 days after report of analysis

Hans Burken Agronomist Reviewed and Approved By:

Analyses are representative of the samples submitted

East Side - Cus	Amount	Unite	Draduct		tual NL Applied	Dor	Aaro
Operation	Amount	Units	Product	AC	tual N Applied		Acre (
Side Dress Fert	63.5	Gal / Acre	32-0-0	Tatal	224.7 #ofN	\$	79
	2 4 9 9 9			Total	224.7 #ofN		4.2
Corn Seed	34000	Seeds / Acre				\$	12
Irrigation						\$	5
Herbicide - Pre						\$	2
Herbicide - Po						\$	2
		ion - coulter ir	njected		6/1/18	\$	-
Planting - No F		ed			5/1/18	\$	
Herbicide App					5/4/18	\$	
Herbicide App					6/8/18	\$	
Harvest Cost		per wet bush				\$	(
Hauling Cost		•	el - over 5 mile	S		\$	
Insurance Cos	•	Multi Peril ar	nd Hail			\$	
Cash Rent - Est	imated					\$	2
					TOTAL COST		
					TOTAL COST	\$	76
					TOTAL COST		
West Side - JD	/360YC Appli		Droduct			\$	76
West Side - JD Operation	/360YC Appli	Units	Product	Ac	tual N Applied	\$ Per	7 Acro
West Side - JD Operation At Planting	/360YC Appli Amount 34	Units Gal / Acre	32-0-0	Ac	tual N Applied 120.3 #of N	\$ Per \$	7 Acre
West Side - JD Operation	/360YC Appli Amount 34	Units			tual N Applied 120.3 #of N 81.0 #of N	\$ Per	7(Acre
West Side - JD Operation At Planting Y Drop App	/360YC Appli Amount 34 22.9	Units Gal / Acre Gal / Acre	32-0-0	Ac	tual N Applied 120.3 #of N	Ş Per Ş Ş	7(Acre
West Side - JD Operation At Planting Y Drop App Corn Seed	/360YC Appli Amount 34 22.9	Units Gal / Acre	32-0-0		tual N Applied 120.3 #of N 81.0 #of N	\$ Per \$ \$ \$ \$	7(Acre
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation	/360YC Appli Amount 34 22.9 34000	Units Gal / Acre Gal / Acre Seeds / Acre	32-0-0		tual N Applied 120.3 #of N 81.0 #of N	\$ Per \$ \$ \$ \$ \$ \$ \$	70 Acre
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro	/360YC Appli Amount 34 22.9 34000 e Chemical Cos	Units Gal / Acre Gal / Acre Seeds / Acre	32-0-0		tual N Applied 120.3 #of N 81.0 #of N	\$ Per \$ \$ \$ \$ \$ \$ \$ \$ \$	7 Acro
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro Herbicide - Po	/360YC Appli Amount 34 22.9 34000 e Chemical Cos st Chemical Cos	Units Gal / Acre Gal / Acre Seeds / Acre	32-0-0		tual N Applied 120.3 #of N 81.0 #of N 201.4 #of N	\$ Per \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	7 Acre 1
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro Herbicide - Po Planting - Ban	/360YC Appli Amount 34 22.9 34000 e Chemical Cos st Chemical Cos ding Nitrogen	Units Gal / Acre Gal / Acre Seeds / Acre	32-0-0		tual N Applied 120.3 #of N 81.0 #of N 201.4 #of N 5/1/18	\$ Per \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	7 Acre 1
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro Herbicide - Po Planting - Ban Y Drop Applica	/360YC Appli Amount 34 22.9 34000 e Chemical Cos st Chemical Cos ding Nitrogen ation	Units Gal / Acre Gal / Acre Seeds / Acre	32-0-0		tual N Applied 120.3 # of N 81.0 # of N 201.4 # of N 5/1/18 6/29/18	\$ Per \$	7(Acre 1:
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro Herbicide - Po Planting - Ban Y Drop Applica Herbicide App	/360YC Appli Amount 34 22.9 34000 e Chemical Cos st Chemical Cos st Chemical Cos ding Nitrogen ation lication - Pre	Units Gal / Acre Gal / Acre Seeds / Acre St St	32-0-0		5/1/18 5/4/18	\$ Per \$	7(Acre 1:
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro Herbicide - Po Planting - Ban Y Drop Applica Herbicide App Herbicide App	/360YC Appli Amount 34 22.9 34000 e Chemical Cos st Chemical Cos st Chemical Cos ding Nitrogen ation lication - Pre lication - Post	Units Gal / Acre Gal / Acre Seeds / Acre st st	32-0-0 32-0-0		tual N Applied 120.3 # of N 81.0 # of N 201.4 # of N 5/1/18 6/29/18	\$ Per \$	70 Acree
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro Herbicide - Po Planting - Ban Y Drop Applica Herbicide App Herbicide App Harvest Cost	/360YC Appli Amount 34 22.9 34000 e Chemical Cos st Chemical Cos st Chemical Cos ding Nitrogen ation lication - Pre lication - Post \$ 0.38	Units Gal / Acre Gal / Acre Seeds / Acre st ost	32-0-0 32-0-0	Total	5/1/18 5/4/18	\$ Per \$	7(Acre
West Side - JD Operation At Planting Y Drop App Corn Seed Irrigation Herbicide - Pro Herbicide - Po Planting - Ban Y Drop Applica Herbicide App Herbicide App	/360YC Appli Amount 34 22.9 34000 e Chemical Cos st Chemical Cos st Chemical Cos ding Nitrogen ation lication - Pre lication - Post \$ 0.38 \$ 0.10	Units Gal / Acre Gal / Acre Seeds / Acre st ost	32-0-0 32-0-0 el el - over 5 mile:	Total	5/1/18 5/4/18	\$ Per \$	7 Acre

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Hauling Cost	Ş 0.10	per	wet bushe	el - over 5 miles			Ş	25.30
Insurance Cost	\$ 22.00	Mu	lti Peril an	d Hail			\$	22.00
Cash Rent - Esti	mated						\$	275.00
						TOTAL COST	\$	777.35
		P	rojected P	rofit		Nitrogen Ef	ficien	су
Customer				YIELD	245	Total # N Applied		224.7
	Costs	\$	766.75	Price Per Bushel	\$3.50	#N / Bushel		0.917
				Revenue	\$857.50			
	Cost / Bu	\$	3.13	Profit	\$90.75			
JD/360YC	Costs	\$	777.35	YIELD	253	Total # N Applied		201.4
				Price Per Bushel	\$3.50	#N / Bushel		0.796
				Revenue	\$885.50			
	Cost / Bu	\$	3.07	Profit	\$108.15			
			Ad	ditional Profit / Acre	\$17.40			

Lexington Test Plot

Overview: The east half of the plot was planted with an ExactEmerge and used the 360 Yield Center Bandit fertilizer system. The customer planted the west half with a 1720 CCS planter with eSet seed meters. The field has had manure applied. The west part of the field was strip-tilled to apply fertilizer and create a seedbed. Other than the Nitrogen applications, both sides were managed in a similar fashion.

Irrigated

Previous Crop: Corn

Tillage Practice: Strip-Till

Target Population: 34,000 seeds per acre

Customer side (east side) of the plot fertilizer applications:

Spring Strip-Till

20 Gallons of 32-0-0

Starter at Planting

3.1 Gallons of 10-34-0

Top Dress Dry

• 100# of actual N (46-0-0)

John Deere / 360 Yield Center (east side) of the plot fertilizer applications:

32-0-0 at Planting with 360 Bandits

20 Gallons

Starter applied at planting

• 10-34-0 - 3.1 Gallons

32-0-0 applied between V10 and VT (pre tassel)

• Y-dropped on at 27.49 gallons per acre with Hagie STS12

Observations / Potential changes if we were to duplicate this plot in the future:

- We believe the entire plot should have been strip-tilled to make it more uniform between the two sides, but not apply the 32-0-0 to the east half. We believe the effect of this may be a reduced stand.
- Yielded 7 more bushels per acre on 2.7 # less Nitrogen
- Nitrogen efficiency was very good on both sides of the plot with 0.590# / Bushel on the 360 side compared to 0.614 # of applied nitrogen. Both were very low due to previous application of manure.
- The 360 Yield Center system achieved a \$17.81 per acre additional profit.

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ENT:UJUSTIN ATWOOD LAB NO:ENT:UJUSTIN ATWOOD LAB NO:LAB NO:3770I ANDMARK IMPLEMENT JANDMARK IMPLEMENT 	97621 - 9	621228	06/26/20	06/27/20							Cation Ex	Capa	%H %K	0		3		
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Image: Instant of the second secon	ö	E NO:	RECEIV	REPOR		N: LEX	DTPA	Zinc ppm Zn	2.7			°,	Ca	0				
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ENT: UUSTIN ATWOOD LANDMARK IMPLEMENT ENT: UUSTIN ATWOOD LANDMARK IMPLEMENT 3770 BI5 BREWSTER RD HOLDREGE, NE 68949 ENT: EN		E 68902		8132		ELD IC	Ammoniu	Calcium ppm Ca	3125		UTRIEN	-	_		_			
ENT: JUSTIN ATWOOD BY70 LANDMARK IMPLEMENT BY70 LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949 HOLDREGE, NE 68949 Marrier RD AMALYSIS Kervitechidato ANALYSIS Marrier RD IOLDREGE, NE 68949 Marrier RD MALYSIS Kervitechidato ANALYSIS Kervitechidato Sample Free Kervitechidato Sample Sample Kervitechidato TOP 0-12 7.7 0.28 Lo 2.12 4.3 55 0 Sample FreeOntone Sample Matter Ningen Matter Ningen Matter Ningen Matter Ningen Sample 12-24 0.28 Lo 2.22 12	Box 169	ings, N	163.352	102.463.		L		fur Ib. S/A	122		UAL N		_	0			ion.	
ENT: JUSTIN ATWOOD BY70 LANDMARK IMPLEMENT BY70 LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949 HOLDREGE, NE 68949 Marrier RD AMALYSIS Kervitechidato ANALYSIS Marrier RD IOLDREGE, NE 68949 Marrier RD MALYSIS Kervitechidato ANALYSIS Kervitechidato Sample Free Kervitechidato Sample Sample Kervitechidato TOP 0-12 7.7 0.28 Lo 2.12 4.3 55 0 Sample FreeOntone Sample Matter Ningen Matter Ningen Matter Ningen Matter Ningen Sample 12-24 0.28 Lo 2.22 12	POG	Hast	402.4	Fax 4			lehlich 3 ICP	Sult ppm	34		DS ACT	,	V7	0			mendat	itent.
ENT: JUSTIN ATWOOD LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949 AMALYSIS RESULTS FOR: LANDMARK AMALYSIS RESULTS FOR: LANDMARK OD USED: Name Deptin pH PH Namolen Lime Sample Sample Sali pH Namolen Lime TOP 0-12 7.7 0.28 Lo SUB 12-24 D. 0.28 LO SUB 12-24			ries	E			2	Potassium ppm K	969		POUNI	0.5	22	0			recom	tter con
ENT: JUSTIN ATWOOD LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949 AMALYSIS RESULTS FOR: LANDMARK AMALYSIS RESULTS FOR: LANDMARK OD USED: Name Deptin pH PH Namolen Lime Sample Sample Sali pH Namolen Lime TOP 0-12 7.7 0.28 Lo SUB 12-24 D. 0.28 LO SUB 12-24		Ļ	rato	techlabs.c			c-Mehlich 3	hosphorus ppm P	55				50°2				ig the N	anic ma
ENT: JUSTIN ATWOOD LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949 AMALYSIS RESULTS FOR: LANDMARK AMALYSIS RESULTS FOR: LANDMARK OD USED: Name Deptin pH PH Namolen Lime Sample Sample Sali pH Namolen Lime TOP 0-12 7.7 0.28 Lo SUB 12-24 D. 0.28 LO SUB 12-24		-Tec	abo	www.servi					43	36				21!			n makir	soil ora:
ENT: JUSTIN ATWOOD LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949 AMALYSIS RESULTS FOR: LANDMARK AMALYSIS RESULTS FOR: LANDMARK OD USED: Name Deptin pH PH Namolen Lime Sample Sample Sali pH Namolen Lime TOP 0-12 7.7 0.28 Lo SUB 12-24 D. 0.28 LO SUB 12-24		Servi	1				Cd Redu	Nitrate-Ni ppm	12	10		A to raise pH to	-) used ii	ted for s
ENT: JUSTIN ATWOOD LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949 AMALYSIS RESULTS FOR: LANDMARK AMALYSIS RESULTS FOR: LANDMARK OD USED: Name Deptin pH PH Namolen Lime Sample Sample Sali pH Namolen Lime TOP 0-12 7.7 0.28 Lo SUB 12-24 D. 0.28 LO SUB 12-24		0		J	٦		(ı)	% Organic Matter	2.2			e, ECC Tons/A	_				mple(s)	n adiust
CLIENT: JUSTIN ATWOOD SITTO 38770 38770 38770 138770 138770 138770 138770 138770 140 HOLDREGE, NE 68949 HOLDREGE, NE 68949 HOLDREGE, NE 68949 HOLDREGE, NE 68949 HOLDREGE, NE 68949 100 101 101 101 101 101 101 10							(I) TSX		٤			┝		n				ive heel
CLIENT: JUSTIN ATWOOD 38770 38770 38770 315 BREWSTER RD HOLDREGE, NE 68949 HOLDREGE, NE 68949 HOLDREGE, NE 68949 AMARKIMPLEMEN HOLDREGE, NE 68949 HOLDREGE, NE 68949 Not ANALYSIS RESULTS FOR: LAND MARKING FOR 68949 HOLDREGE, NE 68949 MARKING FOR 6						ARK	1:1 /ater-Soil	sol. Salts nmho/cm	0.28			Yield	Goa	240 b		ONS:	bsoil ni	tions he
CLIENT: JUSTIN ATWOOD 38770 38770 38770 314 HOLDREGE, NE (915 BREWSTERF HOLDREGE, NE (915 BREWSTERF HOLDREGE, NE (915 BREWSTERF 915 BREWSTE		RD RD	38949				>				NS:					GESTI	ON: Su	menda
CLIENT: JUSTIN AT LANDMARI 38770 915 BREW 915 BREW 915 BREW HOLDREG HOLDREG <u>101 ANALYSIS RESULT</u> <u>011 ANALYSIS RESULT</u> <u>7621 TOP 0 -12</u> 7621 TOP 0 -12 7622 SUB 12 -24 7622 SUB 12 -24 7621 TOP CORN 7621 TOP CORN		STER F	E, NE			S FOR:	1:1 /ater-Soil	Soil PH	7.7		DATIO	Crop To	Be Grown			ND SUG	INDATIC	Thermore
CLIENT: JU 38770 B1 91 LA 91 HC 91 ANALYSIS F 01L ANALYSIS F 01L ANALYSIS F 61L ANALYSIS F 7622 SUB 7622 SUB 7622 SUB 7622 SUB 7622 SUB 7622 SUB 7622 SUB 7622 SUB 7622 SUB 7621 TOP 7621 TOP	STIN AT	5 BREW	DIREG			ESULT			0 - 12	12 - 24	OMMEN			CORN		ENTS AP	7621 COMME	7621 J fertilize
CLIEN1 3877 3877 3877 3877 3877 3877 3877 3877 3877 3877 3877 7621 7622 7622 7622 7622 7622 7622 7622 7622 100 1100 1100			H			ALYSIS R) USED:	Sample ID	TOP	SUB	ZER REC	Sample	ē	TOP	SUB	L COMME	nber(s): 97 OGEN RE	b Number(s): 97621 COBN: Nitroren fartilizer recommendations have been adjusted for soil organic matter content.
	CLIENT	3877				SOIL AN	METHOL	Lab Number	97621	97622	FERTILIZ	Lab	Number	97621	97622	SPECIA	Lab Nur NITR(Lab Nur

Explanations of soil analysis terms are available upon request Samples are retained 30 days after report of analysis Reviewed and Approved By: Analyses are representative of the samples submitted

Have Bule

Hans Burken Agronomist

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West Side - Custor		L La Sta	Due du ct			0	
	Amount	Units	Product	Actual N Appli			Acre C
Spring StripTill) Gal/Acre	32-0-0	70.8		\$	23
At Planting	3.1	Gal / Acre	10-34-0		#of N	\$	20
			46-0-0 Nutrasph	ere			
Top Dress	100) #/Acre	Treated	100.0	#of N	\$	38
			1	otal 174.4	#ofN		
Corn Seed	34000	Seeds/Acre				\$	110
Irrigation						\$	75
0							-
Herbicide - Pre						\$	13
Herbicide - Post						\$	22
Strip Till Operation	n					\$	20
Planting - Applying	g Starter			5/1/18		\$	20
Top Dress Dry						\$	6
Herbicide Applicat	tion - Pre					\$	7
Herbicide Applicat	tion - Post	t				\$	7
Disking - manure ii						\$	14
Manure Applicatio						\$	15
Harvest Cost		B per wet bush	nel			\$	107
Hauling Cost		•	iel - over 5 miles			\$	28
Insurance Cost		2 Multi Peril a				\$	22
Cash Rent - Estima						\$	275
					TOTAL COST	\$	828
East Side - JD/360	YC Applie	d Nitrogen					
	Amount	Units	Product	Actual N Appli	ed	Per 4	Acre C
At Planting) Gal/Acre	32-0-0	70.8		\$	23
At Planting		Gal / Acre	10-34-0		#ofN	\$	20
Y Drop Applicatic		Gal / Acre	32-0-0	97.3		Ş	31
			Т	otal 171.7	#of N		
Corn Seed	34000	Seeds/Acre				\$	110
Irrigation		-				\$	75
Herbicide - Pre Che	emical Co	st				\$	13
Herbicide - Post Ch						\$	22
Field Cultivating p	rior to pla	anting				\$	13
Planting - Applying		-	ogen	5/1/18		\$	30
Y Drop Application	-	0 11	~	6/28/18		\$	15
Herbicide Applicat				-,,20		\$	
Herbicide Applicat		t				\$	7
Disking - manure in						\$, 14
Manure Applicatio	•					\$	15
Harvest Cost		B per wet bush	nel			\$	110
Hauling Cost		•	iel - over 5 miles			\$	29
Insurance Cost		2 Multi Peril a				\$	22
Cash Rent - Estima						\$	275
200110					TOTAL COST	\$	837
		Projected			Nitrogen Ef	ficien	су
Customer			YIELD		Total # N Applied		1
-0	Costs	\$ 828.26			#N / Bushel		0.
			Revenue	\$1,107.60			
C	Cost / Bu	\$ 2.92	Profit	\$279.34			
	-				T-1-1 // AL A		
	Cost / Bu	\$ 2.92 \$ 837.75		291	Total # N Applied #N / Bushel		1 [°] 0.

Revenue 2.88 Profit Additional Profit / Acre

Cost / Bu

\$

\$1,134.90 \$297.15 **\$17.81**

Smith Center Test Plot

Overview: The field is broke up into five different sections with two larger sections planted with the ExactEmerge planter which used the 360 Yield Center Bandit Fertilizer system. The customer planted the other three sections of the field and both having similar amounts of the area of the field. The west section against the creek alternated planting between the customers planter and the JD/360 system. Other than the Nitrogen applications, both sides were managed in similar fashion.

Dryland

Previous Crop: Wheat

Tillage Practice: No-Till

Target Population: 24,000 seeds per acre on the bottom ground - 21,000 seeds per acre on upland ground

Customer side (east side) of the plot fertilizer applications:

Spring applied through the TAPPS System

- 149# Actual N NH3
- 6.86 Gallons 10-34-0
- 2.94 Gallons 12-0-0-26

At Planting:

- 2 Gallons of 10-34-0
- 2 Gallons 32-0-0
- 1 Quart Micro 500

John Deere / 360 Yield Center (east side) of the plot fertilizer applications:

At Planting with 360 Bandits

- 25 Gallons 32-0-0
- 7 Gallons 10-34-0
- 3 Gallons 12-0-0-26
- At Planting in row
 - 10-34-0 2 Gallons
 - 32-0-0 2 Gallons
 - 1 Quart Micro 500

32-0-0 applied between V10 and VT (pre tassel)

• Y-dropped on at 10 Gallons per acre with Hagie STS12 - This was done on 6 passes of 24 rows each. Remainder of the field did not receive this treatment

Observations / Potential changes if we were to duplicate this plot in the future:

- Both sides achieved very high yields and very good nitrogen efficiency
- Due to the amount of Nitrogen in the soil portions of the field on the 360 YC side did not receive additional late season Nitrogen as part of our test.
- Yields
 - o Customer's System
 - Bottom 220 Bu/A 0.652 # of N/Bu
 - \bullet Upland 206 Bu/A 0.697 # of N/Bu
 - o 360 Yield Center
 - Bottom with Y Drop Application 228 Bu/A 0.638 # of N/Bu \$4.26 additional profit
 - Upland with Y Drop Application 219 Bu/A 0.664 # of N/Bu \$21.76 additional profit
 - Bottom with no additional N 232 Bu/A 0.474 # of N/Bu \$18.26 additional profit
 - Upland with no additional N 189 Bu/A 0.582 # of N/Bu \$83.24 loss in profit due to exceptional yield on customer's portion. Should have applied additional late season N on the upland ground.

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CLIENT: 38770		JUSTIN ATWOOD LANDMARK IMPLEMENT 915 BREWSTER RD HOLDREGE, NE 68949	ATWC ARK IN WSTE GE, N	NPLEN ER RD JE 68(AENT 949			40	Serv	Servi-Tech Laboratories	i-Tech Laboratorie www.servitechlabs.com	an and a second se	1602 Hast 800,6 Fax 4	1602 Park West Dr. PO Box 169 Hastings, NE 68902 800.557.7509 402.463.3522 Fax 402.463.8132	Vest Di E 6890 9 8132		LAB NO: INVOICE DATE RE	LAB NO: INVOICE NO: DATE RECEIVED:	/ED:	97758 - 621273 06/28/2	97758 - 97759 621273 06/28/2018	759
																	DAIE	DATE REPORTED:		7/90	91.02/62/90	
SOIL AF	SOIL ANALYSIS RESULTS FOR:	RESUL	TS FC		LANDMARK	ARK								LL-	IELD II	FIELD IDENTIFICATION: SC	ICATIO	N: SC				
METHO	METHOD USED:		1:1 Water-St	oi	Wa	1:1 Water-Soil	(I) TSX	(J)IOT	Cd Reduction		c-Mehlich 3	×	Mehlich 3 ICP		Ammoni	Ammonium Acetate	Mehlich 3 ICP	DTPA				
Lab Number	Sample ID	Sample Depth	PH PH	Buffer pH			Excess Lime	% Organic Matter	Nitrate-Nitrogen ppm Ib. N/A		Phosphorus ppm P	Potassium ppm K	Sulf	Sulfur n Ib. S/A	Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Iron ppm Fe	Manganese ppm Mn	Copper ppm Cu	Boron ppm B
97758	TOP	0 - 12	7.8		ľ	0.38	Ξ	2.0	16	58	24	535	11	40	6461	74	21	1.2				
97759	SUB	12 - 24	*						14	50												
FERTIL	FERTILIZER RECOMMENDATIONS:	COMME	NDAT	LIONS								POUNE	POUNDS ACTUAL	UAL N	NUTRIENT		PER ACRE			Catio	Cation Exchange	ange
Lab Number	Sample ID		Cro Be G	Crop To Be Grown		Yield Goal		Lime, ECC Tons/A to raise pH to: 6.0 6.5 7.0	A to raise pH to	z z	P205	Q2 X2	z	s	Mn	n MgO		Ca	ō	C %H	Capacity	V %Mg %Na
97758	- TOP	CORN				150 bu	7			80	30	0	0	0		0		0		27 0	5 92	2 0
97758	TOP	CORN				180 bu	2			115	40	0	0	0		0		0				
97759	SUB																					
SPECIA	SPECIAL COMMENTS AND SUGGESTIONS:	MENTS	AND S	SUGG	ESTIO	NS:																
Lab Nu COR	Lab Number(s): 97758 CORN: Consider applying part of the recommended nitrogen (N) and phosphate (P2O5) fertilizer in a band at planting, especially with early-planted corn. Avoid placing fertilizer in direct contact with seed to prevent potential injury to young seedlings.	ber(s):97758 : Consider applying part of the recommendec placing fertilizer in direct contact with seed to	lying p r in dir	ant of ect col	the re ntact v	commé vith see	∋nded ∣ ed to p	nitroger revent p	i (N) an	l nitrogen (N) and phosphate (P2O5) fertiliz prevent potential injury to young seedlings.	hate (P to young	205) fe J seedlii	artilizer i ngs.	in a bar	nd at pl	anting, e	especia	lly with €	early-pla	anted co	orn. A	oid
Lab Nu NITR	Lab Number(s):97758 NITROGEN RECOMMENDATION: Subsoil nitrate	97758 RECOMN	JEND	ATION	J: Sub	soil nit		ample(s)) used i	sample(s) used in making the N recommendation.	ig the N	recomr	nendat	ion.								
Lab Nu COR	Lab Number(s): 97758 CORN: Nitrogen fertilizer recommendations have been adjusted for soil organic matter content.	97758 Jen fertili	zer re(comme	endati	ons ha	ve bee	in adjus	ted for	soil org	anic mat	tter con	tent.									
Analyse	Analyses are representative of the samples submitted	esentativ	e of the	e samp	iles sub	mitted	S Revi	Samples are Reviewed and	are retai nd	Samples are retained 30 days after report of analysis viewed and Hans Burken	lays after repor Hans Burken	r report v Jurken	of analy.	sis	Explanat	Explanations of soil analysis terms are available upon request のし、 こん ハ	f soil and	alysis teri	ms are a	available	upon re Page 1	/ailable upon request Page 1 of 1
							App	Approved By:	3y:		Agronomist	omist			met,		1			06/29/	2018 1	:48 pm

Operation	Amount	Units	Product	Actual N Appl	ied	Per Acre C
TAPPS Application		lbs/Acre	NH3	122.2		\$ 35
TAPPS Application		Gal / Acre	10-34-0		# of N	\$ 16
TAPPS Application		Gal / Acre	12-0-0-26	3.9	# of N	\$ 4
Corn Seed		Seeds / Acre	-			\$ 78
Planting	2	Gal / Acre	32-0-0	7.1	# of N	\$ 3
Planting	2	Gal / Acre	10-34-0	2.3	# of N	\$ 4
DI	0.05	<u></u>				<u> </u>
Planting	0.25	Gal / Acre	Micro 500		#of N	\$ 3
			Total	143.5	Total N Applied	<u> </u>
Herbicide - Pre						\$ 13
Herbicide - Post						\$ 15
TAPPS Application (4/19/18	1			\$ 25
Planting - Applying	Fertilizer	5/8/18	1			\$ 20
Herbicide Applicati	on - Pre	5/3/18	5			\$ 7
Herbicide Applicati	on - Post	6/12/18	i i			\$ 7
Harvest Cost	0.38	per wet bush	el			\$ 83
Hauling Cost	0.1	per wet bush	el - over 5 miles			\$ 22
Insurance Cost	18	Multi Peril an	id Hail			\$ 18
Cash Rent - Estimate	ed					\$ 100
					TOTAL COST	<mark>\$ 458</mark>
JD/360YC Applied	Nitrogen - W	ith Y DROP				
Operation	Amount	Units	Product	Actual N Appl	ied	Per Acre C
Planting - Bandit	25	Gal / Acre	32-0-0		# of N	\$ 39
Planting - Bandit	7	Gal / Acre	10-34-0	8.2	# of N	\$ 16
Planting - Bandit		Gal / Acre	12-0-0-26	4.0	# of N	\$ 4
Planting - in row		Gal / Acre	32-0-0		#ofN	\$ 3
-						
Planting - in row		Gal / Acre	10-34-0		#ofN	\$ 4
Planting - in row		Gal / Acre	Micro 500		# of N	\$ 3
Y Drop Application	10	Gal / Acre	32-0-0		#of N	\$ 15
		·	Total	145.4	Total N Applied	
Corn Seed	23400	Seeds / Acre				\$ 78
Herbicide - Pre						\$ 13
Herbicide - Post						\$ 15
Y Drop Application		7/5/18				\$ 15
Planting - Applying		5/8/18				\$ 30
Herbicide Applicati		5/3/18				\$ 7
Herbicide Applicati		6/12/18				\$ 7
Harvest Cost		per wet bush				\$ 86
Hauling Cost	0.1	per wet bush	el - over 5 miles			\$ 22
Insurance Cost	18	Multi Peril an	id Hail			\$ 18
Cash Rent - Estimate	ed					\$ 100
					TOTAL COST	<mark>\$ 482</mark>
JD/360YC Applied	Nitrogen - O	nly with the pl	anter			
Operation	Amount	Units	Product	Actual N Appl	ied	Per Acre C
Planting - Bandit	25	Gal / Acre	32-0-0	88.5	# of N	\$ 39
Planting - Bandit	7	Gal / Acre	10-34-0	8.2	# of N	\$ 16
Planting - Bandit	3	Gal / Acre	12-0-0-26	4.0	# of N	\$ 4
Planting - in row	2	Gal / Acre	32-0-0	7.1	# of N	\$ 3
Planting - in row	2	Gal / Acre	10-34-0	2.3	# of N	\$ 4
Planting - in row	0.25	Gal / Acre	Micro 500	0.0	# of N	\$ 3
			Total	110.0	Total N Applied	
Corn Seed	23400	Seeds / Acre				\$ 78
Herbicide - Pre						\$ 13
Herbicide - Post						\$ 15
Planting - Applying	Fertilizer	5/8/18	i i			\$ 30
Herbicide Applicati	on - Pre	5/3/18	6			\$ 7
Herbicide Applicati	on - Post	6/12/18	5			\$ 7
Harvest Cost	0.38	per wet bush	el			, , ,
ur vest eust	0.50	P				\$ 74
			el - over 5 miles			
Hauling Cost	0.1		el - over 5 miles			\$ 74
Hauling Cost Insurance Cost	0.1 18	per wet bush	el - over 5 miles			\$ 74 \$ 19
Hauling Cost Insurance Cost	0.1 18	per wet bush	el - over 5 miles		TOTAL COST	\$ 74 \$ 19 \$ 18
Hauling Cost Insurance Cost	0.1 18	per wet bush	el - over 5 miles		TOTAL COST	\$ 74 \$ 19 \$ 18 \$ 100
Hauling Cost Insurance Cost	0.1 18	per wet bush	el - over 5 miles Id Hail		TOTAL COST Nitrogen El	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435
Hauling Cost Insurance Cost Cash Rent - Estimate	0.1 18	per wet bush Multi Peril an	el - over 5 miles Id Hail	220		\$ 74 \$ 19 \$ 18 \$ 100 \$ 435
Hauling Cost Insurance Cost Cash Rent - Estimate	0.1 18 ed	per wet bush Multi Peril an Profitabilit	el - over 5 miles nd Hail ty Yield		Nitrogen Ef Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 ficiency 14
Hauling Cost Insurance Cost Cash Rent - Estimate	0.1 18	per wet bush Multi Peril an	el - over 5 miles d Hail ty Yield Price Per Bushel	\$3.50	Nitrogen Ef	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435
Hauling Cost Insurance Cost Cash Rent - Estimate	0.1 18 ed Costs	per wet bush Multi Peril an Profitabilit \$ 458.56	el - over 5 miles d Hail Yield Price Per Bushel Revenue	\$3.50 \$770.00	Nitrogen Ef Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 ficiency 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom	0.1 18 ed	per wet bush Multi Peril an Profitabilit	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit	\$3.50 \$770.00 \$311.44	Nitrogen Ef Total # N Applied #N / Bushel	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom	0.1 18 Costs Cost / Bu	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield	\$3.50 \$770.00 \$311.44 206	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom	0.1 18 ed Costs	per wet bush Multi Peril an Profitabilit \$ 458.56	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel	\$3.50 \$770.00 \$311.44 206 \$3.50	Nitrogen Ef Total # N Applied #N / Bushel	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom	0.1 18 Costs Costs Cost / Bu Costs	per wet bush Multi Peril an Profitabili \$ 458.56 \$ 2.08 \$ 458.56	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom	0.1 18 Costs Cost / Bu Costs Cost / Bu	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44	Nitrogen Ei Total # N Applied #N / Bushel Total # N Applied #N / Bushel	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom	0.1 18 Costs Costs Cost / Bu Costs	per wet bush Multi Peril an Profitabili \$ 458.56 \$ 2.08 \$ 458.56	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom	0.1 18 Costs Cost / Bu Costs Cost / Bu	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228	Nitrogen Ei Total # N Applied #N / Bushel Total # N Applied #N / Bushel	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland	0.1 18 Costs Cost / Bu Costs Cost / Bu	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Profit Yield Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 1.4 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Price Per Bushel Revenue	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 1.4 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland	0.1 18 Costs Cost / Bu Costs Cost / Bu	per wet bush Multi Peril an \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.08 \$ 458.56 \$ \$ \$ 458.56 \$ \$ \$ \$ \$ 458.56 \$ \$ 482.30 \$ \$ \$ \$ \$	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Price Per Bushel Revenue Profit Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 1.4 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland JD/360YC - Y Drop Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30 \$ 482.30 \$ 2.12 Additional Control of the second s	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Price Per Bushel Revenue Profit Yield	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel	\$ 74 \$ 19 \$ 110 \$ 100 \$ 435 101 14 0. 14 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Up/360YC - Y Drop Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.08 \$ 458.56 \$ \$ \$ 458.56 \$ \$ \$ \$ \$ 458.56 \$ \$ 482.30 \$ \$ \$ \$ \$	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Zield Price Per Bushel Revenue Profit Zield Price Per Bushel Revenue Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$798.00 \$315.70 \$4.26 219	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 14 14 14 14 14 0. 14 14 14 14 14 14 14 14 14 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland JD/360YC - Y Drop Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30 \$ 482.30 \$ 2.12 Additional Control of the second s	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Zield Price Per Bushel Revenue Profit Price Per Bushel Price Per Bushel	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel	\$ 74 \$ 19 \$ 110 \$ 100 \$ 435 101 14 0. 14 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Up/360YC - Y Drop Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an \$ 458.56 \$ \$ 458.56 \$ </td <td>el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue</td> <td>\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$766.50</td> <td>Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied</td> <td>\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 14 14 14 14 14 0. 14 14 14 14 14 14 14 14 14 14</td>	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$766.50	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 14 14 14 14 14 0. 14 14 14 14 14 14 14 14 14 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Up/360YC - Y Drop Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an \$ 458.56 \$ \$ 458.56 \$	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Profit Profit Price Per Bushel Revenue Profit Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$76.50 \$284.20	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 14 14 14 14 14 0. 14 14 14 14 14 14 14 14 14 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Up/360YC - Y Drop Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an \$ 458.56 \$ \$ 458.56 \$	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$76.50 \$284.20	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 14 14 14 14 14 0. 14 14 14 14 14 14 14 14 14 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom JD/360YC - Y Drop Bottom JD/360YC - Y Drop Upland	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an \$ 458.56 \$ \$ 458.56 \$	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit ditional Profit / Acree Profit Steld Price Per Bushel Revenue Profit ditional Profit / Acree	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$76.50 \$284.20 \$284.20	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 14 14 14 14 14 0. 14 14 14 14 14 14 14 14 14 14
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland JD/360YC - Y Drop Bottom JD/360YC - Y Drop Upland	0.1 18 Costs Costs Costs Costs Costs Costs Costs Costs Costs Costs Costs	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30 \$ 482.30 \$ 482.30 \$ 482.30	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit ditional Profit / Acree Profit Steld Price Per Bushel Revenue Profit ditional Profit / Acree	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$766.50 \$7766.50 \$284.20 \$284.20 \$221.76 232	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel	\$ 74 \$ 19 \$ 19 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 0.
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Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland JD/360YC - Y Drop Bottom JD/360YC - Y Drop Upland	0.1 18 Costs Costs Costs Costs Costs Costs Costs Costs Costs Costs Costs	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30 \$ 483.30 \$ 483.3	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit ditional Profit / Acre Yield Price Per Bushel Revenue Profit ditional Profit / Acre Yield Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$766.50 \$284.20 \$21.76 232 \$3.50	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied #N / Bushel Total # N Applied Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 14 0. 14 15 16 17 18 19 11 11 <
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Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland JD/360YC - Y Drop Bottom JD/360YC - Y Drop Upland JD/360YC Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs Cost / Bu Costs Cost / Bu	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30 \$ 2.12 \$ 482.30 \$ 2.20 \$ 482.30 \$ 483.97	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Horit Price Per Bushel Revenue Profit Horit Price Per Bushel Revenue Profit Horit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Horit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Horit Price Per Bushel Revenue Profit Price Per Bushel Revenue Profit Horit Price Per Bushel Revenue	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 219 \$3.50 \$74.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$4.26 \$5.50 \$5.84.20 \$5.50 \$5.81.200 \$5.812.00 \$5.82.970 \$18.260	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 144 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 11 0. 11 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland JD/360YC - Y Drop Bottom JD/360YC - Y Drop Upland JD/360YC Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs Cost / Bu Costs	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 458.56 \$ 2.23 \$ 482.30 \$ 2.12 \$ 482.30 \$ 2.12 \$ 482.30 \$ 2.20 \$ 482.30 \$ 435.97 \$ 1.88	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit ditional Profit / Acree Yield Price Per Bushel Revenue Profit ditional Profit / Acree Yield Price Per Bushel Revenue Profit ditional Profit / Acree Yield	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 2199 \$3.50 \$766.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$3.50 \$284.20 \$3.50 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.82 \$3.82 \$1.826 \$1.826 \$1.82 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.82	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 144 0. 14 0. 14 0. 14 0. 14 0. 11 0. 111 0. 111 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom Customer- Upland JD/360YC - Y Drop Bottom JD/360YC - Y Drop Upland JD/360YC Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs Cost / Bu Costs Cost / Bu	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30 \$ 2.12 \$ 482.30 \$ 2.20 \$ 482.30 \$ 483.97	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit ditional Profit / Acre Yield Price Per Bushel Revenue Profit ditional Profit / Acre Yield Price Per Bushel Revenue Profit ditional Profit / Acre Yield Price Per Bushel Revenue Profit Continal Profit / Acre Yield Price Per Bushel	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$315.70 \$4.26 219 \$3.50 \$4.26 219 \$3.50 \$426.50 \$4.26 219 \$3.50 \$4.26 219 \$3.50 \$4.26 232 \$3.50 \$284.20 \$3.50 \$281.200 \$329.70 \$18.26 189 \$3.50	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 144 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14 0. 11 0. 11 0.
Hauling Cost Insurance Cost Cash Rent - Estimate Customer- Bottom UpJ360YC - Y Drop Bottom	0.1 18 Costs Costs Cost / Bu Costs Cost / Bu Costs Cost / Bu Costs Cost / Bu	per wet bush Multi Peril an Profitabilit \$ 458.56 \$ 2.08 \$ 458.56 \$ 2.23 \$ 482.30 \$ 2.12 \$ 482.30 \$ 2.20 \$ 482.30 \$ 483.97	el - over 5 miles d Hail Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit Yield Price Per Bushel Revenue Profit ditional Profit / Acree Yield Price Per Bushel Revenue	\$3.50 \$770.00 \$311.44 206 \$3.50 \$721.00 \$262.44 228 \$3.50 \$798.00 \$315.70 \$4.26 2199 \$3.50 \$766.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$21.76 232 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$3.50 \$284.20 \$3.50 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$284.20 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.50 \$3.82 \$3.82 \$1.826 \$1.826 \$1.82 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.826 \$1.82	Nitrogen Ef Total # N Applied #N / Bushel Total # N Applied Total # N Applied	\$ 74 \$ 19 \$ 19 \$ 18 \$ 100 \$ 435 fficiency 14 0. 144 0. 14 0. 14 0. 14 0. 14 0. 11 0. 111 0. 111 0.

Smith Center Plot - Dryland

Beatrice Test Plot

Overview: 160 acres of dryland. Dry fertilizer was applied to the whole field last fall with a John Deere 2510S strip-till rig. The west half, end rows and one pass next to the east road was planted by the customer with his 1775NT with an Rx with an average of 27,000. The east 70 acres were planted with the 1775NT ExactEmerge with 360 Yield Center Bandits at a flat rate of 27,000. Other than the Nitrogen applications, both side were managed in a similar fashion.

Dryland

Previous Crop: Soybeans

Tillage Practice: 27,000 seeds per acre

Customer Side (west side) of the plot fertilizer applications:

Strip-Till - Fall

• 150# MESZ

• 150# Urea

Starter at Planting

• 3.2 Gallons of Impulse Starter

Side Dress Nitrogen

• 271.4# Urea

John Deere / 360 Yield Center (east side) of the plot fertilizer applications:

Strip-Till - Fall

- 150# MESZ
- 150# Urea

Starter at Planting

3.2 Gallons of Impulse Starter

28-0-0 at Planting with 360 Bandits

• 10 Gallons

28-0-0 applied between V10 and VT (pre tassel)

• Y-dropped on at 19 Gallons per acre with Hagie STS12

Observations / Potential changes if we were to duplicate this plot in the future:

- ExactEmerge visibly achieved a better stand of corn
- Would like to remove the Urea from the Fall Strip-Till operation and apply more liquid N in the spring with the planter to see if we can increase our Nitrogen efficiency per bushel.
- Yield was the same between both sides of the plot (216 Vs 215) on 38.7 less pounds of N
- Nitrogen Efficiency was 0.806# of N with the 360 system Vs 0.982 # of N with the customer's system
- Our profitability was \$7.60 lower than the customers. We believe the difference in profitability could be negated in cost of application

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6						Boron ppm B			oge		N%	13			σ		q		
97585 - 97586		018	018			Copper ppm Cu			Cation Exchange	acity	%Ca	46			Avoi		now e		
585 -	621213	06/25/2018	06/26/2018						ion E	O	4%	39 2			corn.		of lime		
6	62	90	90			Manganese ppm Mn			Cat		•	25 3			anted		rate (
		ED:	TED:	RICE		Iron ppm Fe			F	5					arly-pl		ended		
ä	E NO:	RECEIV	REPOR.	I: BEAT	DTPA	Zinc ppm Zn	1.2			Ca		0			y with e		ecomm		
LAB NO:	INVOICE NO:	DATE RECEIVED:	DATE REPORTED:	SATION	Mehlich 3	Sodium ppm Na	23		ACRE						specially		ig the r		
			_	FIELD IDENTIFICATION: BEATRICE		Magnesium ppm Mg	369		POUNDS ACTUAL NUTRIENT PER ACRE	OpM	6	0			nting, es		ent which can reduce crop growth and yield. Applying and incorporatin laboratory to request a soil aluminum test or for additional information.		
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1602 Park West Dr. PO Box 169	Hastings, NE 68902 800 557 7509	402.463.3522	X 402.4		СР	Sulfur n Ib. S/A	40		CTUAI	0		•			er in a	ation.	Apply for ad		
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		ries	Elos	-		Potassium ppm K	187		POUN	<u>8</u>		0			l nitrogen (N) and phosphate (P2O5) fertiliz prevent potential injury to young seedlings.	sample(s) used in making the N recommendation.	th and inum t	tter co	
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	ect	log	w.servire				25	18		z		190			hosph jury to	naking	e crop st a so	orgai	
	Servi-Tech	2	MM		Cd Reduction	Nitrate-Nitrogen ppm Ib. N/A	┝			se pH to:	7.0	7.7			and p ntial in	ed in n	reduc	for soi	
-united	Se				8		2	5		ins/A to rais	6.5	6.5			en (N) it pote	sn (s)	th can	usted	
		1		1	(I)	% Organic Matter	2.6			Lime, ECC Tons/A to raise pH to:	6.0	5.2			nitrog	ample	it whic borato	en adji	
					(I) XSL(I)	Excess Lime	Ŷ			μ					ed to p	trate se	presen Tech la	ive bee	
				MARK	1:1	vvater-Soli Sol. Salts mmho/cm	0.15			Yield	000	200 bu		ONS:	ber(s): 97585 : Consider applying part of the recommende placing fertilizer in direct contact with seed to	in liosdı	ber(s): 97585 ING: At this soil pH, aluminum may be prest correct the problem. Contact the Servi-Tech	ttions ha	
	LANDINIARK INIPLEINIEN I 915 BREWSTER RD	38949		LANDI	Sikora	Buffer	6.2		S:					GEST	of the r contact	SIN: SI	ninum tact the	menda	
VOOD	TERR	NE NE		FOR:	1	Soil PH	5.4		ATION	Crop To				SUG	g part direct	IDATIO	H, alur 1. Con	recom	
N ATW	REWS.	RGE		JLTS				24	NEND			RN		S AND	oplyinç zer in o	MEN	soil ph roblem	tilizer	
JUSTIN ATWOOD	LANUMARK IMPLEMEN 915 BREWSTER RD	HOLDF		RESI		Sample Depth	0 - 12	12 - 24	COMA	-		CORN		MENT	97585 ider al fertiliz	97585 (ECO	97585 At this the pi	97585 Jen fer	
		<u> </u>		ALYSIS	USED.	Sample ID	TOP	SUB	ZER RE	Sample	⊒	TOP	SUB	SPECIAL COMMENTS AND SUGGESTIONS:	b Number(s): 97585 CORN: Consider applying part of the recommended nitrogen (N) and phosphate (P2O5) fertilizer in a band at planting, especially with early-planted corn. Avoid placing fertilizer in direct contact with seed to prevent potential injury to young seedlings.	Lab Number(s):97585 NITROGEN RECOMMENDATION: Subsoil nitrate	Lab Number(s): 97585 WARNING: At this soil pH, aluminum may be present which can reduce crop growth and yield. Applying and incorporating the recommended rate of lime would correct the problem. Contact the Servi-Tech laboratory to request a soil aluminum test or for additional information.	Lab Number(s): 97585 CORN: Nitrogen fertilizer recommendations have been adjusted for soil organic matter content.	
CLIENT:	38770			SOIL ANALYSIS RESULTS FOR: LANDMARK	METHOD USED:	Lab Number	97585	97586	FERTILIZER RECOMMENDATIONS:	Lab	Number	97585	97586	SPECIA	Lab Number(s): 97585 CORN: Consider ap placing fertiliz	Lab Nur NITR(Lab Nur WAR	Lab Nur CORÌ	

Explanations of soil analysis terms are available upon request Have Bal Samples are retained 30 days after report of analysis eviewed and Hans Burken Approved By: Agronomist

Reviewed and Approved By:

Analyses are representative of the samples submitted

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Operation	tomer Amount	Units	Product	Actual N App	ied	Per	Acre Co
Fall StripTill		lbs/Acre	MESZ		#of N		31.8
•						\$	
Fall StripTill		lbs/Acre	46-0-0 - Treated		#ofN	\$	24.
At Planting		Gal / Acre	Impulse Starter		#ofN	\$	9.
Sidedress	271.4	lbs/Acre	46-0-0		#ofN	\$	39.3
			Tota	al 212.0	# of N		
Corn Seed	27000	Seeds / Acre				\$	86.
Herbicide - Pre						\$	14.0
Herbicide - Post	t					\$	23.0
Strip Till Operat	tion					\$	25.0
Planting - Apply	ying Starter			4/30/18		\$	20.0
Side Dress Appl	ication			5/18/18		\$	15.0
Herbicide Appli	ication - Pre					\$	7.
Herbicide Appli	ication - Post					\$	7.5
Harvest Cost		per wet bush	el			\$	82.0
Hauling Cost		•	el - over 5 miles			\$	21.6
Insurance Cost		Multi Peril an				\$	18.0
Cash Rent - Esti	•					\$	200.0
					TOTAL COST	\$	625.
East Side - JD/3	60YC Applie	d Nitrogen				Ť	0101
Operation	Amount	Units	Product	Actual N App	lied	Per	Acre C
Fall StripTill		lbs/Acre	MESZ		#ofN	\$	31.8
Fall StripTill		lbs/Acre	46-0-0 - Treated		#ofN	\$ \$	24.3
-		-					
At Planting		Gal / Acre	28-0-0		#ofN	\$	11.
At Planting		Gal / Acre	Impulse Starter		#ofN	\$ \$	9.
Y Drop Applicat	10 19	Gal / Acre	28-0-0		#ofN	Ş	22.2
			Tota	al 173.3	# OT IN		
Corn Seed		Seeds / Acre				\$	86.8
Herbicide - Pre						\$	14.(
Herbicide - Pos		ost				\$	23.0
Strip Till Operat						\$	25.0
Planting - Apply	/ ying Starter	Banding Nitro	gen	4/30/18		\$	30.0
Y Drop Applicat	tion			7/2/18		\$	15.0
Herbicide Appli	ication - Pre					\$	7.5
Herbicide Appli						\$	7.5
Harvest Cost		per wet bush	el			\$	81.
Hauling Cost	•	•	el - over 5 miles			\$	21.
Insurance Cost		Multi Peril an				Ş	18.0
Cash Rent - Esti	•	-				\$	200.0
Cush Kent Esti					TOTAL COST	Ś	629.
						Y	
		Projected I	Profit		Nitrogen Ef	ficien	CV
Customer			YIELD	216	Total #N Applied		212
Customer	Costs	\$ 625.85	Price Per Bushel	\$3.50	#N / Bushel		0.9
	CUSIS	کې دري د					0.9
	Cost / Bu	k 2.00	Revenue Profit	\$756.00			
	COSt / BU	\$ 2.90	FIUIIL	\$130.15			
			1.45.5			1	
JD/360YC	Costs	\$ 629.95			Total # N Applied		173
			Price Per Bushel	\$3.50	#N / Bushel		0.8

Revenue

Additional Profit / Acre

2.93 Profit

Cost / Bu

\$

\$752.50

\$122.55

(\$7.6

Hebron Test Plot

Overview: The west half of the plot was planted with an ExactEmerge planter and used the 360 Yield Center Bandit Fertilizer system. The east half utilized spring applied NH3 and the customer planted it with their planter. Other than the Nitrogen applications, both sides were managed in similar fashion.

Irrigated

Previous Crop: Soybeans

Tillage Practice: No-Till

Target Populations: 34,300 seeds per acre

Customer Side (west side) of the plot fertilized applications:

NH3 - Spring Applied - Knife

• 176.2# Actual N

Dry Application

• 175# of 11-52-0

Starter at Planting

6.5 Gallons of 10-34-0 Starter

Applied with Pre Emerge herbicide

• 10 Gallons of 32-0-0

John Deere / 360 Yield Center (east side) of the plot fertilizer applications:

Dry Application

• 175# of 11-52-0

Applied with Pre Emerge herbicide

• 10 Gallons of 32-0-0

Starter at Planting

- 5 Gallons of 10-34-0 Starter
- 32-0-0 at Planting with 360 Bandits
 - 33.7 Gallons

32-0-0 applied between V10 and VT (pre tassel)

• Y-dropped on at 20 and 25 Gallons (for comparison) per acre with Hagie STS12

Observations / Potential changes if we were to duplicate in this plot in the future:

- When making the Nitrogen application recommendations prior to Y Drop, we missed the 10 gallons of 32-0-0 that was applied with herbicide. Ideally, we would have reduced our Y-Drop application by 10 gallons and applied similar amount of Nitrogen to the customer's application.
- Tractor broke down on the JD/360 YC side at the beginning of planting which resulted in being 4 days later than the east sides planting date. We feel that this had some impact on the yield.
- Achieved a 5 Bu/A additional yield with a Nitrogen Efficiency of 1.158 # of N per bushel which is higher than the customer's N Efficiency of 1.101 # of N per bushel.
- Due to the extra 10 GPA of 32-0-0 applied our profitability was \$10.70 lower than the customer's.

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CLIENT:	IUK	STIN A	JUSTIN ATWOOD LANDMARK IMPLEMENT	LEMEN						•			PO B	1602 Park West Dr. PO Box 169	lest Dr		LAB NO:	ö		975	97587 - 97588	7588	
38770	16 19 19 19	5 BREV	915 BREWSTER RD HOLDREGE, NE 68949	RD 68945	-			Se		Servi-Tech Laboratories	Stori labs.con	es es	Hasti 800.5 402.4 Fax 4(Hastings, NE 089U2 800.557.7509 402.463.3522 Fax 402.463.8132	= 089U		INVOI DATE DATE	INVOICE NO: DATE RECEIVED: DATE REPORTED:	/ED: (TED:	621 06// 06//	621213 06/25/2018 06/26/2018	ωω	
SOIL ANALYSIS RESULTS FOR:	YSIS R	ESULT	S FOR		LANDMARK]							Œ	ELD IC	DENTIF	CATIO	FIELD IDENTIFICATION: HEBRON	RON			5	
METHOD USED:	SED:		1:1 Water-Soil		1:1 Water-Soil	(I) XSL(I)	(J)IOT	_	Cd Reduction		c-Mehlich 3	Meh	Mehlich 3 ICP		Ammoniu	Ammonium Acetate	Mehlich 3 ICP	DTPA					
Lab Sa Number	Sample ID	Sample Depth	Soil PH	Buffer pH	Sol. Salts mmho/cm	Excess Lime	% Organic Matter		Nitrate-Nitrogen ppm Ib. N/A	A Phosphorus A ppm P		Potassium ppm K	Sulfu ppm 1	Sulfur n Ib. S/A	Calcium ppm Ca	Magnesium ppm Mg	Sodium ppm Na	Zinc ppm Zn	Iron ppm Fe	Manganese ppm Mn	se Copper ppm Cu		Boron ppm B
97587 T	TOP	0 - 12	6.0	6.8	0.32	Ŷ	2.2				34	351	10	36	3297	539	52	0.7					
97588 S	SUB	12 - 24						4	-	14												_	
FERTILIZER RECOMMENDATIONS:	R RECC	DMME	VDATIC	:SNC							ď.	POUNDS ACTUAL NUTRIENI	S ACT	UAL N	JTRIEI		PER ACRE			Catio	Cation Exchange	hange	
Lab · Sa Number	Sample ID		Crop To Be Grown	<u>و</u>		Yield Goal	Lime, ECC 7 6.0	Lime, ECC Tons/A to raise pH to: 6.0 6.5 7.0	se pH to: 7.0	z	P ₂ O ₅	Q2	Zn	s	Mn	OBM	m	Са	5	CEC %H	Capacity	a %Mg %Na	%Na
97587 T	TOP	CORN			25	250 bu	0.0	1.1	1.7	270	25	0	e	0		0		0		25 10	4	67 18	-
97588 S	SUB														_					_			
SPECIAL COMMENTS AND SUGGESTIONS:	COMME	NTS A	ND SU	GGES	TIONS:														-		2		
Lab Number(s): 97587 CORN: Consider applying part of the recommended nitrogen (N) and phosphate (P2O5) fertilizer in a band at planting, especially with early-planted corn. Avoid placing fertilizer in direct contact with seed to prevent potential injury to young seedlings.	ber(s): 97587 : Consider applying part of the recommender placing fertilizer in direct contact with seed to	587 er apply	/ing pal	t of the t conta	ct with s	mende seed tr	d nitro	gen (N) nt pote) and p	h nitrogen (N) and phosphate (P2O5) fertiliz prevent potential injury to young seedlings.	te (P2)	O5) fer seedlin	tilizer i gs.	n a bar	id at pl	anting,	especia	lly with	early-pl	anted o	corn. A	lvoid	
Lab Number(s):97587 NITROGEN RECOMMENDATION: Subsoil nitrate	er(s): 97 3EN RE(587 COMM	ENDAT	-ION:	Subsoil	nitrate	sample	sn (s)ə	ed in m	sample(s) used in making the N recommendation.	he N n	ecomm	lendati	on.									
Lab Number(s): 97587 CORN: Nitrogen fertilizer recommendations have been adjusted for soil organic matter content	er(s): 97 Nitrogen	1587 1 fertiliz	er reco	mmenc	lations	have b	een ad	justed	for soil	organi	c matte	er conte	ent.										

Samples are retained 30 days after report of analysis Reviewed and Hans Burken Approved By: Agronomist Analyses are representative of the samples submitted

How Bal

Page 1 of 1 06/26/2018 2:17 pm Explanations of soil analysis terms are available upon request

East Side - Custo							
Operation	Amount	Units	Product	Actual N App			Acre C
Spring NH3 Appl		#/Acre	NH3 with N-Serve	176.2		\$	52.
At Planting		Gal / Acre	10-34-0	7.6	#ofN	\$	13.
Dry Application	175	#/Acre	11-52-0 & Zinc	18.7	# of N	\$	39.
With Herbicide	10	Gal / Acre	32-0-0	35.4	#of N	\$	13.
			Tota	al 237.9	#ofN		
Corn Seed	34300	Seeds / Acre				\$	102.
Irrigation						\$	50.
Herbicide - Pre						\$	14.0
Herbicide - Post						\$	32.
Fungicide/Insect	icide Aerial	Treatment			7/15/18		36.0
NH3 Knive Appli		neutrient			3/4/18		16.0
Planting - Applyi					4/23/18		22.
Dry Application	ing Starter				5/10/18		7.0
	ation Dro				5/10/18		7.
Herbicide Applic						\$	
Herbicide Applic			.1			\$	7.
Harvest Cost		per wet bush				\$	82.
Hauling Cost		•	el - over 5 miles			\$	21.
Insurance Cost	-	Multi Peril an	nd Hail			\$	35.
Cash Rent - Estim	ated					\$	300.
					TOTAL COST	<mark>\$</mark>	853.
West Side - JD/3							
Operation	Amount	Units	Product	Actual N App			Acre C
At Planting	33.7	Gal / Acre	32-0-0	119.3	#ofN	\$	44.
At Planting	5	Gal / Acre	10-34-0	5.8	# of N	\$	10.4
Dry Application	175	#/Acre	11-52-0 & Zinc	18.7	#of N	\$	39.0
With Herbicide	10	Gal / Acre	32-0-0	35.4	#ofN	\$	13.
Y Drop Applicatio	21.7	Gal / Acre	32-0-0	76.8	#ofN	\$	30.
			Tota	al 256.0	#ofN		
Corn Seed	34300	Seeds / Acre				\$	102.9
Irrigation						\$	50.
Herbicide - Pre						\$	14.0
Herbicide - Post						\$	32.0
Fungicide/Insect	icide Aerial	Treatment			7/15/18		36.0
Y Drop Applicatio					6/28/18		15.0
Planting - Applyi		nd Nitrogon			4/27/18		30.0
Dry Application	ing starter di	ia miliogen			5/10/18		
Herbicide Applic	ation Dre				5/10/18		7.
						\$	7.
Herbicide Applic			al			\$	7.5
Harvest Cost		per wet bush				\$	83.
Hauling Cost			el - over 5 miles			\$	22.3
Insurance Cost	•	Multi Peril an	id Hail			\$	35.
Cash Rent - Estim	ated					\$	300.0
					TOTAL COST	<mark>\$</mark>	881.
		Projected F	Profit		Nitrogen Ef	ficier	
Customer		Tiojecteur	YIELD	216	Total # N Applied		
customer	Costs	\$ 853.62			#N / Bushel		23 ⁻ 1.1
	CUSIS	000.02 ډ			HIN / DUSITE		1.1
	Cost / Du	\$ 3.95	Revenue Profit	\$756.00 (\$97.62)			
				154/ 6/1			
	Cost / Bu		TIONE	(757.02)			
JD/360YC	Cost / Bu		Yield - Estimated	221	Total # N Applied #N / Bushel		256

 Cost / Bu
 \$ 3.95
 Profit
 (\$97.62)

 D/360YC
 Costs
 \$ 881.81
 Yield - Estimated
 221
 Total # N Applied
 256.0

 Price Per Bushel
 \$3.50
 #N / Bushel
 1.158

 Revenue
 \$773.50

 Cost / Bu
 \$ 3.99
 Profit
 (\$108.31)

 Additional Profit / Acre
 (\$10.70)