
Boosting Your Bottom Line

Engaging IP via Non-GMO
and Organic Markets

ISPFMRA ANNUAL MEETING 2017

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FEB 16, 2017 - BLOOMINGTON



Which markets? Critical question



Strategic choices

- Conventional
- Non-GMO
- Organic (classic)
- Organic & Non-GMO
- Transitional & Non-GMO

Stories

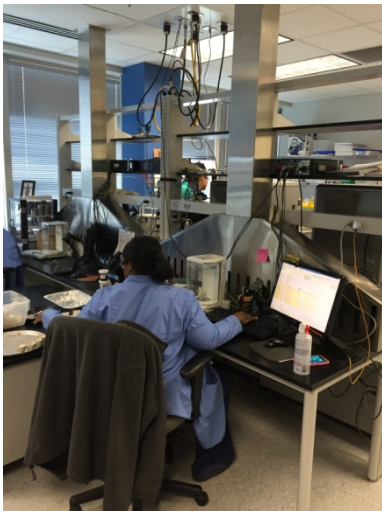
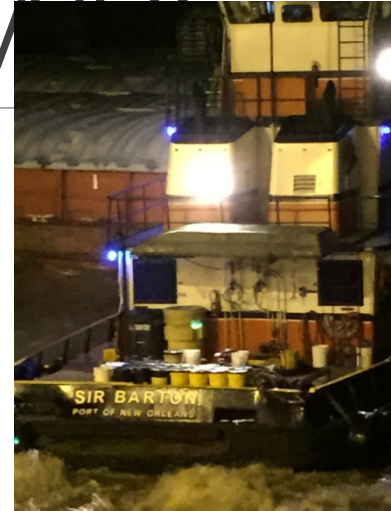
- NE irrigated - organic blue corn
- Indian farm Colorado
- Better Life by Pioneer
- IL River - Asian markets
- Kansas Farms - organic dairy feed
- IL Farms

Perspective

- Merchant - goal
- Supply corn & soy segregated by market distinction (IP)
- Contract with farmers before planting to secure suitable supplies
- Ship by container, truck, rail, barge, ship, entire Panamax; in bulk, bags and boxes; prepared and ready to cook or bin run.
- Raw, cleaned and ready to cook, and/or processed ingredients



INDONESIA DAN JAMAICA



Market value triggers

Problems - solutions

Quality Consistency -
single hybrid

- Improve process
yield - HES corn
- Improve product -
high oleic oil

Transparency

Traceability

Market access

- Specific attribute
- Cultural key

Cultural preferences

Perception/reality

Healthy

- For consumer
- For environment

Social value vote

- Organic - chem free
- Non-GMO
- Source verified
- Domestic v imported
- Precautionary principal
- Next??

Markets talk with Price

Commodity, Non-GMO & Organic Farm Market Price Comparisons

Corn		Per bu	2015	2016	2017
US#2		price	X	X	X
Non-GMO +		premium	25-85¢	10-70¢	10-50¢
Organic YC		price	\$10-12	\$8-10	\$7-10.50
Organic WC		price	\$11-13	\$10-12	\$8-11.50
Soybeans		Per bu	2015	2016	2017
US#1		price	Y	Y	Y
Non-GMO +		premium	\$1.50-2.25	\$1-1.75	\$0.50-1.50
Organic		price	\$27-30	\$18-21	\$17-21

Keys to good ORGANIC crops

Corn	Nitrogen	manure and cover crops
Soybeans	Weed control	cultivation and cover crops

Corn \$\$ - Cost, Gross, Net

Corn	US#2YC	Non-GMO	Organic	Org vg
	\$	\$	\$	\$
Op Cost/acre	450.00	430.00	460.00	460.00
	\$	\$	\$	\$
Land cost/acre	250.00	250.00	250.00	250.00
	\$	\$	\$	\$
Gross cost/acre	700.00	680.00	710.00	710.00
	\$	\$	\$	\$
Yield bu/acre	180	180	120	180
	\$	\$	\$	\$
Price	3.40	4.00	8.50	12.00
	\$	\$	\$	\$
Gross in/acre	612.00	720.00	1,020.00	2,160.00
	\$	\$	\$	\$
Gross cost/acre	700.00	680.00	710.00	710.00
	\$	\$	\$	\$
Net/acre	(88.00)	40.00	310.00	1,450.00
	\$	\$	\$	\$

Soy \$\$ - Cost, Gross, Net

Soybean	US#1YSB	Non-GMO	Organic	Org vg
	\$	\$	\$	\$
Op Cost/acre	250.00	250.00	350.00	350.00
	\$	\$	\$	\$
Land cost/acre	250.00	250.00	250.00	250.00
	\$	\$	\$	\$
Gross cost/acre	500.00	500.00	600.00	600.00
Yield bu/acre	60	60	45	60
	\$	\$	\$	\$
Price	10.00	11.30	19.00	19.00
	\$	\$	\$	\$
Gross in/acre	600.00	678.00	855.00	1,140.00
	\$	\$	\$	\$
Gross cost/acre	500.00	500.00	600.00	600.00
	\$	\$	\$	\$
Net /acre	100.00	178.00	255.00	540.00

Non-GMO programs

Market demand drivers

- ❑ Asian market drives, defines regional character
- ❑ Non-GMO project and others drive US retail demand
- ❑ Market talks with dollars
 - Current bids
 - Contract v open market
- ❑ Supply / demand
- ❑ Buyer perception - an organic alternative



Organic markets - EU big, USA biggest



Corn, Organic, 2015, all tenures

Benchmark report on 65 farms

Data from FinBin - farms in IL, MI, MN, NE, OH, SD, WI

					Range
Factor	Median/acre	Count	10%	100%	High - Low
Yield (bu/acre)	126	65	35.07	188.99	153.92
Value/bu	\$ 10.00	65	\$ 7.00	\$ 11.75	\$ 4.75
Total product value	\$ 1,140.00	65	\$ 337.85	\$2,120.24	\$ 1,782.39
Gross return	\$ 1,190.00	65	\$ 541.68	\$2,120.24	\$ 1,578.56
Seed	\$ 96.00	65	\$ 125.97	\$ 43.00	\$ (82.97)
Fertilizer	\$ 117.10	58	\$ 272.11	\$ 22.25	\$ (249.86)
Crop insurance	\$ 21.05	62	\$ 58.74	\$ 8.22	\$ (50.52)
Drying expense	\$ 15.19	33	\$ 61.30	\$ 3.89	\$ (57.41)
Fuel & oil	\$ 37.34	63	\$ 76.92	\$ 13.74	\$ (63.18)
Repairs	\$ 78.12	63	\$ 170.32	\$ 24.33	\$ (145.99)
Land rent	\$ 160.05	35	\$ 266.69	\$ 24.00	\$ (242.69)
Organic certification	\$ 3.20	45	\$ 15.00	\$ 1.18	\$ (13.82)
Operating interest	\$ 12.11	47	\$ 48.59	\$ 1.47	\$ (47.12)
Total direct expenses	\$ 474.52	65	\$ 902.39	\$ 248.85	\$ (653.54)
Return over direct expenses	\$ 741.38	65	\$ 17.04	\$1,449.71	\$ 1,432.67

Hired labor	\$	23.64	41	\$ 119.92	\$ -	\$ (119.92)
Farm insurance	\$	11.14	61	\$ 39.14	\$ 2.79	\$ (36.35)
Utilities	\$	6.01	59	\$ 30.74	\$ -	\$ (30.74)
Dues and professional fees	\$	4.68	56	\$ 31.34	\$ 0.10	\$ (31.24)
Interest on interm debt	\$	6.66	54	\$ 38.36	\$ 0.30	\$ (38.06)
Machinery depreciation	\$	61.06	63	\$ 153.40	\$ 3.91	\$ (149.49)
Building depreciation	\$	9.45	40	\$ 27.90	\$ 1.46	\$ (26.44)
Mioscellaneous	\$	5.42	60	\$ 41.73	\$ 0.43	\$ (41.30)
Total overhead expenses	\$	171.24	65	\$ 404.48	\$ 33.71	\$ (370.77)
Total direct & ovrhd expenses	\$	715.14	65	\$1,106.15	\$ 345.75	\$ (760.40)
Net return	\$	524.51	65	\$ (148.14)	\$1,229.20	\$ 1,377.34
Govt payments	\$	33.47	65	\$ -	\$ 67.82	\$ 67.82
Net return w govt payments	\$	524.51	65	\$ (143.61)	\$1,289.72	\$ 1,433.33
Labor & mgmt charge	\$	44.51	65	\$ 150.89	\$ 4.20	\$ (146.69)
Net return over labor & mgmt	\$	489.70	65	\$ (261.00)	\$1,192.46	\$ 1,453.46
Direct cost of product/bu	\$	4.06	65	15.6	\$ 1.97	\$ (13.63)
Dir & ovrhd cost per bu	\$	5.63	65	23.6	\$ 3.30	\$ (20.30)
COP less govt & other income	\$	5.00	65	14.4	\$ 2.83	\$ (11.57)
Cost of product with lbr & mgmt	\$	5.59	65	18.54	\$ 3.07	\$ (15.47)

Organic Soybeans Imported into the US 2016

	11 months		12 mo projected		
Soybean	Qty	Qty	Qty	Value	Value
Source	MT	Bushels	Bushels	\$/bu	US\$\$
World Total	352,973	12,969,537	14,148,586	\$ 18.13	\$ 256,491,273
Turkey	161,674	5,940,507	6,480,553	\$ 17.08	\$ 110,695,636
India	67,663	2,486,198	2,712,216	\$ 18.77	\$ 50,913,818
Argentina	46,520	1,709,326	1,864,720	\$ 19.17	\$ 35,746,909
Ukraine	31,194	1,146,182	1,250,380	\$ 17.41	\$ 21,766,909
Canada	16,508	606,579	661,723	\$ 23.58	\$ 15,606,545
China	13,326	489,631	534,143	\$ 18.62	\$ 9,948,000
Russia	6,677	245,326	267,629	\$ 16.54	\$ 4,425,818
Uganda	4,257	156,418	170,638	\$ 21.28	\$ 3,631,636
Uruguay	4,702	172,761	188,467	\$ 18.26	\$ 3,440,727
Ethiopia(*)	335	12,291	13,408	\$ 17.41	\$ 233,455
Lithuania	110	4,023	4,389	\$ 17.40	\$ 76,364
Netherlands	8	290	317	\$ 17.23	\$ 5,455

Organic Yellow Corn Imported into US in 2016

	11 months		12 mo projected		
Corn	Qty	Qty	Qty	Value	Value
Source	MT	Bushels	Bushels	\$/bu	US\$\$
World Total	539,072	21,222,282	23,151,581	\$ 7.39	\$ 171,153,818
Turkey	390,447	15,371,201	16,768,583	\$ 7.49	\$ 125,637,818
Romania	55,928	2,201,782	2,401,944	\$ 6.32	\$ 15,171,273
Argentina	52,448	2,064,784	2,252,492	\$ 6.58	\$ 14,817,818
Netherlands	23,540	926,732	1,010,980	\$ 7.95	\$ 8,032,364
Canada	15,266	600,979	655,614	\$ 10.57	\$ 6,931,636
UAE	877	34,526	37,665	\$ 6.98	\$ 262,909
India	526	20,723	22,607	\$ 12.69	\$ 286,909
Panama	23	894	975	\$ 10.07	\$ 9,818
Mexico	17	665	726	\$ 4.51	\$ 3,273

Data generated on Thursday, January 19, 2017 at 11:03:27 AM EST
 from US Census Bureau Trade Reports. Excludes seed.

Organic Soybeans Imported into US - \$\$ value

	January - December, \$\$US					Projected	
Soy	2011	2012	2013	2014	2015	2016	2016
Source	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	Growth
World Total	41,790	90,177	110,237	184,168	240,175	256,491	6.79%
India	5,327	12,729	29,819	74,365	77,818	50,914	-34.57%
Ukraine	0	0	0	16,608	71,856	21,767	-69.71%
Argentina	1,682	7,276	8,681	14,183	26,055	35,747	37.20%
China	2,320	38,923	48,472	39,523	20,867	9,948	-52.33%
Canada	32,462	29,748	18,603	16,996	19,026	15,607	-17.97%
Turkey	0	167	387	11,654	12,966	110,696	753.74%
Romania	0	166	2,826	0	5,142	-	-100.00%
Russia	0	0	35	254	2,903	4,426	52.46%
Netherlands	0	631	0	2,091	1,025	5	-99.47%
Uruguay	0	0	447	131	766	3,441	349.18%
Uganda	0	0	0	360	722	3,632	403.00%
Others		536	966	8002	1030	310	-69.92%

Organic corn imported into US - Value \$\$

	January - December, \$\$US					Projected Jan - Dec, \$\$US	
Corn	2011	2012	2013	2014	2015	2016	2016
Source	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	Growth
World Total	0	0	36,620	35,700	112,712	171,154	51.85%
Romania	0	0	545	11,604	53,460	15,171	-71.62%
Turkey	0	0	0	6,797	36,355	125,638	245.59%
Argentina	0	0	21,282	3,677	10,303	14,818	43.82%
Canada	0	0	1,826	6,420	7,436	6,932	-6.78%
India	0	0	0	684	2,652	287	-89.18%
Netherlands	0	0	0	6,519	2,217	8,032	262.31%
Greece	0	0	0	0	190	-	-100.00%
Bulgaria	0	0	0	0	93	-	-100.00%
Mexico	0	0	0	0	7	3	-53.25%
United Arab	0	0	0	0	0	263	
Others			12,966			10	

Data sourced Jan 19, 2017 from US Census Bureau Trade Reports

USDA Certifiers' Organic Reports

US	2014	2015	Growth
Operations	13,174	14,861	12.8%
Acres reported	4,081,903	5,336,058	30.7%
Pasture and rangeland	1,467,874	2,160,764	47.2%
Barley	63,774	57,961	-9.1%
Com	209,659	262,089	25.0%
Oats	56,215	63,689	13.3%
Soybeans	100,952	140,345	39.0%
Wheat	319,874	393,281	22.9%
Forage	641,404	707,108	10.2%

Organic - recent trends selected states

State	Organic Operations			Organic Crop Acres		
	2014	2015	Delta	2014	2015	Delta
CA	2318	2500	7.9%	324707	378017	16.4%
L	199	218	9.5%	20486	27275	33.1%
IN	288	397	37.8%	13209	18547	40.4%
IA	696	840	20.7%	77993	90310	15.8%
KS	86	99	15.1%	17234	25908	50.3%
MN	584	659	12.8%	100130	125780	25.6%
MO	229	308	34.5%	25287	26885	6.3%
NE	165	178	7.9%	71434	61438	-14.0%
OH	552	608	10.1%	50086	53022	5.9%

Livestock and Poultry, US, 2014 and 2015

	2014	2015	Growth
Operations	1401	2001	42.8%
Total animals, poultry	16,509,520	22,389,214	35.6%
Cattle	233,133	334,514	43.5%
Hogs	2,956	4,740	60.4%
Sheep	4,625	5,345	15.6%
Goats	1,007	1,313	30.4%
Other livestock	3,143	4,103	30.5%
Chickens	15,375,993	20,826,831	35.5%
Turkeys	606,138	968,402	59.8%
Other poultry	282,545	243,966	-13.7%



Domestic Production Estimates						
	2016			2017		
Crop	Acres	Yield	Bushels	Acres	Yield	Bushels
Com	300,000	120	36,000,000	375,000	125	46,875,000
Soy	180,000	30	5,400,000	240,000	35	8,400,000

Imported Production Estimates (bu)					Acres
	US actual	Estimate	Estimate	Estimate	Estimated
Crop	2015	2016	2017	Growth	2017
Com	12,000,000	23,152,000	35,000,000	51%	280,000
Soy	11,700,000	14,149,000	18,393,700	30%	525,534

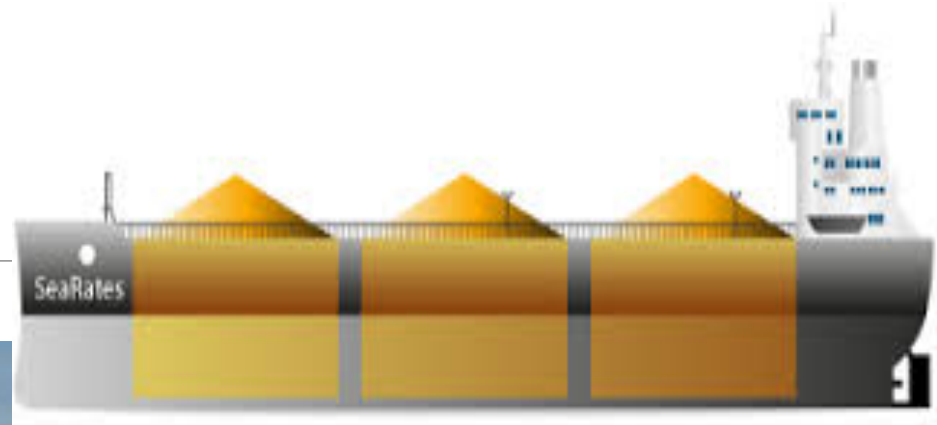


imports

Sources of organic feed grains for US markets

Surplus corn & soy
Deficit
Deficit

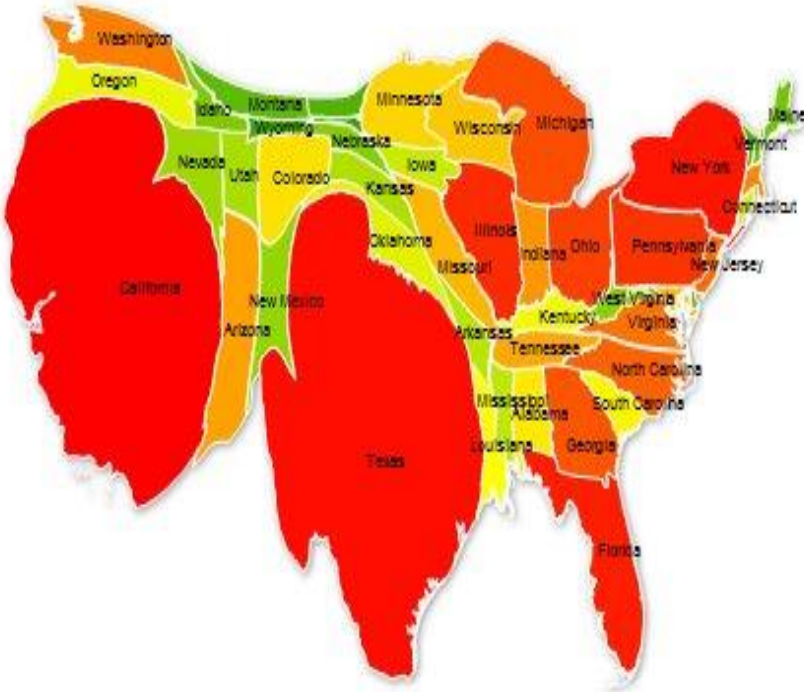
Logistics



Compare – Map | Population USA 2010



Anamorph



Mercator



The Organic Market

Why are more US farms not transitioning?

- ❖ Convenience
- ❖ Fear of the unknown
- ❖ Lack of supporting advice
- ❖ More personal responsibility w/o 3rd party support
- ❖ Lack banker support - changing
- ❖ Lack insurance - eliminated
- ❖ Rented land “weed free” culture
- ❖ KEY - 3 years between changing and reward



TRANSITION to ORGANIC Balancing Supply & Demand with Domestic Credibility

History & status: OFPA, 2015, 2017
Potential impact - GAME CHANGING
POLICY

Transition program proposed via USDA

Requirements for producers

- ❑ Follow all the USDA NOP organic protocols for at least 1 year to qualify crop as transitional
- ❑ Be verified transitional by USDA approved organic certifier
- ❑ One mistake allowance

Incentives

- ❑ Get a market premium – guesstimate
- ❑ Use Certifier as advisor, not just silent regulator - not policy
- ❑ Be a better prepared, more regulatory and production astute

Premium depends on consumer acceptance - Keys include D & Triple NEGATIVE

- ❑ Domestic ?? Not policy, Private requirement
- ❑ No unapproved pesticides - policy
- ❑ No unapproved fertilizers - policy
- ❑ Produced without GMO technology - policy

Label issue

- ❑ OFPA
- ❑ Romance language & PPS declarations

Credibility- biggest threat

Rule or wish

- NOP rules
- EU Equivalency
- Indian Equivalency

Consequence if fraud by

- Farmer
- Handler/consolidator
- Certifier

EKTO - the case of the No, No, Yes certifier

- EU - lost certification
- Canada - lost certification
- USA - appears last week to still be certified

If no penalty, perhaps we just have a wish. If so, that is biggest single threat to the credibility of the US organic label

Growing demand market - how to satisfy and maintain credibility?

Options

- ❑ Higher prices
- ❑ Tariffs or restrictions on imports
- ❑ Consumer & supplier emphasis on DOMESTIC feed and production
- ❑ Transition
- ❑ Combination

Goal of transition

- ❑ Enhanced domestic supply
- ❑ Consumer pressure for domestic as part of label
- ❑ Enhanced credibility for products within the US jurisdiction due to
 - Uniform commercial code
 - Good industry regulation
 - NOP regulations
 - Better oversight
 - Penalties - civil, criminal

Consequence

Con

- ❑ More competition which will depend on more demand to avoid lower prices
- ❑ Not good for organic lite brackets
 - Natural
 - GMO
- ❑ ??

Pro

- ❑ Improved incentive for organic certification
- ❑ Increased organic acres without run-away conversion
- ❑ Better credibility
- ❑ More demand
- ❑ Competitors follow the same rules - in IL and Eastern EU, India, China

The Organic Market

Push/pull factors

- ❖ Domestic changes
 - ❖ Commodity markets in general - push
 - ❖ Organic markets - price pull
 - ❖ Next generation landowners - demand for skilled organic farmers
 - ❖ New tools
 - ❖ Certified organic pesticides
 - ❖ Improved technology
 - ❖ Availability of organic fertilizers
 - ❖ Availability of good seed
 - ❖ Increased GMO sensitivity
 - ❖ Cross pollination
 - ❖ Seed contamination
 - ❖ Improved crop insurance



Organic's GMO Wrinkle

Are organic products free of
GMOs?

Organic standards are process based. NOP regulations prohibit use of genetically modified organisms, prohibit commingling or contamination during processing and handling, and require preventative practices to avoid contact with GMOs. Organic agricultural products should have minimal if any GMO contaminants. However, organic food products do not have a zero tolerance for the presence of GMO material.



But

certified organic crops
might not be
merchantable as
organic because most
organic buyers have
added a NON-GMO
requirement.

Potential loss from
adventitious presence

- Corn - \$8/bu
- Soybeans - \$10/bu

Seed purity Common Challenge

Co-existence - vectors

Cross pollination - corn

Seed - adventitious presence

Seed GMO tolerance

- Accept
- Want
- Declared on tag

Current supply situation

- Major
- 0.5%
- 0.1%

Challenge - asking for greater purity that seed industry's norms

Cherry picking seed fields

Domestic w/ extreme isolation

Sourced from EU

Technology

- Pura-maze
- CRISPR- cas9

Vision for US AG

CO-EXISTENCE

Goal - support farmer choice, protect farmer from being market dominated by neighbor.

Goal - Support buyer choice of hybrid/quality, GE presence, production methods.

Goal - Support continuing technical and market improvements of corn and soy.

GOOD NEIGHBOR FACTORS

Conflicting market choices

Challenge - balancing conflicting values, example

Better communication

Cooperative respect

- Pollen drift
- Pesticide use

Buffers - USDA conservation policy can assist

Experience, predictions, dialogue

History

Client discussions

Predictions

- ❑ Transitional with tightened international regulation
- ❑ Transitional with increased consumer emphasis on domestic production
- ❑ Serious increase in US organic production via transition IF
 - Consumers agree
 - Processors & feeders push

With
transition,
organic



Questions - Comments



Thank You



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- USDA ATAC Committee on Grains, Oilseeds...
- Organic Trade Association (OTA)
- National Grain and Feed Association
- Illinois Grain Dealers Association
- Illinois Farm Bureau
- Illinois Corn Growers Assn
- Illinois Soybean Assn
- US Soy Export council (USSEC)
- Former member USDA AC21 committee
- Former member, OTA Board of Directors
- Former member, USDA GIPSA Advisory Board
- Former member, UIUC, various advisory boards

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