



Securities

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Investment Banking at National – Where Agriculture Meets the Capital Markets

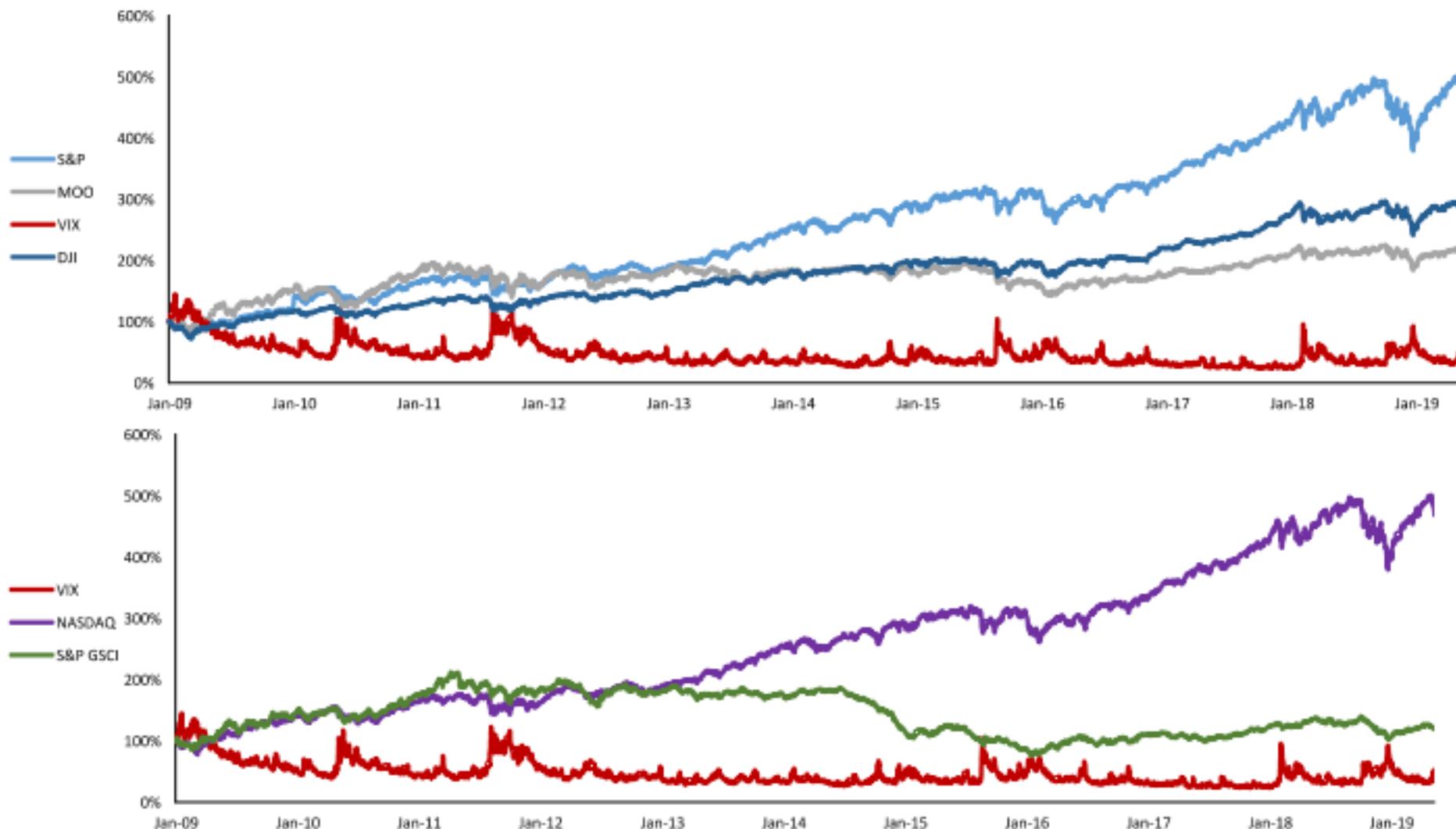


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FOOD, BEV. & AGRICULTURE – EQUITY PERFORMANCE | 2009 – 1Q19



THE FARMER TRADE WINDS

A CHALLENGING SCENARIO

9.7bn

Expected world population by 2050, translating into 70% required growth in global food supply from current levels.

58yrs

Average age of a farmer (in years) in the US – a number that has consistently moved up over the past 30 years.

76%

Global percent growth of meat consumption by 2050.

DEPRESSED FARMER ECONOMICS

\$263.7bn

Farm real estate debt highest since 1980s.

16:1

Debt to equity increasing since 2012 to global financial crisis 2008 levels. 20:1 considered highly, over leveraged.

474

Bankruptcies from farmers, a 50% increase in the last four years.

Farmers need solutions to do much more with less



MIDSTREAM AGROBUSINESS CAPITAL MARKETS EVOLUTION

Agriculture is Beginning to Meet the Capital Markets as a Meaningful Selection Set for Investors

1990s

Pure Agriculture Plays

Legacy Farming Systems

Supply chain logistics,
grain merchants, global
traders



Hard Assets

Farmland, timber,
specialty crops, row
crops

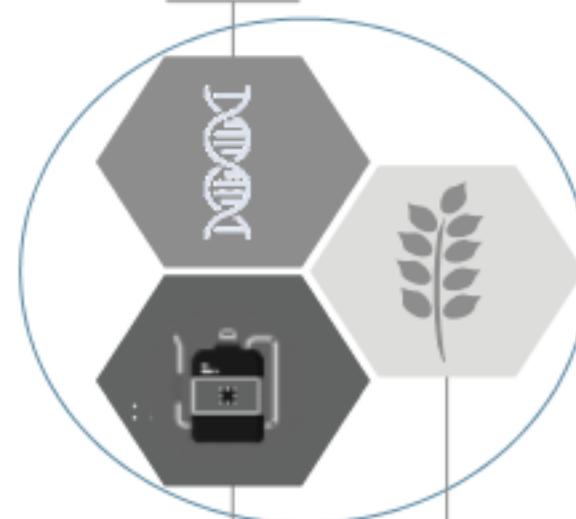
Farm Equipment
Innovative
equipment providers

2000s

University R&D spinoffs/ AgScience

Crop Science

Multiple issuers positioned as outsourced
R&D opportunities in pest management,
plant nutrition, and inputs, generally



Crop Protection

Nonpolluting, potent
biopesticides

Bioenergy and Biomaterials

Nonfood
extraction and
processing,
feedstock tech

2010 – Present

Tsunami of Tech and Ag

Innovative Food

Alternative proteins, novel
ingredients, feedstock
technology, localized livestock
production



Precision Ag

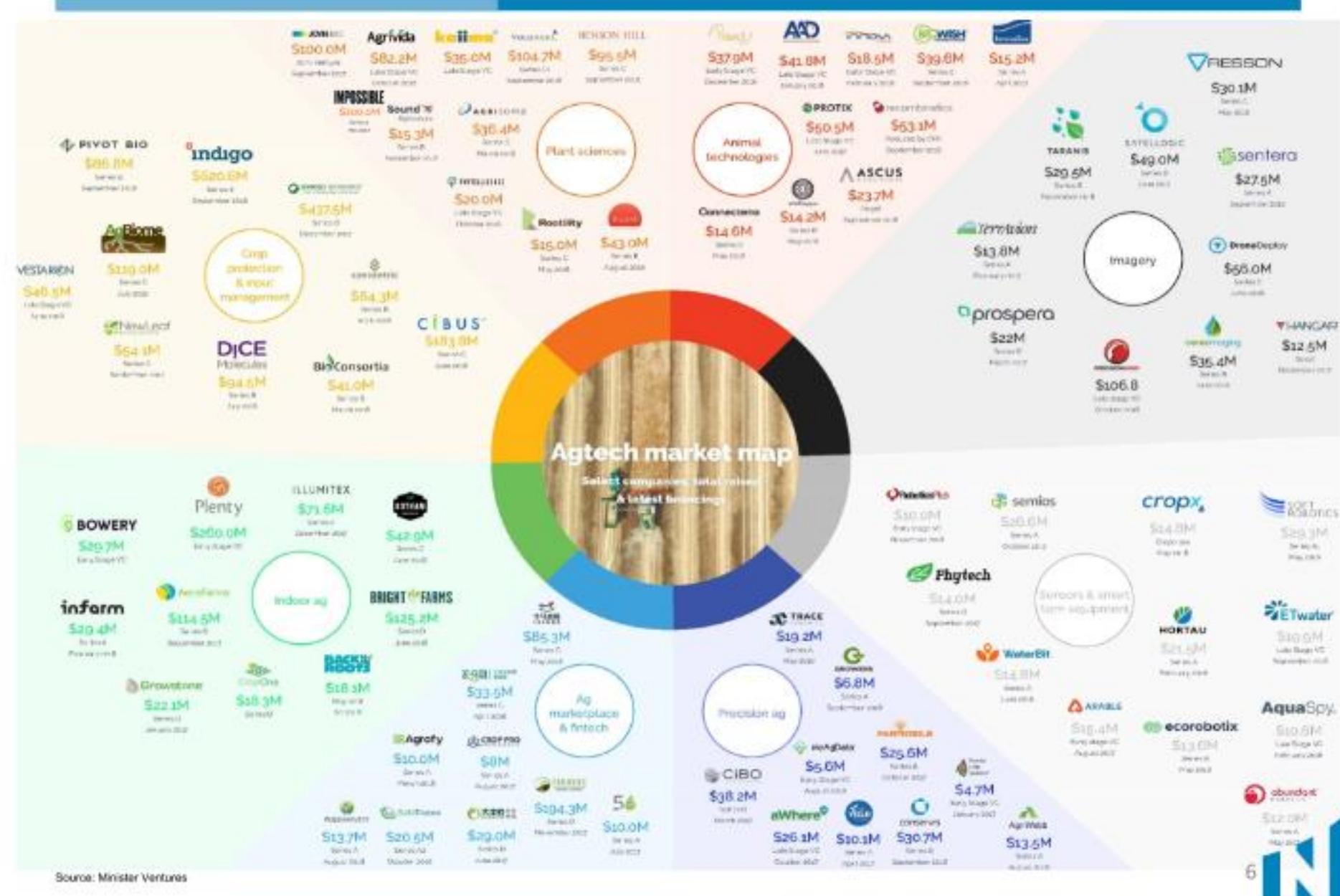
Autonomous
farming,
predictive
analytics

Food/Feed SC Food
Safety and traceability
tech, downstream
transportation and
digital logistics

A Growing Number of Agri Investment Opportunities



SELECT 2018 AGTECH PRIVATE FINANCING. LIQUIDITY HORIZON?



Source: Minister Ventures

Organic Sales

U.S. Organic Food vs. Total Food Sales, Growth and Penetration, 2008-2017

Category	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Organic Food	20,393	21,266	22,961	25,148	27,965	31,378	35,099	39,006	42,507	45,209
Growth (%)	17.5%	4.3%	8.0%	9.5%	11.2%	12.2%	11.9%	11.1%	9.0%	6.4%
Total Food	659,012	669,556	677,354	713,985	740,450	760,486	787,575	807,998	812,907	822,160
Growth (%)	4.9%	1.6%	1.2%	5.4%	3.7%	2.7%	3.6%	2.6%	0.6%	1.1%
Organic (as % Total)	3.1%	3.2%	3.4%	3.5%	3.8%	4.1%	4.5%	4.8%	5.2%	5.5%

Source: Organic Trade Association's 2018 Organic Industry Survey conducted 1/25/2018 - 3/26/2018 (\$mil., consumer sales).

Organic Corn and Soy Premiums

Organic corn averaged \$5.75/bu (168%) over conventional and
\$601/acre (91%) over conventional

Organic soy has averaged \$10.18/bu (109%) over conventional
and \$345/acre (62%) over conventional

	2015/16		2016/17		2017/18		2018/19 ¹		
	Organic*	Conventional ¹	Organic*	Conventional ¹	Corn	Organic*	Conventional ¹	Organic*	Conventional ¹
MY Average Price ²	\$9.31	\$3.56	\$8.25	\$3.37		\$9.57	\$3.34	\$9.50	\$3.49
Yield (bu/acre) ⁴	115.4	175.0	143.2	197.0		146.0	201.0	152.1	210.0
Revenue Per Acre	\$1,074.85	\$623.29	\$1,180.92	\$664.71		\$1,396.61	\$670.34	\$1,444.49	\$732.48
Organic Premium Per Acre	\$452		\$516			\$726		\$712	
Soybeans									
MY Average Price ³	\$20.64	\$9.34	\$18.67	\$9.56		\$19.34	\$9.31	\$19.23	\$8.27
Yield (bu/acre) ⁴	44.6	56.0	45.9	59.0		45.2	58.0	48.8	65.0
Revenue Per Acre	\$920.69	\$522.95	\$856.84	\$563.79		\$874.02	\$540.03	\$938.23	\$537.68
Organic Premium Per Acre	\$398		\$293			\$334		\$401	

Source : *Mercaris, #USDA

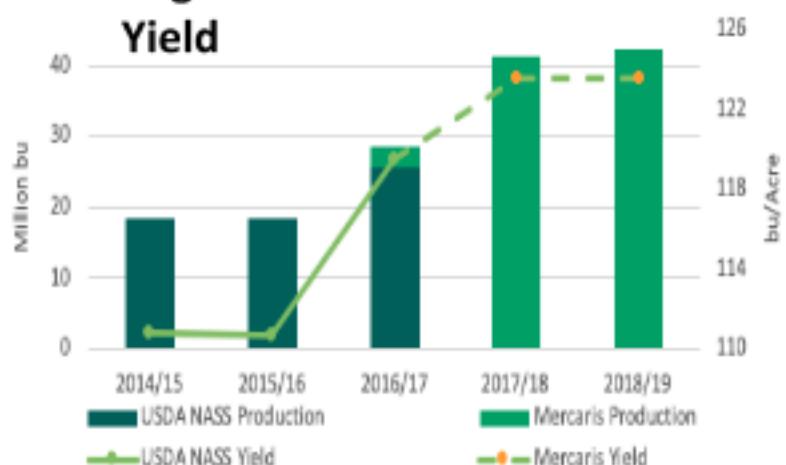
Notes: 1. Based on observations from Sep 2018-June 2019, 2. Corn organic prices are Corn Belt average delivered to first handler, conventional prices are USDA Central II, Yellow No. 2 delivered

3. Soybean organic prices are Corn Belt average delivered to first handler, conventional prices are USDA Central II, Yellow No. 1 delivered

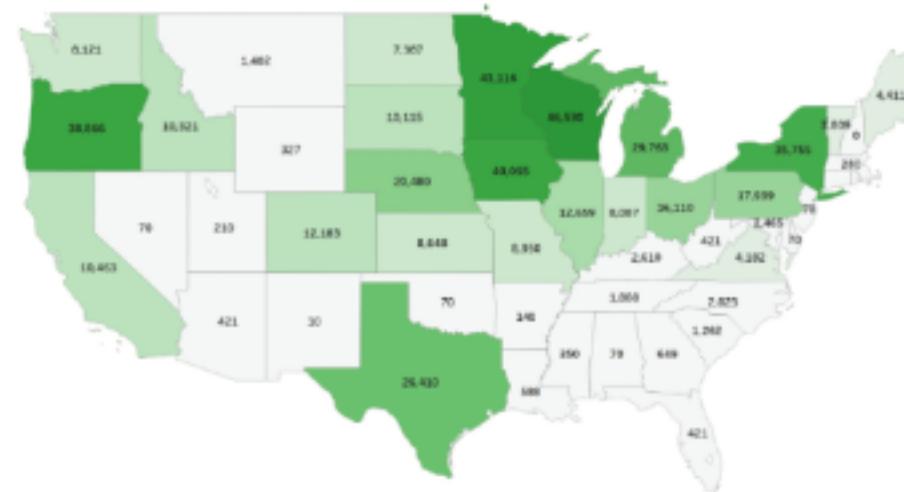
4. Average yields for Illinois

Total Organic Corn Acres

Mercaris and USDA NASS Organic Corn Production & Yield

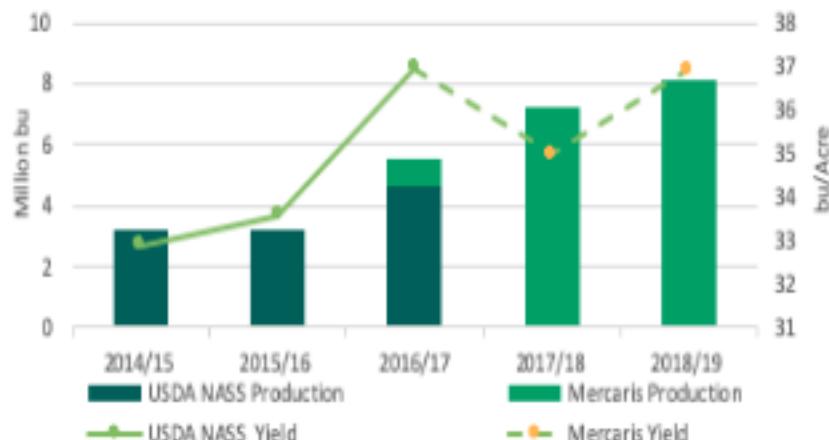


Source: Mercaris 2019, USDA NASS



Total Organic SB Acres

Mercaris and USDA NASS Organic Soybean Production & Yield



Source: Mercaris 2019, USDA NASS

