



Arcadia
B I O S C I E N C E S

Company Overview

May 24, 2016

Forward-looking statements



“Safe Harbor” statement under the Private Securities Litigation Reform Act of 1995: This presentation contains forward-looking statements about the company and its products, including statements relating to components of the company’s long-term financial success; the company’s traits, commercial products, and collaborations; the company’s ability to manage the regulatory processes for its traits and commercial products; the company’s anticipated financial results; current and future products under development; additional collaboration agreements; the regulatory process; business and financial plans; and other non-historical facts.

Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially, and reported results should not be considered as an indication of future performance. These risks and uncertainties include, but are not limited to: the company’s and its partners’ ability to develop commercial products incorporating its traits and complete the regulatory review process for such products; continued competition in seed traits and other products; the company’s compliance with laws and regulations that impact the company’s business, and changes to such laws and regulations; the company’s reliance on its collaborators to commercialize products incorporating its seed traits; the company’s future capital requirements and ability to satisfy its capital needs; the company’s exposure to various contingencies, including those related to intellectual property protection, success of field trials, regulatory compliance, the speed with which regulatory approvals are received, and public acceptance of biotechnology products; developments related to foreign governmental regulations, political climate, currencies and economies; successful operation of the company’s joint ventures; fluctuations in commodity prices; the company’s ability to obtain a significant portion of the increased value to farmers from products that incorporate its traits; and the effect of weather conditions, natural disasters and accidents on the agriculture business or the company’s facilities.

Further information regarding these and other factors that could affect the company’s financial results is included in filings the company makes with the Securities and Exchange Commission from time to time, including the section entitled “Risk Factors” in the company’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2016. These documents are or will be available on the SEC Filings section of the Investor Relations pages of the company’s website at www.arcadiabio.com. All information provided in this presentation and in the attachments is as of the date hereof, and Arcadia Biosciences, Inc. undertakes no duty to update this information.

Arcadia develops plants that create value for growers while improving the environment and enhancing human health

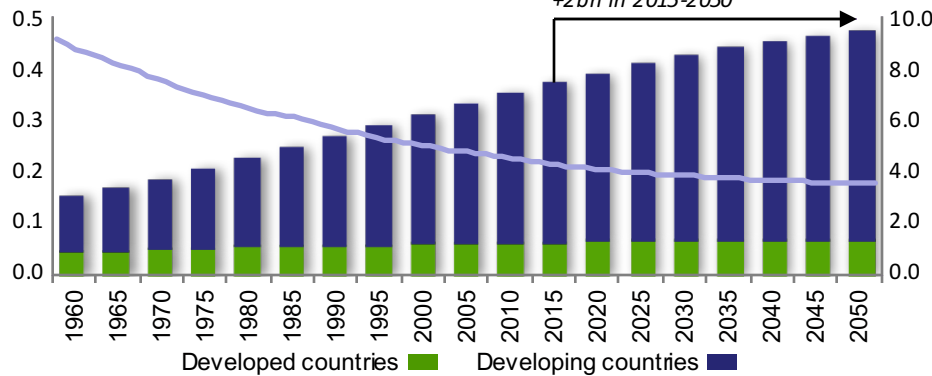
- 🌱 Founded in 2002
- 🌱 Raised \$68 MM in IPO in 2015
- 🌱 Nasdaq: RKDA
- 🌱 Late-stage portfolio with 11 products in Phase 3 of development or later
- 🌱 Headquarters and main R&D facilities in Davis, California
- 🌱 Approx. 80 employees



Increasing agricultural yield is critical, and traits create significant value on the farm

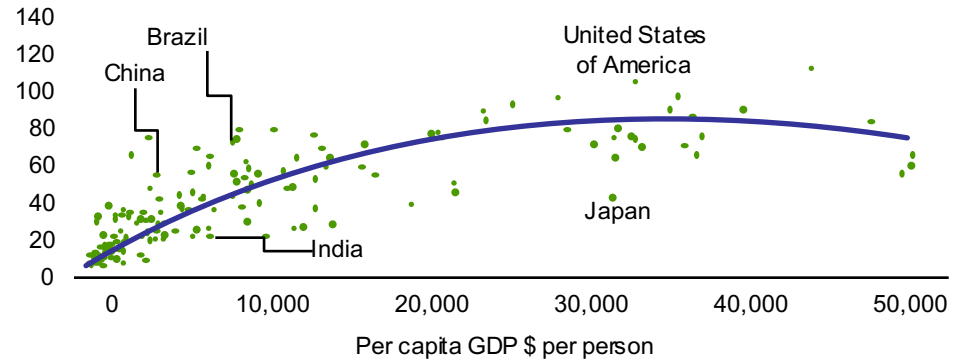
Population growth and increasing per capita income drive need for increased yield

Arable land per capita (ha)



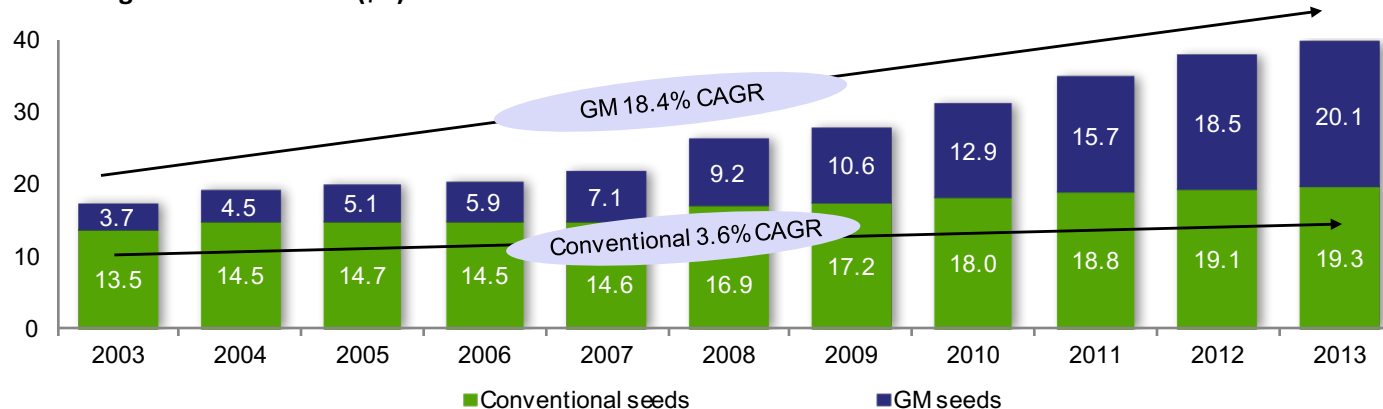
World population (B)

Meat consumption vs. GDP: more income = more calories
(Per capita meat consumption, kg/year)



Seeds are the vehicle for delivering improved genetics and have had tremendous growth

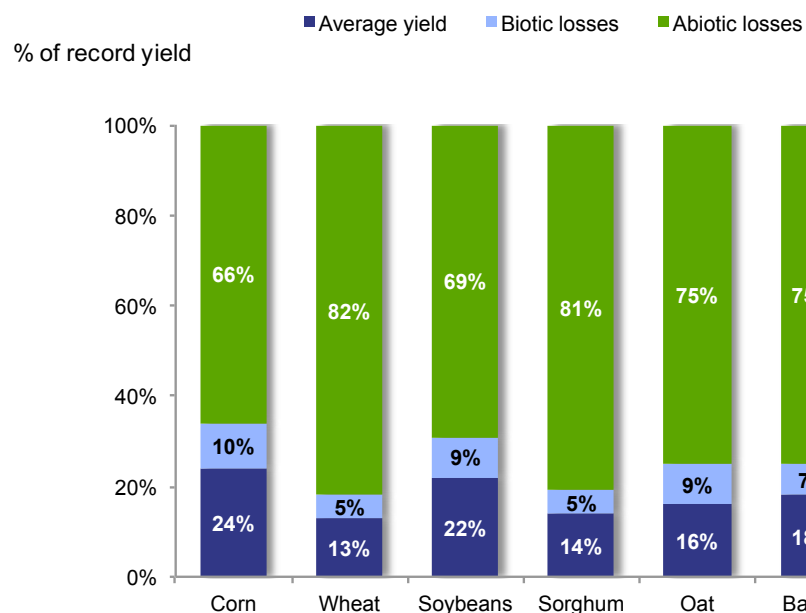
Value of global seed market (\$B)



Source: Food and Agriculture Organization of the United Nations (FAO), Seed Industry Synopsis, Phillips McDougall, June 2014

Arcadia addresses yield losses from abiotic stress, an untapped opportunity

Abiotic stress accounts for 66-82% of lost yield



Addressing yield losses caused by abiotic stresses represents untapped growth opportunity

Limited number of commercially available abiotic stress solutions on the market:



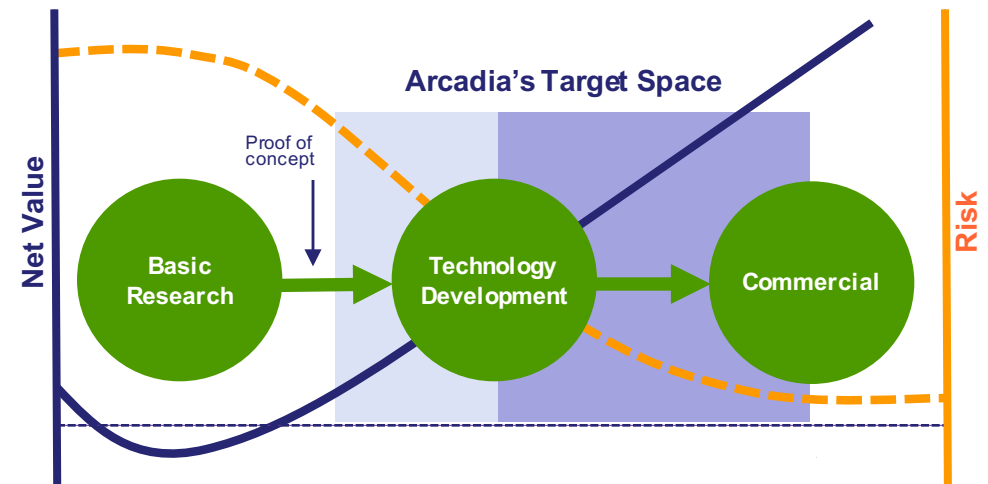
Multiple commercially available biotic stress solutions (partial list):



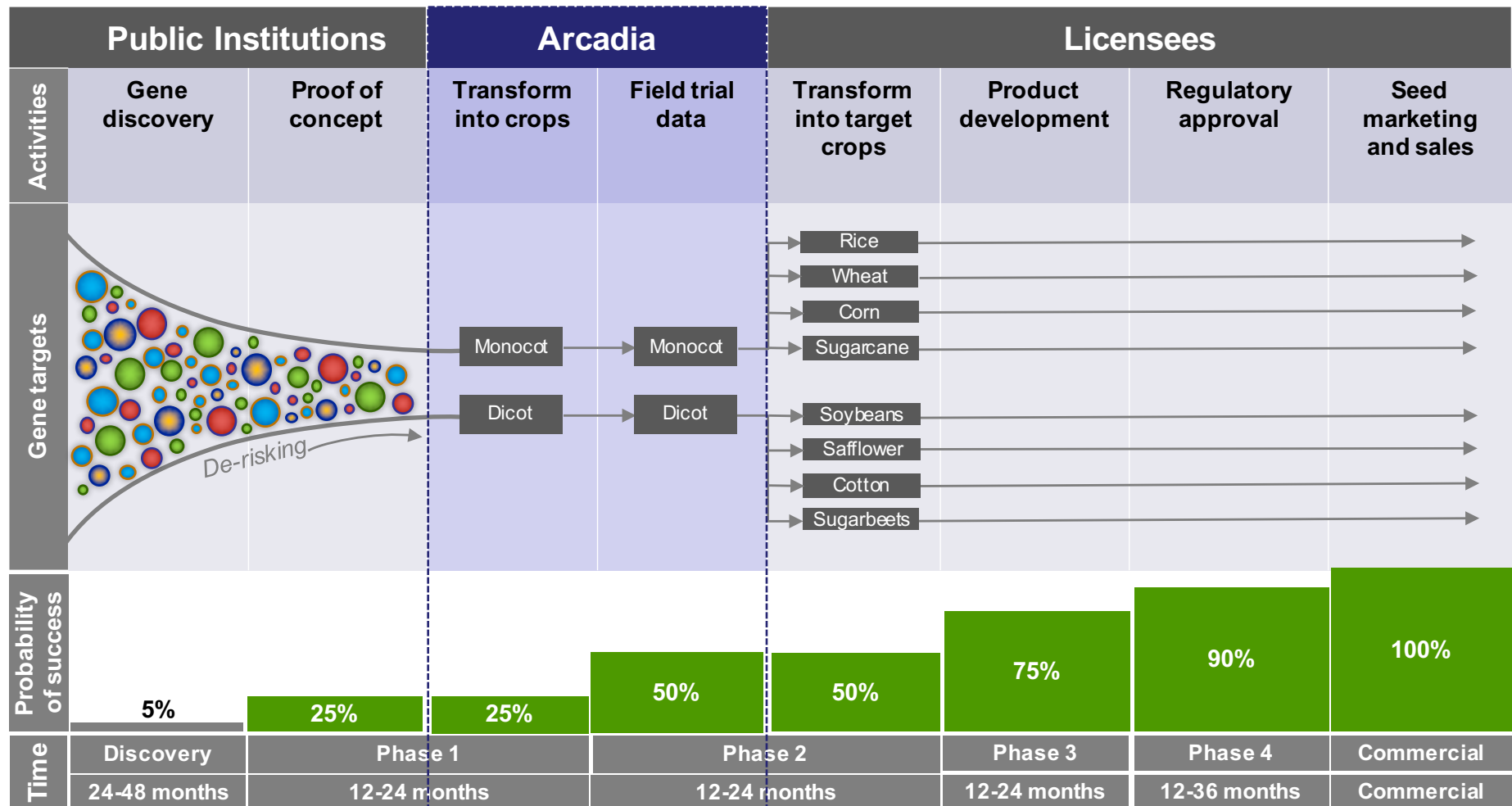
- GM seed market of approximately \$20B based primarily on biotic stress management – highly competitive, multiple products; zero-sum play
- Abiotic stress management has greater value potential, minimal current products, and opportunity for major market expansion

Bridging the gap between basic research and commercial development

- ④ Capitalizing on a decade of investments as product candidates move closer to commercialization
- ④ Focusing on product development, regulatory and commercial needs
- ④ Managing resource allocation to drive mid-term revenue and successful product launches
- ④ Targeting large-acre, high value crops: corn, rice, soybeans and wheat



Business model reduces risk and leverages third-party capital and capabilities



Source: Company information, Phillips McDougall, Seed Industry June 2014.

Late-stage portfolio with 11 products in Phase 3 of development or later



Phase	D	1	2	3	4	C
Months	24-48	12-24	12-24	12-24	12-36	
Success ¹	5%	25%	50%	75%	90%	

Productivity traits: Designed to increase crop yields and income through improved input efficiency and environmental stress tolerance

Program	Crop	Collaborator(s)						Key markets
Nitrogen Use Efficiency (NUE)	Wheat	Limagrain, Mahyco, CSIRO, ACPFG	■	■	■	■		Global
	Rice	Mahyco, AATF	■	■	■	■		Asia
Water Use Efficiency (WUE) and Stress Tolerance (DT)	Soybean (DT)	Verdeca JV: TMG, GDM Seeds	■	■	■	■	■	Americas, Asia
	Wheat (DT)	Bioceres	■	■	■	■		Global
Salinity Tolerance (ST)	Rice	Mahyco	■	■	■	■		Asia
Herbicide Tolerance²	Wheat	Confidential	■	■	■	■		Global
Trait Stacks								
NUE/WUE/ST	Rice	AATF	■	■	■	■		Asia

Product quality traits: Designed to increase the value of harvested products

GLA Oil	Safflower	Abbott	■	■	■	■	■	■	North America, Asia
Resistant Starch²	Wheat	-	■	■	■	■	■		Global
Post Harvest Quality²	Tomato	Bioseed	■	■	■	■			Asia, North America
ARA Oil	Safflower	Abbott, DuPont Pioneer	■	■	■	■			North America, Asia

Note: Phase: D=Discovery; 1=Proof of Concept; 2=Greenhouse / Early Field Trials; 3=Additional Field Trials / Product Development; 4=Regulatory / Pre-Commercial; C=Commercialized

¹ Based on industry standard probabilities

² Non-GM

Partnered with leaders in target crops, markets and geographies

Soybeans		<ul style="list-style-type: none"> Owned by ~300 of the largest soybean farmers in South America 	<ul style="list-style-type: none"> Verdeca JV partner Commercial partner
		<ul style="list-style-type: none"> Leader in crop protection traits Development and regulatory expertise 	<ul style="list-style-type: none"> Development and commercial partner
		<ul style="list-style-type: none"> Top tier Brazilian soybean seed Leadership position in Matto Grosso 	<ul style="list-style-type: none"> Development and commercial partner
		<ul style="list-style-type: none"> Leading South American seed company Leadership position in Argentina 	<ul style="list-style-type: none"> Development and commercial partner
Corn		<ul style="list-style-type: none"> Leader in crop protection traits Development and regulatory expertise 	<ul style="list-style-type: none"> Development and commercial partner
		<ul style="list-style-type: none"> Largest family-owned, retail seed company in the United States 	<ul style="list-style-type: none"> Development and commercial partner
Wheat		<ul style="list-style-type: none"> Leading global wheat seed breeder and marketer Fourth largest global seed company in the world 	<ul style="list-style-type: none"> Investor JV partner Development and commercial partner
Rice, Cotton, Wheat		<ul style="list-style-type: none"> Biotech trait leader in S. Asia Cotton trait leader in India 	<ul style="list-style-type: none"> Development and commercial partner
Nutritional Oils		<ul style="list-style-type: none"> Leading nutrition and medical foods company 	<ul style="list-style-type: none"> Development and commercial partner
Grain Quality		<ul style="list-style-type: none"> Leading global grain miller combining assets of ConAgra, Cargill and Horizon milling 	<ul style="list-style-type: none"> Development and commercial partner

Commercial agreements enable and incentivize sub-licensing and stacking to maximize trait market share

Arcadia provides traits and services to achieve high value capture

Licenses generally extend for 20 years from commercial launch, with value shared independent of patent life

Partial list

Corn strategy leverages partner expertise and assets to advance yield and stress pipeline

Yield and Stress Traits – Corn

DEVELOPMENT PHASE / PROBABILITY OF SUCCESS

D	1	2	3	4	C
24-48 mo	12-24 mo	12-24 mo	12-24 mo	12-36 mo	
5%	25%	50%			

Market Potential

- Global: 433M acres
- Most valuable trait crop
- 53% of market value in the US
- Focus: Global

Value Creation

- Each 10% yield increase creates ~\$62 of added value per acre
- ~\$11B in annual trait value
- Trait share potential: High

Corn Highlights



- Leading global commercial development partner
- Proven crop protection products and pipeline complements Arcadia yield and stress platform
- Strong track record of broad trait licensing and collaboration
- Collaboration resulted in two product candidates in Phase 2 of development



- Largest family-owned retail corn seed company in the US
- Leadership position in key market segments
- Transformation, testing and product development capabilities



Source: FAO, Phillips McDougall, Company information

NUE rice addresses world's most important food crop; driving double-digit yield increases

Nitrogen Use Efficiency – Rice

DEVELOPMENT PHASE / PROBABILITY OF SUCCESS

D	1	2	3	4	C
24-48 mo	12-24 mo	12-24 mo	12-24 mo	12-36 mo	
5%	25%	50%	75%		


Market Potential

- Global: 400M acres
- Most valuable global crop
- 3rd largest global crop by acres
- Focus: Asia

Value Creation

- Each 10% yield increase creates added value of ~\$63 per acre
- ~\$10B in annual trait value
- Trait share potential: High

Rice Highlights

- Partnered with major seed company and trait leader in India 

EVERY SEED COUNTS
- Completed US FDA Early Food Safety Evaluation
- Multiple field tests demonstrate double-digit yield increases in major rice types
 - 30% average yield increase based on 4 years of field trials in multiple environments at CIAT in Colombia
 - 19% average yield increase based on 2 years of field trials in multiple environments
 - Introgression underway in Indica and Japonica rice varieties; covers most of rice production worldwide



Source: FAO, CIAT, AATF, Phillips McDougall, Company information

NUE wheat drives significant yield increases in largest global crop

Nitrogen Use Efficiency – Wheat

DEVELOPMENT PHASE / PROBABILITY OF SUCCESS

D	1	2	3	4	C
24-48 mo	12-24 mo	12-24 mo	12-24 mo	12-36 mo	
5%	25%	50%	75%		

Market Potential

- Global: 536M acres
- Largest global crop
- Focus: North America, South America, Asia, Australia

Value Creation

- Each 10% yield increase creates ~\$24 of added value per acre
- ~\$5B added value globally
- Trait share potential: High

NUE Wheat Highlights

- Largest crop in the world is underserved by technology
- Partnered with 4th largest global seed company, leader in wheat
- NUE trait has completed US FDA Early Food Safety Evaluation
- Field trials at multiple locations across multiple crop seasons demonstrate a mean yield increase of 10%
- Trait introgression into commercial germplasm is underway
- Stack with drought and water use efficiency traits to create most competitive yield stacks



Source: FAO, Phillips McDougall, Company information

Resistant starch wheat product addresses nutrition and health needs

Resistant Starch Wheat (non-GM)

DEVELOPMENT PHASE / PROBABILITY OF SUCCESS

D	1	2	3	4	C
24-48 mo	12-24 mo	12-24 mo	12-24 mo	12-36 mo	
5%	25%	50%	75%	90%	

Market Potential

- Global
- \$2B market opportunity

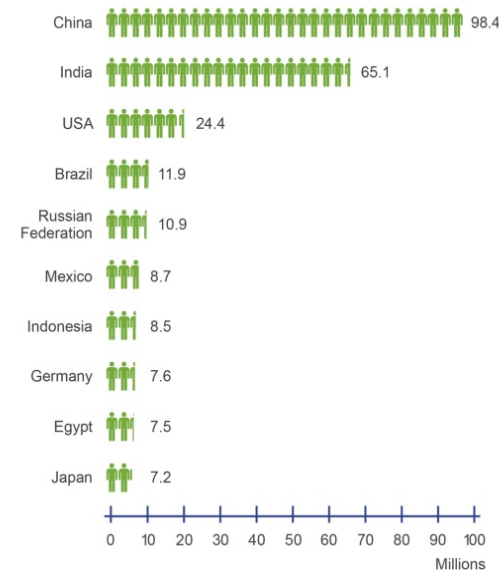
Value Creation

- Based on delivery of greater total dietary fiber in wheat products
- Trait share potential: Medium

Resistant Starch Wheat Highlights

- Resistant starch wheat leads a series of products that provide breakthroughs in wheat nutrition and functionality
- Increases dietary fiber and decreases glycemic index, important in obesity and diabetes mitigation
- Scaling-up production to meet pilot testing to support our partners' processing, formulation and commercial launch plans
- Trait introgression into commercial germplasm is underway
- Converging breeding and partner product development efforts to support commercial launch in the next few years

Top 10 countries with people with diabetes (ages 20-79), 2013



Source: International Diabetes Federation, Company information

HB4 stress tolerant soybeans lead pipeline in regulatory and breeding advancements

Stress Tolerance – Soybeans

DEVELOPMENT PHASE / PROBABILITY OF SUCCESS

D	1	2	3	4	C
24-48 mo	12-24 mo	12-24 mo	12-24 mo	12-36 mo	
5%	25%	50%	75%	90%	

Market Potential

- Global: 272M acres
- 4th largest global crop
- Focus: Americas, Asia

Value Creation

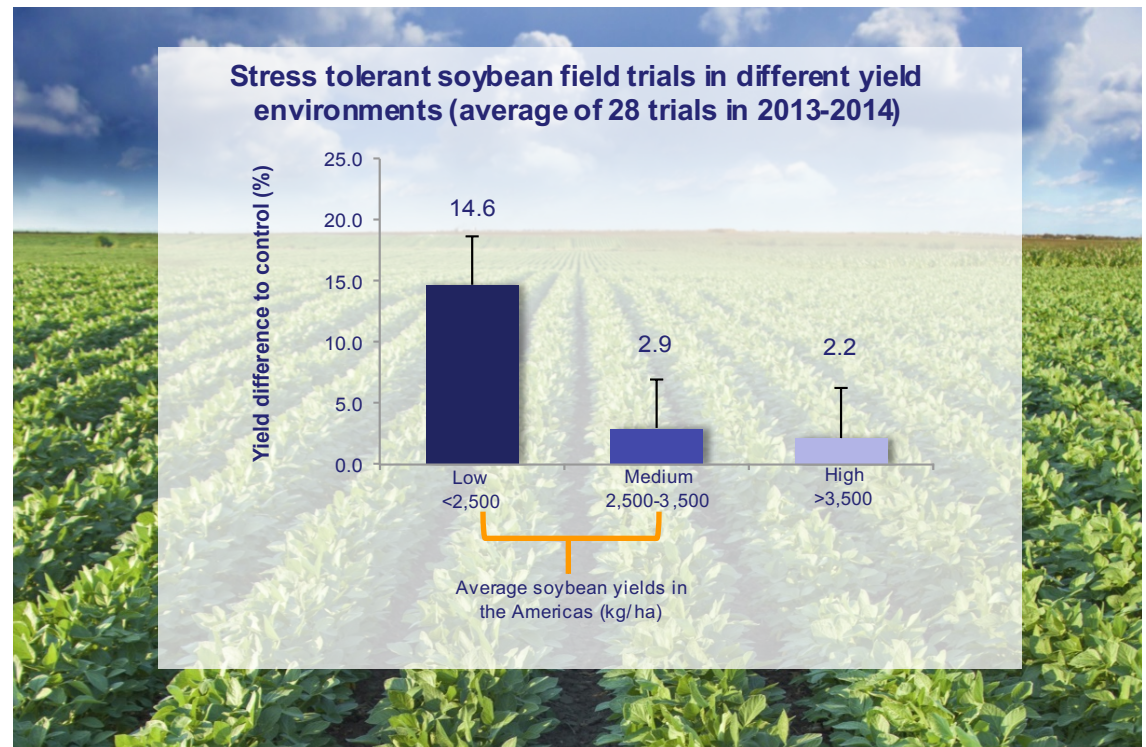
- Each 10% yield increase creates added value of ~\$40 per acre
- ~\$4B globally in annual trait value
- Trait share potential: High

Soybean Highlights

- Joint venture with Bioceres, owned by ~300 of the largest soybean farmers in South America
- ~80% historic trait adoption in soybeans, highest of any crop
- HB4 trait in the hands of breeders covering more than 35% of soybean seed sales in South America
- Regulatory approval completed in Argentina, pending in Uruguay
- Regulatory submissions planned for largest single markets:
 - Production: US and Brazil
 - Consumption: China and Europe



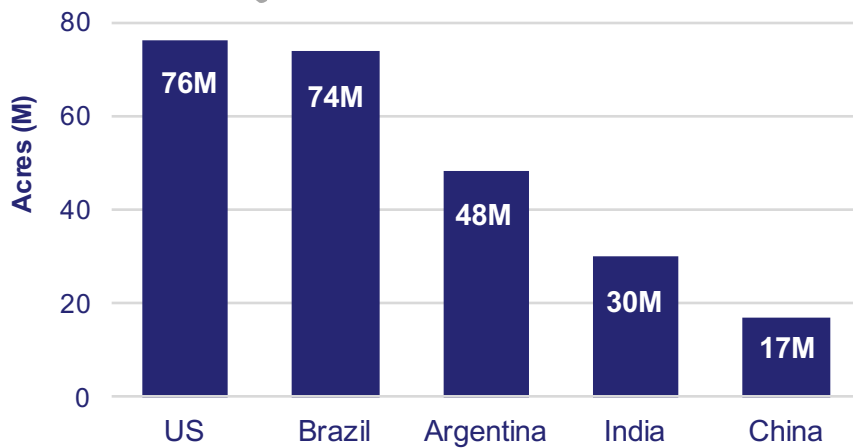
Stress Tolerant Soybean Field Trials



Source: FAO, Phillips McDougall, Company information

Trait opportunity for HB4 stress tolerant soybeans based on 25% – 35% of South American acres

Top five soybean producing countries



HB4 commercial launch status

- Regulatory approvals complete in Argentina
- US FDA Early Food Safety Evaluation completed
- Submissions for production and import approvals underway in other countries

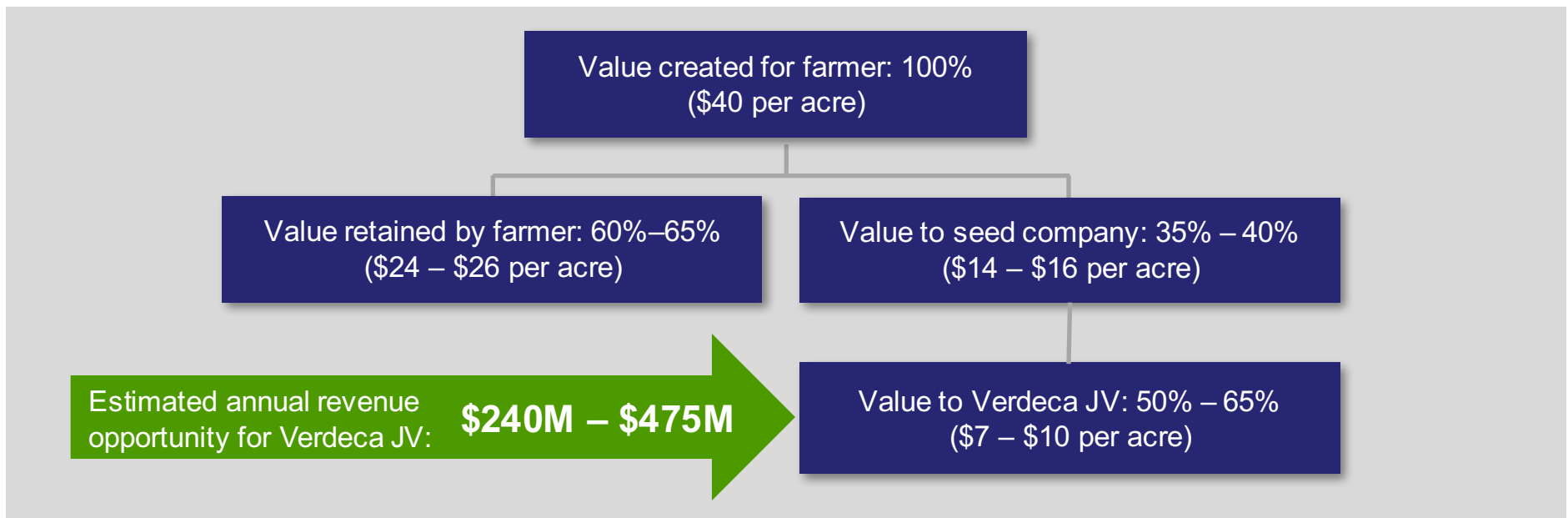
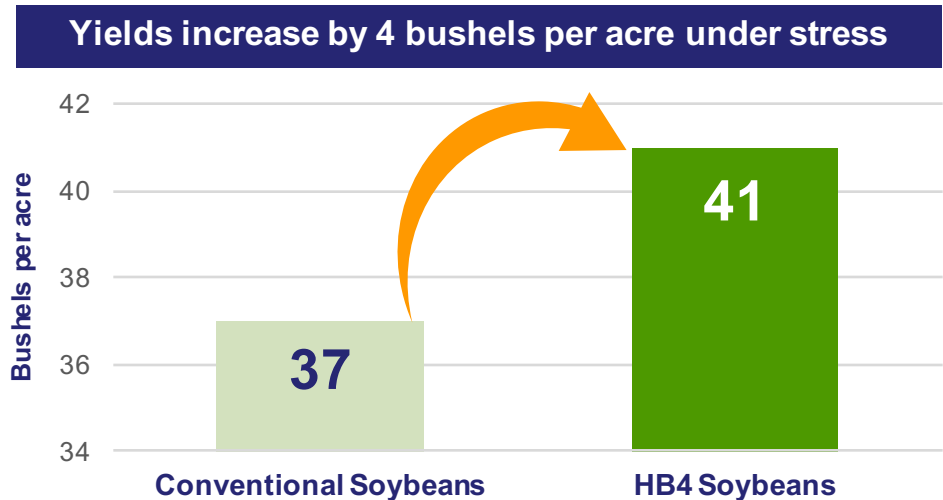
Initial launch in South America

- South America soybean market: **136M acres**
- Estimated trait market share: **25% – 35%**



Source: USDA Foreign Agricultural Service, Company information

HB4 stress tolerant soybeans lift grower revenue and significantly reward entire value chain



Regulatory approvals and commercial partnerships accelerate soybean pipeline

Regulatory approvals



Regulatory process completed for HB4 stress tolerant soybeans in Argentina. Approval sets stage for future submissions in the US, Europe and China.



Regulatory dossier for HB4 stress tolerant soybeans submitted and pending in Uruguay.



US FDA Early Food Safety Evaluation completed for HB4 trait in all crops.

Commercial partnerships



Verdeca collaboration to advance breeding of stress tolerant soybeans in S. America and to develop non-GM agronomic and quality traits.



Verdeca collaboration to advance yield traits in soybeans in South America



Verdeca collaboration to advance breeding of stress tolerant soybeans in S. America



Phytola research partnership to develop soybean varieties with increased oil content.

Partners in multiple markets support diverse yield and quality soybean platform

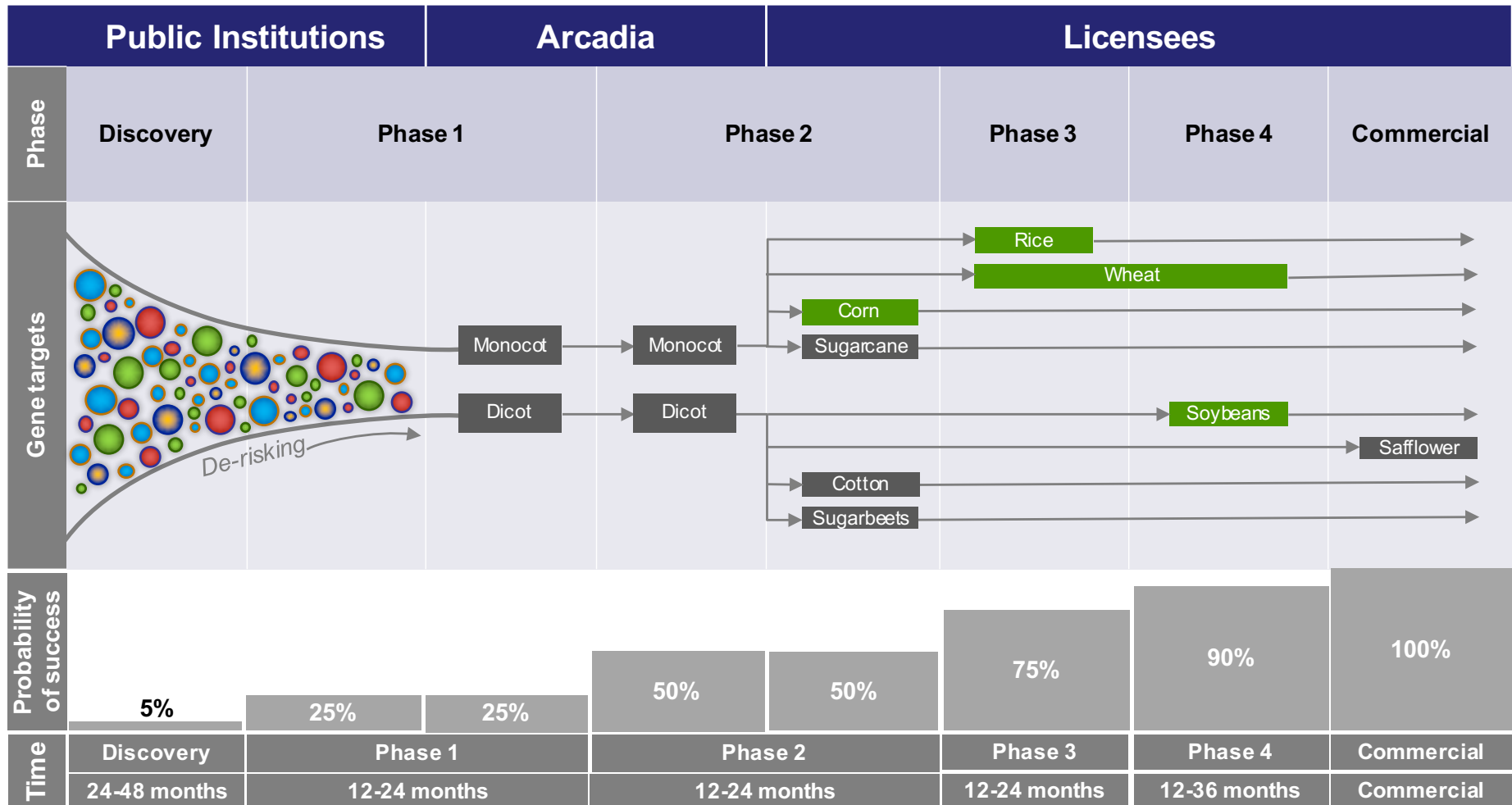
Program	Crop	Collaborator(s)	Phase					Key Markets
			D	1	2	3	4	
PRODUCTIVITY TRAITS								
Drought / Stress tolerance (HB4)	Soybeans	TMG, GDM Seeds	■	■	■	■	■	Americas, Asia
Non-GM yield and Quality (multiple traits)*	Soybeans	TMG	■					Global
Yield*	Soybeans	Phytola	■	■				Global
PRODUCT QUALITY TRAITS								
Oil Quality*	Soybeans	TMG	■	■	■			Global

Phase: D=Discovery; 1=Proof of Concept; 2=Greenhouse / Early Field Trials; 3=Additional Field Trials / Product Development; 4=Regulatory / Pre-Commercial; 5=Commercialized
 * Non GM



Soybean trait partners		
 Dow AgroSciences	<ul style="list-style-type: none"> • Leader in crop protection traits • Development and regulatory expertise 	<ul style="list-style-type: none"> • Development and commercial partner
 TMG <small>Tropical Measurements & Genetics</small>	<ul style="list-style-type: none"> • Leading Brazilian soybean seed company 	<ul style="list-style-type: none"> • Development and commercial partner
 GDM <small>SEEDS</small>	<ul style="list-style-type: none"> • Leading South American seed company 	<ul style="list-style-type: none"> • Development and commercial partner
 PHYTO LA	<ul style="list-style-type: none"> • Leader in oilseed crop research based at the University of Alberta 	<ul style="list-style-type: none"> • Research and development partner

Arcadia's collaborative framework accelerates advancements in top four global crops



D=Discovery 1=Proof of Concept 2=Greenhouse / Early Field Trials 3=Additional Field Trials / Product Development 4=Regulatory / Pre-Commercial

Source: Company information, Phillips McDougall, Seed Industry June 2014



Arcadia

B I O S C I E N C E S

Recent Financials

Key financial results



	First Quarter		% Favorable/ (Unfavorable)
	2016	2015	
Total revenues	852	815	5%
Cost of product revenues	147	56	(163%)
R&D expense	2,202	1,832	(20%)
SG&A expense	3,436	2,638	(30%)
Loss from operations	(4,933)	(3,711)	(33%)
Net loss	(5,190)	(5,803)	11%
Net loss attributable to common stockholders	(5,190)	(7,695)	33%
Net loss per share attributable to common stockholders	(0.12)	(3.71)	N/A
Basic and diluted shares outstanding (weighted average)	44,215,156	2,075,407	

*\$ in thousands, except share and per share data
Unaudited*

Revenue

	First Quarter		% Favorable/ (Unfavorable)
	2016	2015	
Product revenue	255	81	215%
License revenue	152	158	(4%)
Contract research and government grants	445	576	(23%)
Total revenues	852	815	5%

\$ in thousands; Unaudited

First quarter revenue mix comparison:

- Product revenue
- License revenue
- Contract research and government grants

