

### Forward-looking statements

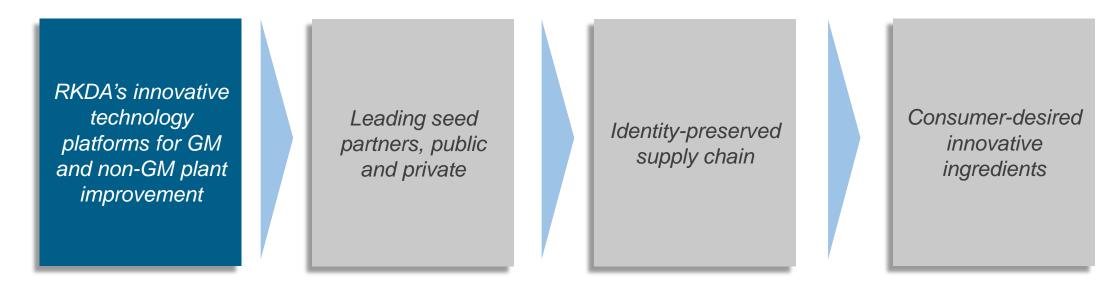


- "Safe Harbor" statement under the Private Securities Litigation Reform Act of 1995: This presentation contains forward-looking statements about the company and its products, including statements relating to components of the company's long-term financial success; the company's traits, commercial products, 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.
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### Arcadia Biosciences is...



- Improving the nutrition and quality of food ingredients while improving crop productivity
- Using advanced plant breeding and gene editing technologies
- Accelerating innovation through industry-leading partners



Founded in 2002; Public company in 2015 (Nasdaq:RKDA); Headquarters in Davis, CA

# Consumer demands and challenges in the food supply chain create opportunities for innovation



### Consumers expect more from their food

- Clean labels
- Authentic, natural foods
- Functional foods with health benefits
- New protein alternatives
- Reduced environmental impact

### Food production systems are stressed

- Climate and pests mount challenges
- One third of all crops grown for consumption become food waste
- Commodity prices remain low
- Government regulators, NGOs and consumers demand reduced crop inputs

### Arcadia Biosciences innovations address the challenges facing our food systems





#### **IMPROVE**

- Shelf life
- Dietary fiber
- Nutrient profile
- Amino acid
- Plant proteins
- Flavor and color



#### REDUCE

- Allergenicity
- Calories
- Added fibers and sugars
- Environmental impact



### **MANAGE**

- Increased yield
- Reduced pesticide
- Herbicide tolerance
- Reduced nitrogen
- Manage drought and salt stress

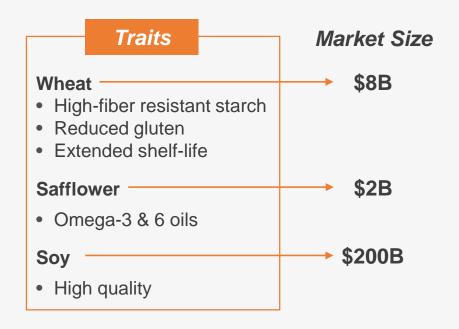
Using our non-GM breeding platform and proprietary libraries or GM techniques

# Arcadia's product portfolio addresses a large global market opportunity



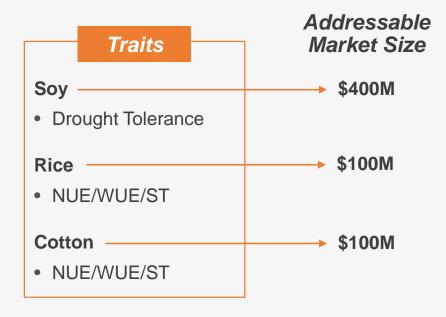
#### **Health & Nutrition**

Increasing nutrient and trait quality in crops to meet consumer health demands



### **Crop Productivity**

Addressing crop productivity through intrinsic yield and abiotic stress reduction



Building on over 15 years of industry expertise

# Health & nutrition business model extracts value throughout the food supply chain

**Rapid Product Development** 

Growth facilities

Field trials

Regulatory





- Demand quality food ingredients (high fiber/ protein, low gluten, etc.)
- Pay premium pricing



• Breeding into commercial public varieties

Expanded access to grower base via FBN

Testing production in multiple locations

• Identified seed producers

## GoodWheat<sup>TM</sup> redesigns wheat as a functional food, with new value throughout the chain



- GoodWheat portfolio includes:
  - High fiber Resistant Starch wheat
  - Reduced Gluten wheat
  - Extended Shelf Life wheat
  - Future wheat innovations
- Adds value to the wheat supply chain by enabling a wider range of choices to meet consumer demands
- Allows consumers to enjoy unique health benefits in their favorite foods
- Delivers distinct market differentiation for consumer food companies to provide specialty products to discerning consumers



### GoodWheat business model presents multiple opportunities for revenue capture



#### **TRAIT**



GoodWheat traits sold to seed companies

RKDA collects royalties

\$ -

Wheat value per acre (bread model)

### SEED



Seed company partners manufacture seed

RKDA sells seed to growers

\$94

### **GRAIN**



Farmer partners produce specialty grain

RKDA sells grain to millers & CPGs

\$ 600

### **INGREDIENTS**



GoodWheat ingredients sold to CPGs

RKDA collects royalties

\$819

#### **FOOD**



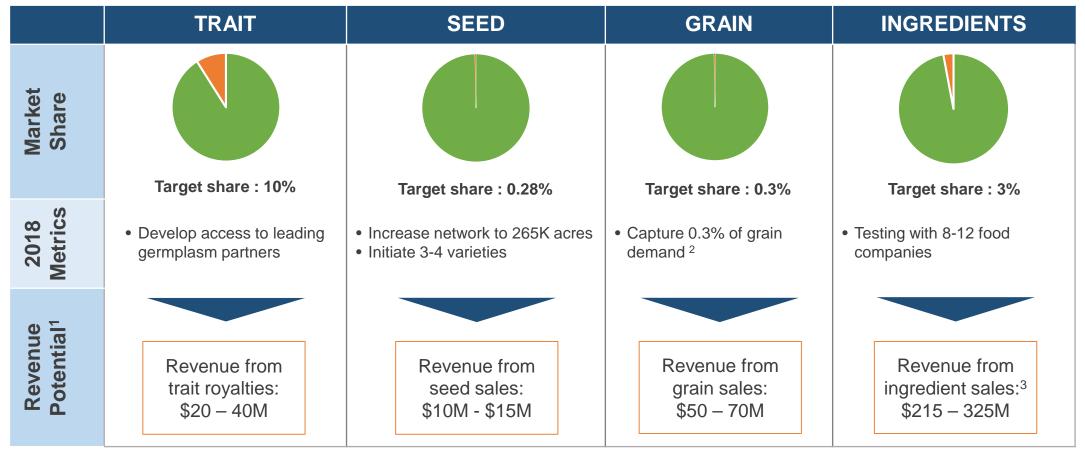
Foods including GoodWheat sold to consumers

RKDA brand reaches consumers

\$ 13,750

### Example: Resistant Starch (RS) GoodWheat Revenue Opportunity





- 1: Revenue from RKDA LTP. Mature year = ten years after initial launch of first varieties.
- 2: US grain production 2018 source USDA/ERS July 13, 2018
- 3: Statista: US Sales of wheat products = \$8,863 M in 2016

### Collaborating with partners for significant advantage



#### **Health & Nutrition**









#### **Active Targets**

- Consumer Packaged Goods Co's
- Expanded milling/processing partner coverage in EU, Japan and Australia

### **Crop Productivity**













Strategic alliances with global players to develop and commercialize traits

### Arcadia's competitive advantages allow for accelerated market entry







- Unique patent-protected, portfolio of traits for diverse crops
- Leading TILLING researchers, unmatched in their years of experience
- Proprietary TILLING libraries for key broad-acre crops, fruit & vegetables
- CRISPR-Cas9 gene editing capabilities



#### Accelerated breeding processes and germplasm

- Up to four generations per year through accelerated breeding
- Proprietary heirloom wheat, durum and oilseed varieties
- Germplasm partnerships with leading public programs in North America



#### Field trial, regulatory and production capabilities

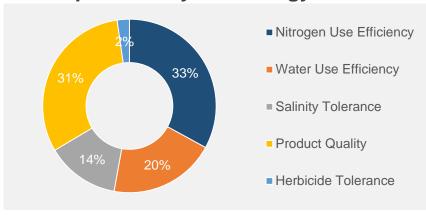
- Home based in USA, global capabilities
- Diverse facilities including: Lab, Greenhouse, Field Research Farm
- In-house oilseed production optimized for best cost position
- Secured partners for seed bulking and grain/oil production

# Strong patent portfolio addressing a variety of trait technologies

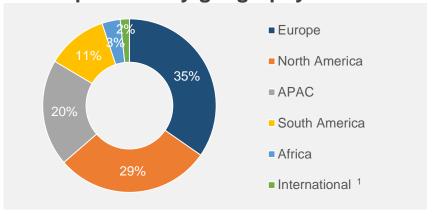


- Owns or exclusively controls 176 patents worldwide in 32 families
- Issued 24 patents and filed 14 new patent applications since January 2015
- Owns patents in most key production markets for specific crops
- Unique ability to achieve full control over mutation enables the company to obtain patents on non-GM traits

#### Patent portfolio by technology



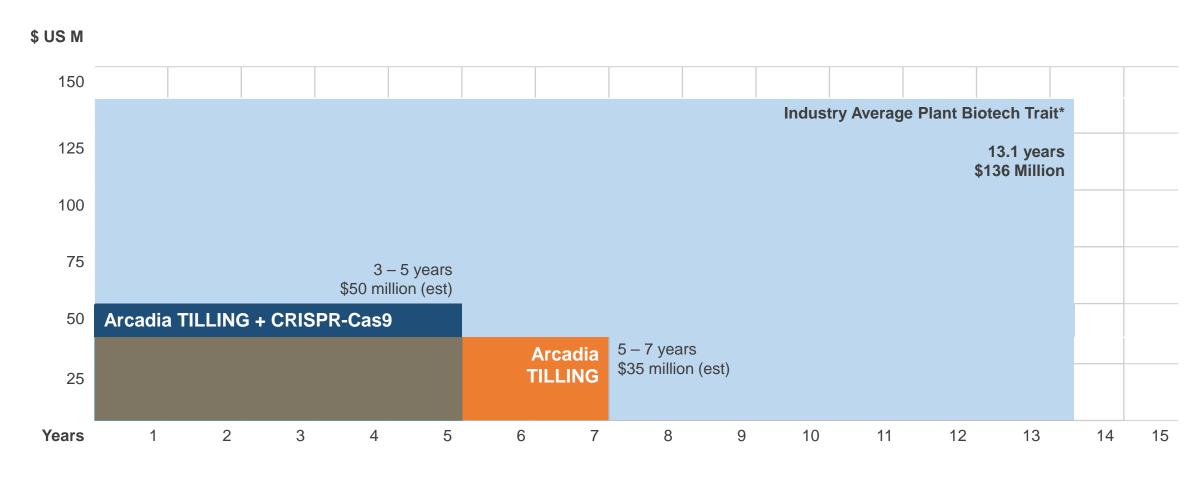
### Patent portfolio by geography



Note 1: International applications filed under the Patent Cooperation Treaty

### Arcadia's R&D processes shorten timeline to launch and allow broader globalization





<sup>\*</sup> CropLife, 2011

### In 2018 we made significant advances towards commercialization of RS GoodWheat



#### Achieved key technical milestones

- 94% amylose (vs. 25%-30% in traditional wheat)
- High fiber levels that meet FDA requirements for "high in fiber" and "good source of fiber" designations

### Breeding into commercial germplasm

- Arrangements with public breeding institutions to introduce trait into commercial germplasm
- Produced increased acres of wheat across several states in US to supply customers for testing

#### Building partnerships across wheat value chain

- Seed production
- Logistics identity preservation
- Grain millers
- Food companies

**Development phase** 











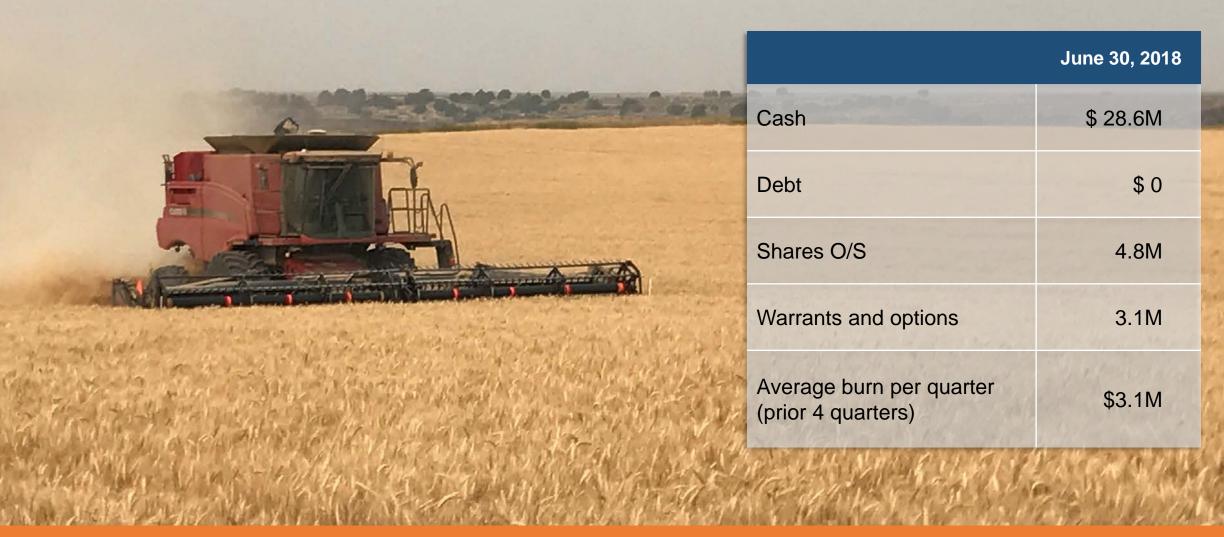
# HB4 drought tolerant soybeans are advancing through field trials and regulatory progress





### Financial highlights: Solid cash reserves and no debt





### We are focused on delivering key milestones in 2018 – 2019





### Arcadia's growth strategy focuses on non-GM wheat health and nutrition products



Innovative Product Portfolio	<ul> <li>Leading platform of health and nutrition ingredients</li> <li>Exclusive technologies with strong intellectual property</li> <li>Created using non-GM techniques for widest market potential</li> </ul>
Consumer Ingredient Brand	Build GoodWheat brand to maximize value capture     Re-inventing wheat as a functional food, enable new routes of revenue capture throughout the value chain
Portfolio of Productivity Traits in other Crops	<ul> <li>Providing innovation to meet the needs of farmers and food chain</li> <li>GM traits that address climate stresses</li> <li>HB4 drought tolerant soybeans preparing for launch in Argentina</li> </ul>
Operating Performance	<ul> <li>Strong leadership geared to transition company</li> <li>Reduced operating costs; no debt</li> <li>Focused deliverables and aligned R&amp;D activities</li> <li>Building commercial organization</li> </ul>

