



Arcadia Biosciences Investor Presentation

November 2019

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 Annual Report on Form 10-K for the year ended December 31, 2018. These documents are 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 Biosciences is a leader in enhancing the quality, nutritional value and production efficiency of plant-based ingredients



Using advanced plant breeding and gene editing technologies



Proprietary optimization of crops to improve health benefits, quality and productivity



Accelerating formulation & commercialization innovation through partnerships with industry leaders



Developing specialty ingredients with advanced nutritional profiles



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

Arcadia Biosciences innovations meet a wide variety of health, nutrition and performance needs globally



IMPROVE

- Shelf life
- Dietary fiber
- Oil quality
- Nutrient profile
- Plant proteins
- Flavor and color



REDUCE

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



MANAGE

- Yield and quality
- Drought tolerance
- Herbicide tolerance
- Plant resilience
- Growth cycle

Key crop & ingredient traits

Leading Traits

US Market

Hemp (CBD)

- Yield and quality
- Plant resilience
- Growth cycle

→ \$20.0B

Wheat

- High-fiber resistant starch
- Reduced gluten
- Extended shelf-life

→ \$9.7B

Soy

- Drought tolerance
- Herbicide tolerance

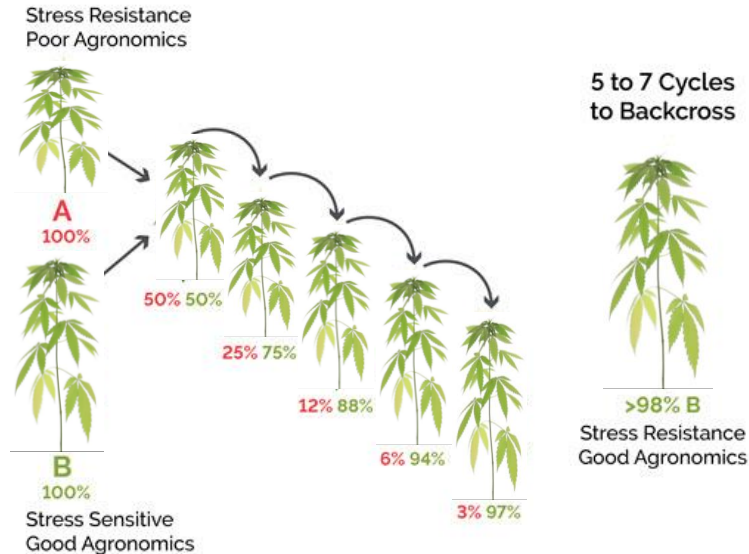
→ \$12.7B

Using our technology platform and proprietary libraries

Building on over 15 years of industry expertise

- Hemp market estimate for 2024 – BDS Analytics
- Wheat market estimate represents farm-gate value of all US wheat
- Soy seed market (31% of total 2017 US Soy revenue)

Genomics and genome editing have revolutionized plant breeding and crop improvement

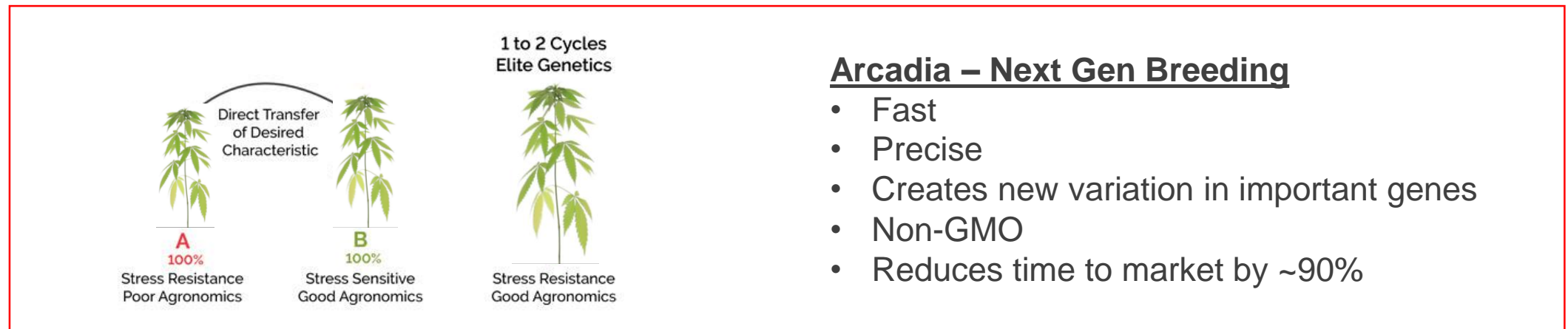


Traditional Breeding

- Slow
- Expensive
- Limited by genetic variation

Marker Assisted Selection

- Enabled by genomics
- Reduces time by ~25%

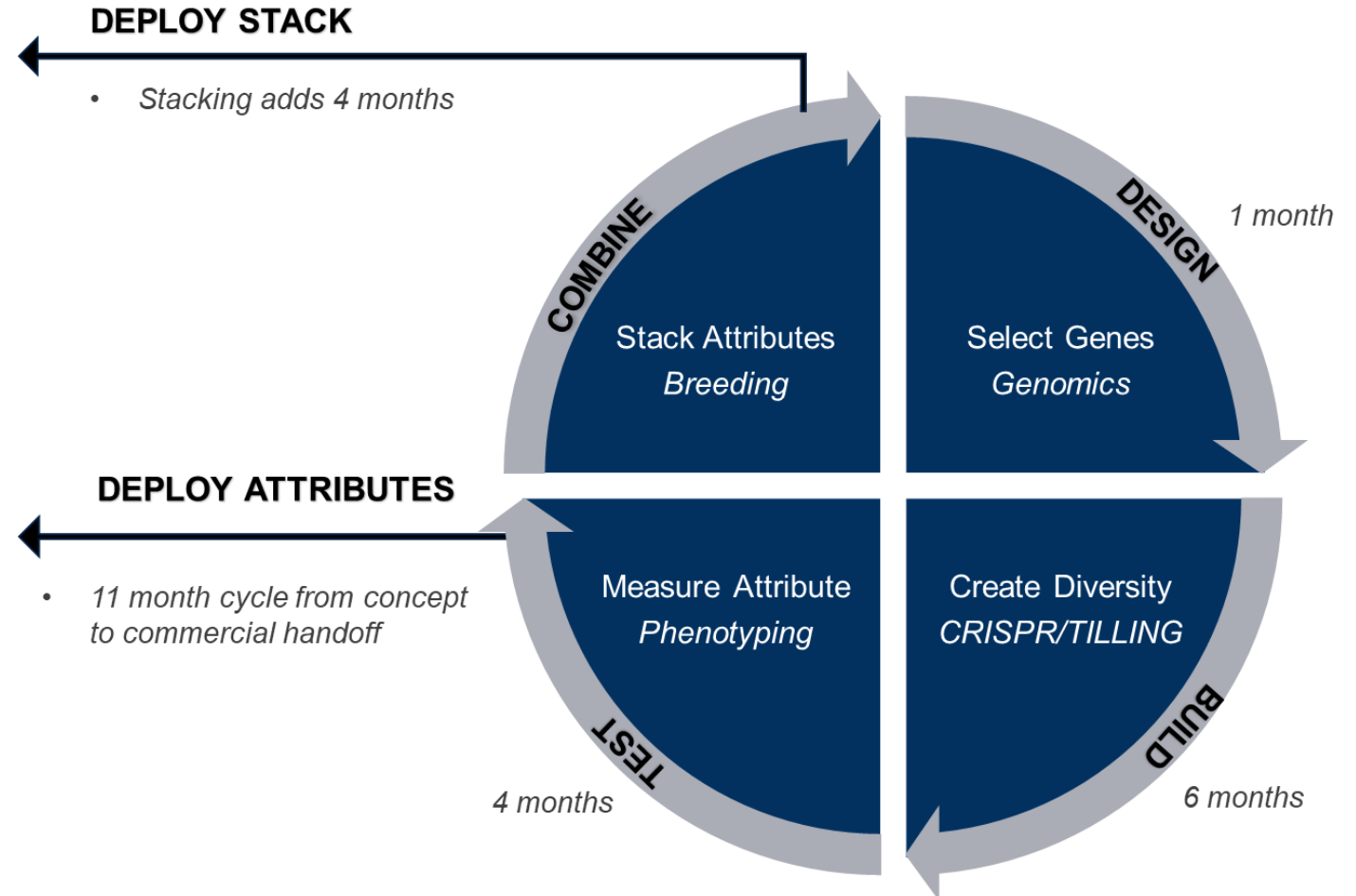
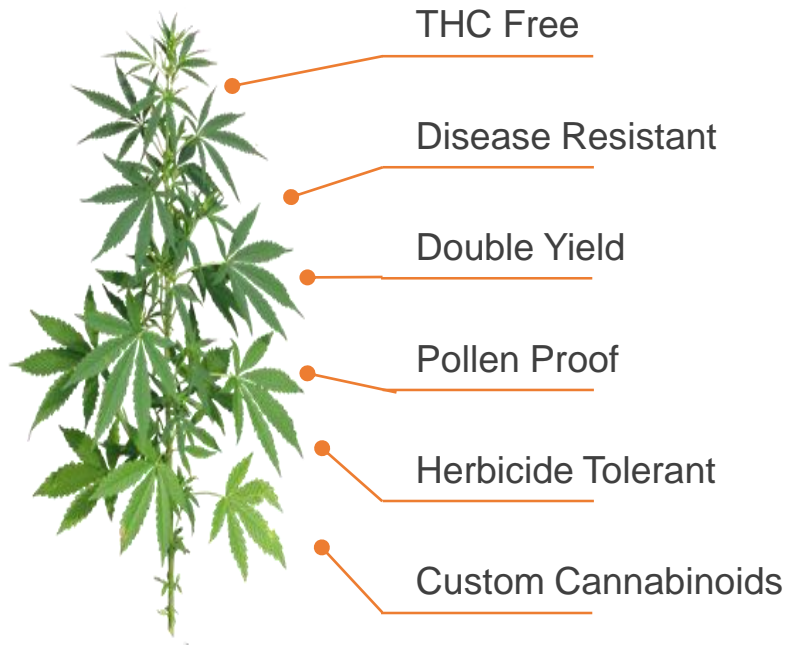


Arcadia – Next Gen Breeding

- Fast
- Precise
- Creates new variation in important genes
- Non-GMO
- Reduces time to market by ~90%

Arcadia's technology platform enables rapid commercialization of elite hemp varieties

Custom Designed Varieties



Single trait addressable market example: THC-free hemp

Minimum Viable Product: A widely adapted cannabis strain that reproducibly delivers high CBD content >15%, with zero risk of above threshold THC%. Guaranteed not to fail inspection.

Zero THC Guarantee



- De-risks CBD production
- Enables crop insurance

Consistent CBD Yields >15%

- Predictable returns for growers
- Higher profit/acre
- Reliable supply chain

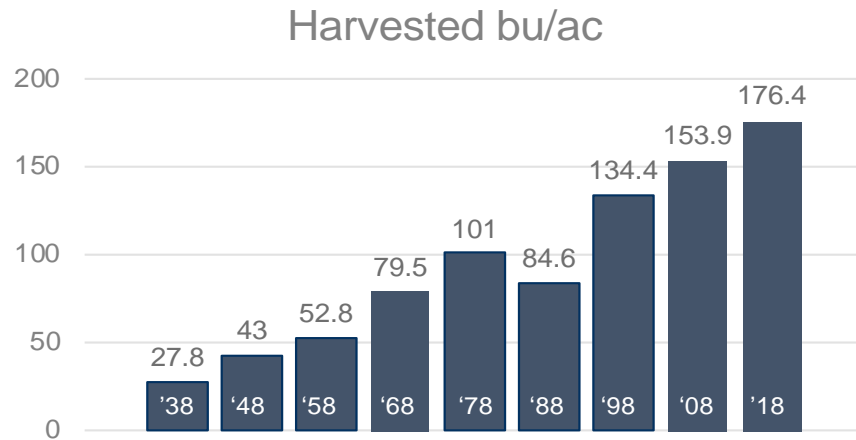
Zero THC Hemp	Planted Acres	Non-compliant Acres	Value per acre	Addressable Market / Grower Loss
2016	10,000			
2017	25,713			
2018	78,716			
2019	230,000	50,000	\$40,000	\$2,000,000,000
2024 (est)	5,291,185	1,150,257	\$10,000	\$ 11,502,570,000

Data Source: VoteHemp

CAGR from 2016 to 2019 (119%) carried forward

Using corn as a model values cannabis pipeline at \$1.75B/yr – MJ value significant upside

Corn Yield Gains through Modern Ag and Genomics Practices serve as a model for hemp improvement potential



Firm	Market	Market Value (\$B)
Brightfield group	CBD in 2022	\$22.0
BDS Analytics	CBD in 2024	\$20.0
Canaccord	CBD in 2024	\$18.4
Cowen	CBD in 2025	\$16.0
Grand View Research	Industrial Hemp in 2025	\$10.6

KEY FIGURES – Corn USA as a model for hemp:

\$51.9 B

Farmgate value
2017

\$16.2 B

Seed and trait
value 2017

35%

#1 Seed Co
Market share

HEMP ESTIMATES:

\$16 B

Est hemp
products value
in 2024

\$5 B

Est hemp seed &
trait value
in 2024

\$1.75 B

Reasonable value
for market leader
in seeds and
traits

Potential for market leader in hemp seeds and traits by 2023



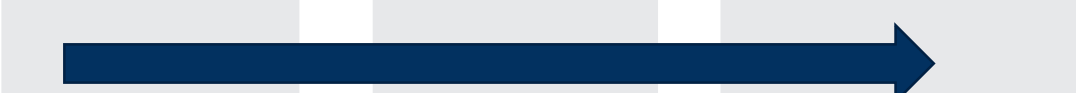
Hemp as strategic crop	Good Hemp Seed Launch	<u>7 varieties</u> 3 proprietary	<u>20 varieties</u> <u>7 proprietary</u> 2 traits	<u>30 varieties</u> <u>12 proprietary</u> 4 traits	<u>30 varieties</u> <u>12 proprietary</u> 6 traits	<u>30 varieties</u> <u>12 proprietary</u> 10 traits
Feb 2019	Dec 2019	2020	2021	2022	2023	2024



Farm Up-sells
Seed Services
Agronomy
Biomass Sales



Extract Upsells
Quality





Arcadia's non-GM wheat portfolio includes multiple products



Addresses
\$9.7B US
flour market

GoodWheat™ Portfolio



Reduced Gluten

- Reduces allergenic gluten levels by 65%
- Increases levels of essential amino acids
- Target as high Lysine feed

Future Product Innovations

- Wheat yield – YB traits impacting grain size, grain filling and plant architecture
- Herbicide Tolerant Wheat

Wheat Collaborations

Ardent Mills

- Extends shelf life of milled whole wheat flour
- Improves taste of whole wheat by reducing bitterness associated with rancidity

Bay State Milling

- Improves TDF values 2-6X standard wheat
- Reduces glycemic response to improve insulin sensitivity
- Improves gut health & colon health

HB4[®] drought and herbicide tolerant soybeans approved in > 80% of global soybean acres

Addresses
\$12.7B US
Soy market

- Developed through Verdeca joint venture with Bioceres 
- 2018 field trials coincided with drought conditions, demonstrating benefits of trait
- HB4 and herbicide tolerant trait stack approved in all major soybean producing countries
- Third season of breeding trials completed
- USDA Approval in August 2019
- First sales expected in 2020, pending import approval in China

Investment and financial highlights

Solid cash reserves, no debt, poised for significant shareholder value creation



- Hemp genetics opportunity >\$1B in enterprise value by 2024
- New hemp derivative products in 2019 and beyond
- Wheat business now commercialized
- Soy trait scaling up acreage in 2020/2021



RKDA Analyst Price Targets

Bank	Rating	Price	Impl. Value (\$M)
NCS	Buy	\$16.00	\$138
HCW	Buy	\$14.00	\$120
Zacks	Buy	\$12.00	\$103

Recent management guidance

Initial revenues in 2019	Hemp, Wheat
Total Revenues for 2020	> \$10.0 Million
Total Revenues for 2021	> \$30.0 Million
Positive net cash from Ops	Mid-to-late 2021

Financial metrics Sept 30, 2019

Cash	\$30.9M
Debt	\$0.1M
Shares O/S	8.6M
Warrants and options O/S	4.9M
Value of cash warrants	~\$38M
NOL carryforward <i>Tax affected, subject to 382 study</i>	~\$42M



Thank you!