

The background of the slide is a photograph of a cornfield at sunset. The sun is low on the horizon, casting a warm orange and yellow glow across the sky and the field. The corn plants are green and tall, with some yellow sunflowers visible. The sky is filled with dark, silhouetted clouds.

# Origin Agritech

NASDAQ: SEED

Investor Presentation

August 2023

# Forward Looking Statements and Disclaimers

This communication contains "forward-looking statements" as defined in the federal securities laws, including Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended, and as defined in the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements address expected future business and financial performance and financial condition, and contain words like "expect," "anticipate," "intend," "plan," "believe," "seek," "will," "would," "target," and similar expressions and variations. Forward-looking statements address matters that are uncertain. Forward-looking statements are not guarantees of future performance and are based on assumptions and expectations which may not be realized. They are based on management's current expectations, assumptions, estimates and projections about the Company and the industry in which the Company operates but involve a number of risks and uncertainties, many of which are beyond the Company's control. Some of the important factors that could cause the Company's actual results to differ materially from those discussed in forward-looking statements are: failure to develop and market new products and optimally manage product life cycles; ability to respond to market acceptance, rules, regulations and policies affecting our products and operations; failure to appropriately manage safety and product stewardship issues; changes in laws and regulations or political conditions; global economic and capital markets conditions, such as inflation, interest and currency exchange rates; business or supply disruptions; natural disasters and weather events and patterns; ability to protect and enforce the Company's intellectual property rights; and separation of underperforming or non-strategic assets or businesses. The Company undertakes no duty or obligation to publicly revise or update any forward-looking statements as a result of future developments, or new information or otherwise, should circumstances change, except as otherwise required by securities and other applicable laws. Although the Company believes that the expectations expressed in these forward-looking statements are reasonable, it cannot assure you that such expectations will turn out to be correct, and actual results may differ materially from the anticipated results. You are urged to consider these factors carefully in evaluating the forward-looking statements contained herein and are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by these cautionary statements.

# About Us



## How it started

- Founded in 1997
- Heritage in hybrid corn breeding
- R&D developing GMO seed traits and transgenic technology
- Collaborated with Chinese agricultural institutes to leverage their resources



## Where we are

- GMO commercial seed production in 2023
- 2nd & 3rd generation BT & GT GMO corn in safety certificate approval process
- Drought resistance GMO corn in final stage of safety certificate approval
- Large-scale commercial production of NEC corn in 2023



## Where we're going

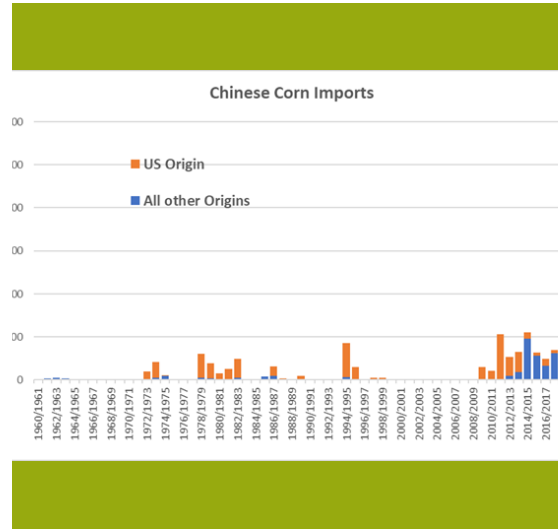
- CRISPR gene editing speeding up innovation
- Using leading tech to create corn varieties to meet customers' needs
- Future expansion from just seeds to vertically integrated Ag Co

# The Chinese Food Security Problem



## Tough Mismatch

With 22% of the world's population but only 10% of the world's arable land, China is the largest corn importer in the world.



## Dependent on Imports

Recent trade tensions and COVID related supply chain disruptions have prompted the Chinese government to embrace agritech solutions for food independence.



## Climate Change

Global crop yields could fall about 30% because of climate change, even as food demand is expected to jump 50% in the coming decades, according to United Nations' estimates.



## Inflation

Corn prices have risen 100% and fertilizer prices 230% from pre-pandemic levels.



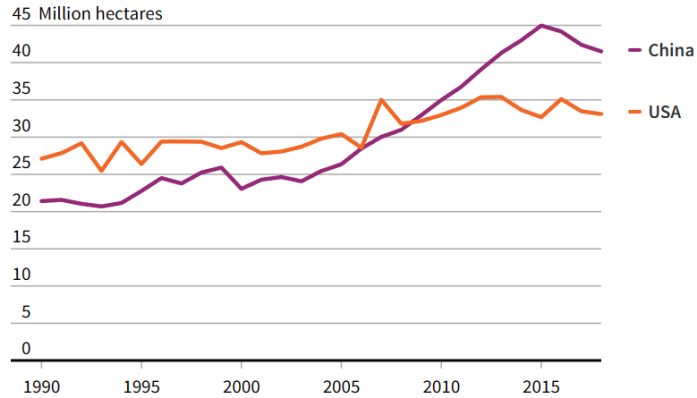
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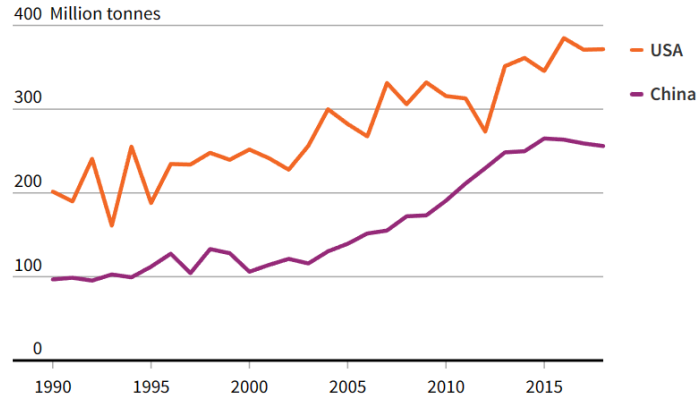
## China vs U.S. corn output; China tractor sales

Larger farms, more mechanization and the use of genetically-modified seeds allow the U.S. to produce more corn from less land compared to China

### CORN HARVEST AREA

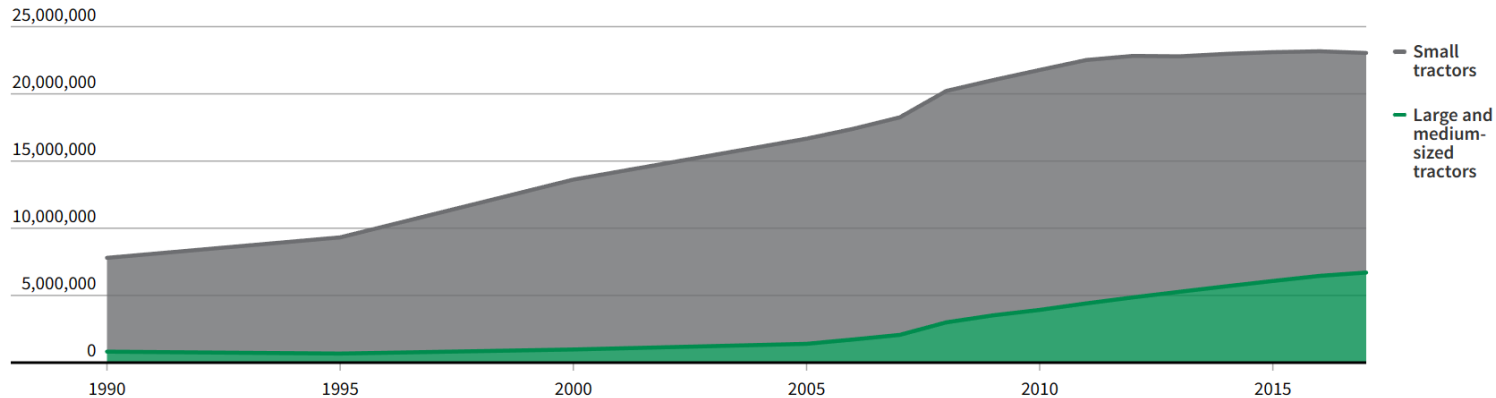


### CORN PRODUCTION



### CHINA TRACTOR SALES BY SIZE

Large tractor sales are up 588 pct since 2000; small tractor sales are up 29 pct



Source: United States Dept. of Agriculture; China National Statistics Bureau

Gavin Maquire | REUTERS GRAPHICS

Corn yields are 45% lower in China than the USA

- China has a larger corn harvest area than USA but lower production
- China's past **GMO** limitations and lower tech family farms are the reason



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# China's historic agricultural modernization begins...

## Government GMO corn approval in February 2023

4 million mu (660k acres) to be planted this year

1% of the total corn harvest area. Likely 90%+ GMO within 5 years like with Monsanto in USA.

Foreign companies not allowed to sell GMO corn in China

Origin's GMO corn hybrids are in the national demo plot in 2023 and ready for commercial production

# Origin's GMO Portfolio



## Phytase Corn

Origin's Phytase corn GMO is the first GMO corn trait to receive biosafety certificate in 2009. Phytase is an enzyme that is added to corn feedstock so that livestock can absorb essential nutrients. The use of phytase corn should also reduce phosphate pollution caused by animal waste and excessive fertilizer use.



## Herbicide and Pest Resistance

The first and only triple stack GMO corn hybrid entering the national demo plot and ready for commercial production in 2023. Several elite commercial hybrids in the new variety approval process. Multiple next-generation GMO traits are in the approval process.



## Drought Resistance

Origin's drought resistance trait is in the final stage of GMO safety certificate approval.



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# Origin's Solution: 3 Pillars of Agritech Innovation

## Germplasm

- Origin's huge library of thriving hybrid corn varieties are the solid foundation for innovation
- Huge competitive advantage vs. competition

## Gene editing

- Origin is a leading player in using CRISPR to create innovative new corn varieties
- Breakthrough technology significantly increases breeding efficiency

## GMO traits

- Origin has all of the major GMO traits integrated into its hybrid corn and awaiting approval



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# Origin's Germplasm Superiority

Origin's 26 years of R&D on hybrid corn provide a huge competitive advantage

## GMO and Germplasm Go Hand in Hand

GMO traits only modify a few genetic traits; the underlying seed variety needs to be of high quality to ensure a superior product

## Validated Technology

- 112 hybrids approved as new varieties in last 26 years
- 4000 new hybrids being tested across major corn production regions in China each year
- Origin's hybrids cover all major corn production regions in China

## Improving Regulatory Environment

Chinese regulators are strengthening IP protection to incentivize innovation in the agricultural industry, making Origin's germplasm more commercially valuable.

## Increasing Need for Elite Hybrids

Climate change has made and will continue to make the growing environment harsher, exacerbating the need for elite corn hybrids.



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# Give the customers what they want...

Origin's elite hybrid corn  
(germplasm)

Use CRISPR to turn on & off genes to create  
what customer wants (i.e. high protein)

Integrate GMO traits into new variety (herbicide and insect  
resistance) to make corn even better with higher yield

Contract grow the new NEC variety for the customer. Corn processing,  
drying and fulfilment to customer (feedstock company or hog farmer)



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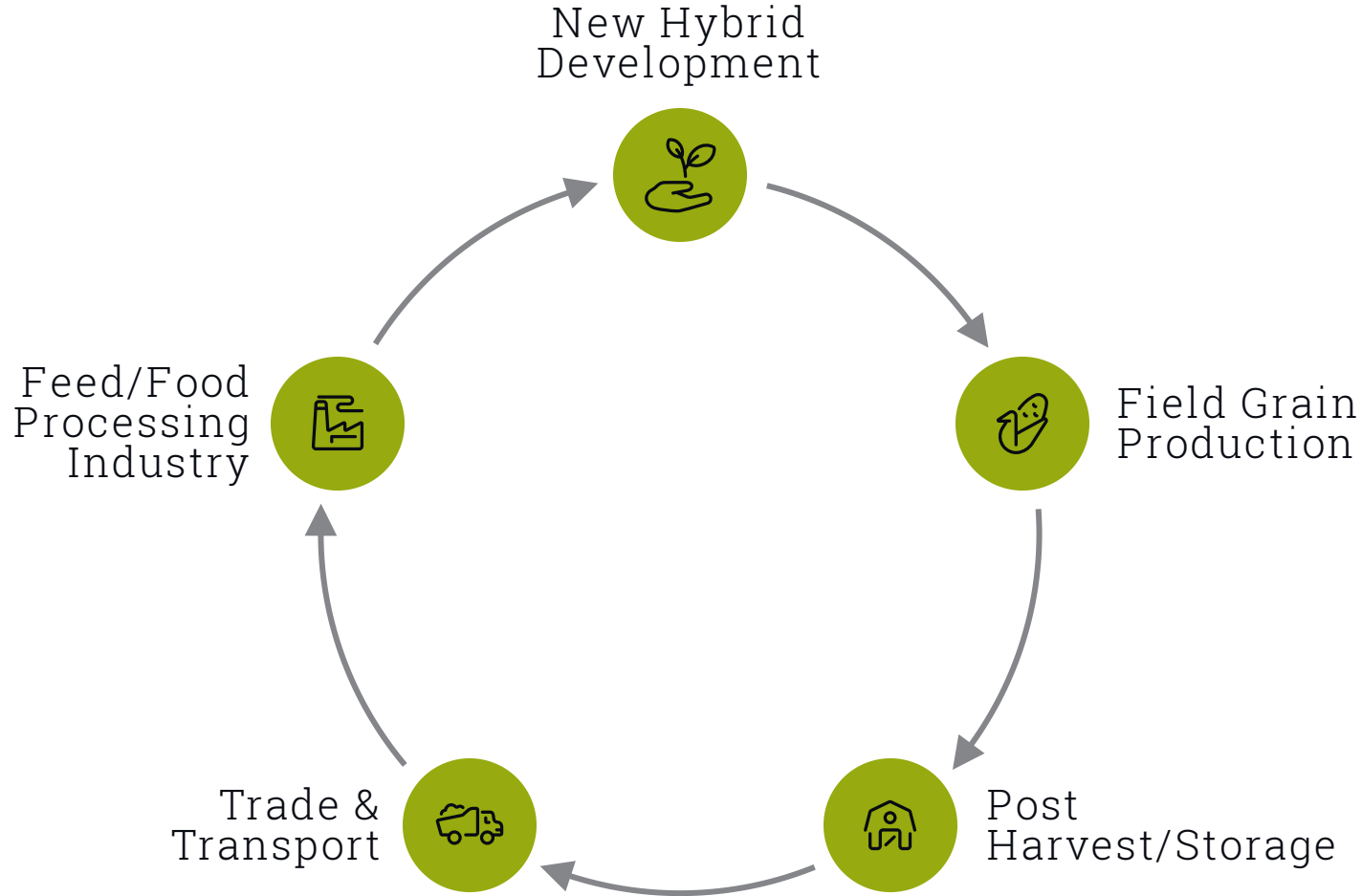
# Our Innovation is Disrupting a \$75B Industry

First example of vertically integrated business model...

- Nutritionally enhanced corn (NEC) eliminates the need for expensive additives in hog feed
- Doubles feedstock companies' margins
- No competition for the product
- Feedstock in China is a \$75 billion market



# Business Model of Supply Chain



- With innovation we control more of the supply chain
- Grow NEC corn rather than just sell seed
- Increases our revenue and profit potential

# Expanding to NEC Corn Production, Dramatically Increases the Market Size

\*Market size in billions of dollars



# Initial Rollout of NEC Corn Supply Chain

- Growing ~5,000 acres of NEC corn in Xinjiang
  - Grown by Origin's Joint Venture, Baodao Origin Agritech and Livestock Co. Ltd.
  - Will expand to ~33,000 acres in 2024
  - Expected to add \$8 million revenue in 2023 and \$55 million in 2024
- Constructing 100,000-ton corn drying base in Xinjiang
  - \$11.1 million investment funded by JV partner and local banks
- Expands Origin's market opportunity > 20x
  - \$83 billion market for feedstock
- In negotiations for similar deals in other provinces
  - Goal is to expand NEC production into all major corn growing regions



# Strategic Alliances

\*More partnerships in the works!



China Academy of  
Agricultural Sciences



China Agricultural  
University



National Maize  
Improvement Center



Henan Agricultural  
University



奥瑞金  
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# Equity Snapshot

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Stock Price (21-Jul-23 )	<b>\$4.03</b>
Shares Outstanding	<b>6.2 M</b>
Market Capitalization	<b>\$25M</b>
Revenue H1 2023	<b>\$9.6 M</b>
Growth Rate	<b>42%</b>
Operating Income H1 2023	<b>-\$0.02 M</b>
Cash	<b>\$2.1 M</b>
Insider Ownership	<b>14.1%</b>
Institutional Ownership	<b>17.5%</b>

## Investment Highlights

# Origin Agritech



- 1 Nascent multi-billion market for GMO corn
- 2 Leader in gene editing  
Speeding up the pace of innovation and staying ahead of competitors
- 3 Seeds ---> vertically integrated corn company
- 4 NEC corn to drive growth in 2023  
Growing 5,000 acres in Xinjiang
- 5 GMO revenues to kick in  
Big growth driver
- 6 Low-cost structure  
Should drive significant margin expansion and profitability
- 7 US traded on NASDAQ  
Ticker: SEED



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You've heard from us.

we want to  
hear from **you.**

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