



ORIGIN AGRITECH LTD.

July 2024 | NASDAQ: SEED

Forward Looking Statements & 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 Origin Agritech



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

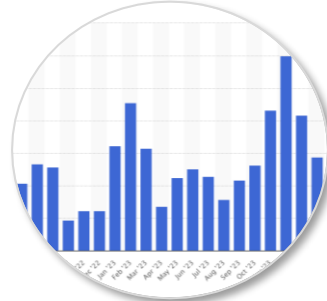
- Gene editing speeding up innovation
- Using leading tech to create corn varieties to meet customers' needs
- Future expansion from just seeds to vertically integrated Ag Co

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



Import Dependent

- Recent trade tensions and COVID related supply chain disruptions have prompted the Chinese government to embrace AgTech 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

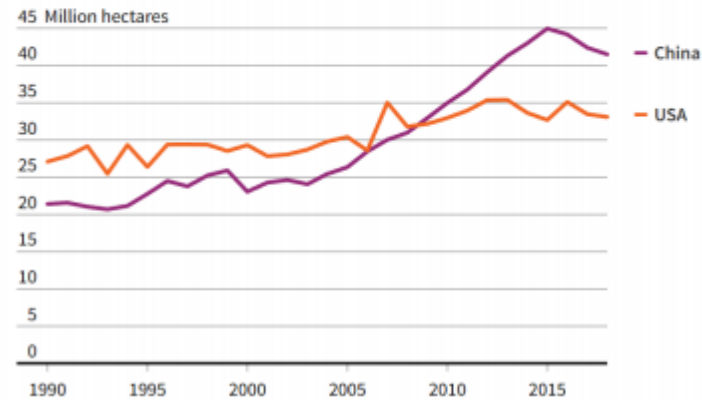
- Corn prices have risen 100% and fertilizer prices 230% from pre-pandemic levels.

Corn Yields 45% lower in CN than USA

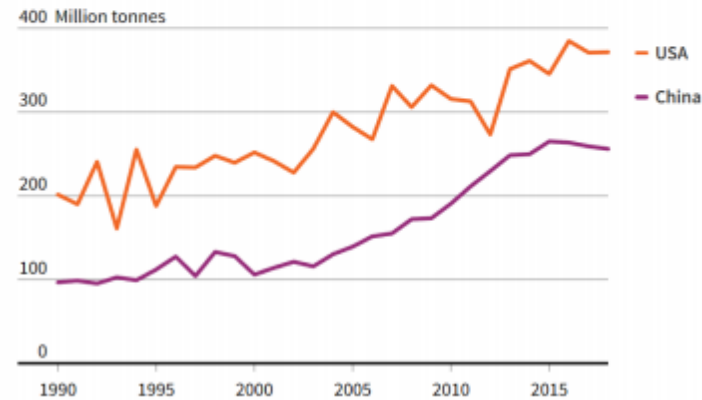
China vs U.S. corn output; China tractor sales

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



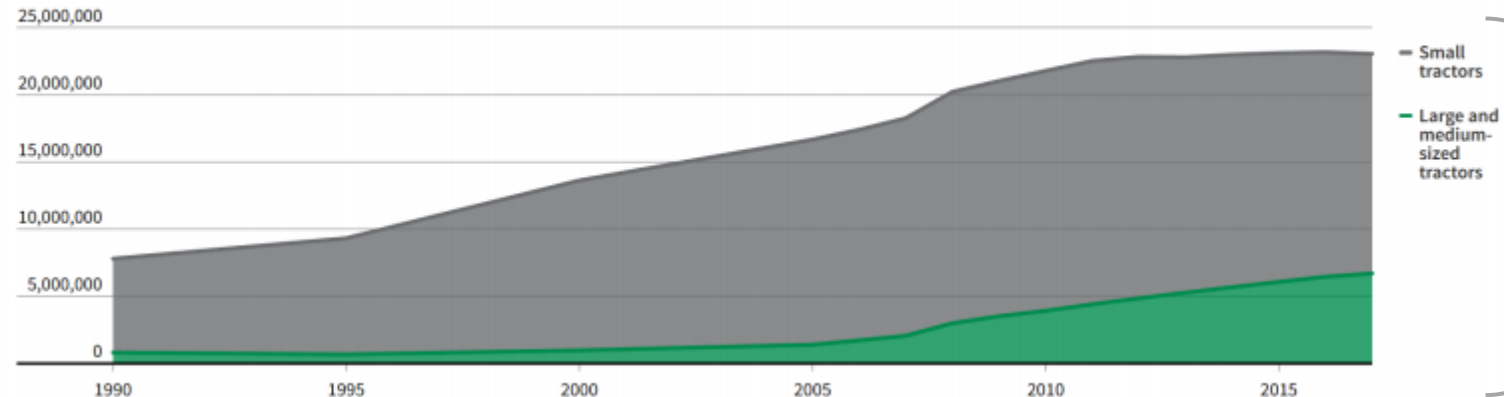
CORN PRODUCTION



CHINA HAS A LARGER CORN HARVEST AREA THAN THE USA, BUT LOWER PRODUCTION

CHINA TRACTOR SALES BY SIZE

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



CHINA'S PAST GMO LIMITATIONS AND LOWER TECH FAMILY FARMS ARE THE REASON

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

China's Historic Agricultural Modernization Begins

Government GMO Corn Approval in February 2023

660k
ACRES (4 million MU)

- To be planted this year
- 1% of the total corn harvest area
- Likely 90% GMO within 5 years (like Monsanto in the 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 are ready for commercial production



Major Milestone:

Origin Receives GMO Safety Certificate for Triple Stack Maize



Certification of transgenic maize, BBL2-2, containing two insect-resistant genes (Cry1Ab, Cry3Bb) and one herbicide-tolerance gene (Cp4-epsps):

- Enhances agricultural productivity & sustainability
- Provides effective pest management & reduces environmental impact
- Advancement in gene editing with high-yield corn inbred line
- Yield increase of **over 50%** in trials, pending biosafety assessment

Bloomberg

China Approves Gene-Edited Grain Crops in Food Security Push

-May 2024



REUTERS

China approves first gene-edited wheat in step to open up GM tech to food crops

-May 2024

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 Insect 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.

Next generation triple stack trait includes two bt genes that not only resist lepidoptera but also resistant to coleoptera dichotoma, a major pest in Southern China. Filling for biosafety certificate in 2024.



Drought Resistance

Origin's drought resistant gene is the only one in China. Filed for biosafety certificate in May 2023. **We expect approval this year.**

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 gene editing 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 is awaiting approval

Origin's Germplasm Superiority

Our 26 years of R&D on hybrid corn provide a huge competitive advantage



GMO & GERMLASM 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



IMPROVING REGULATORY ENVIRONMENT

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



VALIDATED TECHNOLOGY

- 112 hybrids approved as new varieties in last 26 years
- 4,000 new hybrids being tested across major corn production regions in China each year
- Origin's hybrids cover all major prod. regions in China



INCREASING NEED FOR ELITE HYBRIDS

- Climate change has made and will continue to make the growing environment more challenging, exacerbating the need for elite corn hybrids

Origin's Breakthrough Gene Editing Plant Breeding

2016

Origin established gene editing platform

2022

Origin developed nitrogen efficiency corn through gene editing method

2023

Origin conducted intensive tests for nitrogen-efficiency trait and field evaluated in Origin's commercial lines

2021

Origin developed new corn gene editing method, which reduced backcross procedures from 4-5 years to 1 year to convert the edited trace to elite commercial lines

2023

Origin established gene editing breeding system that includes 7 traits, such as drought-resistance, nitrogen-efficiency and plant types, etc. With this system, Origin can convert any commercial lines into edited lines in 1 year

This is the effect of nitrogen-efficiency inbred B73 vs. control samples



Giving our customers what they want...

✓
**Origin's elite hybrid corn
(germplasm)**

✓
**Use gene editing to turn
on & off genes to create
what the customer wants
(i.e. high protein)**

✓
**Integrate GMO traits into
new varieties (herbicide
& insect resistant) to make
corn even better, with a
higher yield**

✓
**Contract grow the new NEC
variety for the customer.
Processing, drying & fulfilment
to the customer (feedstock co.
or hog farmer)**

Our Innovation is Disrupting a \$75B Industry

Origin is the first example of a vertically integrated business model in the space...



Nutritionally enhanced corn (NEC) eliminates the need for expensive additives in hog feed

2x

Doubles feedstock company margins



No competition for the product

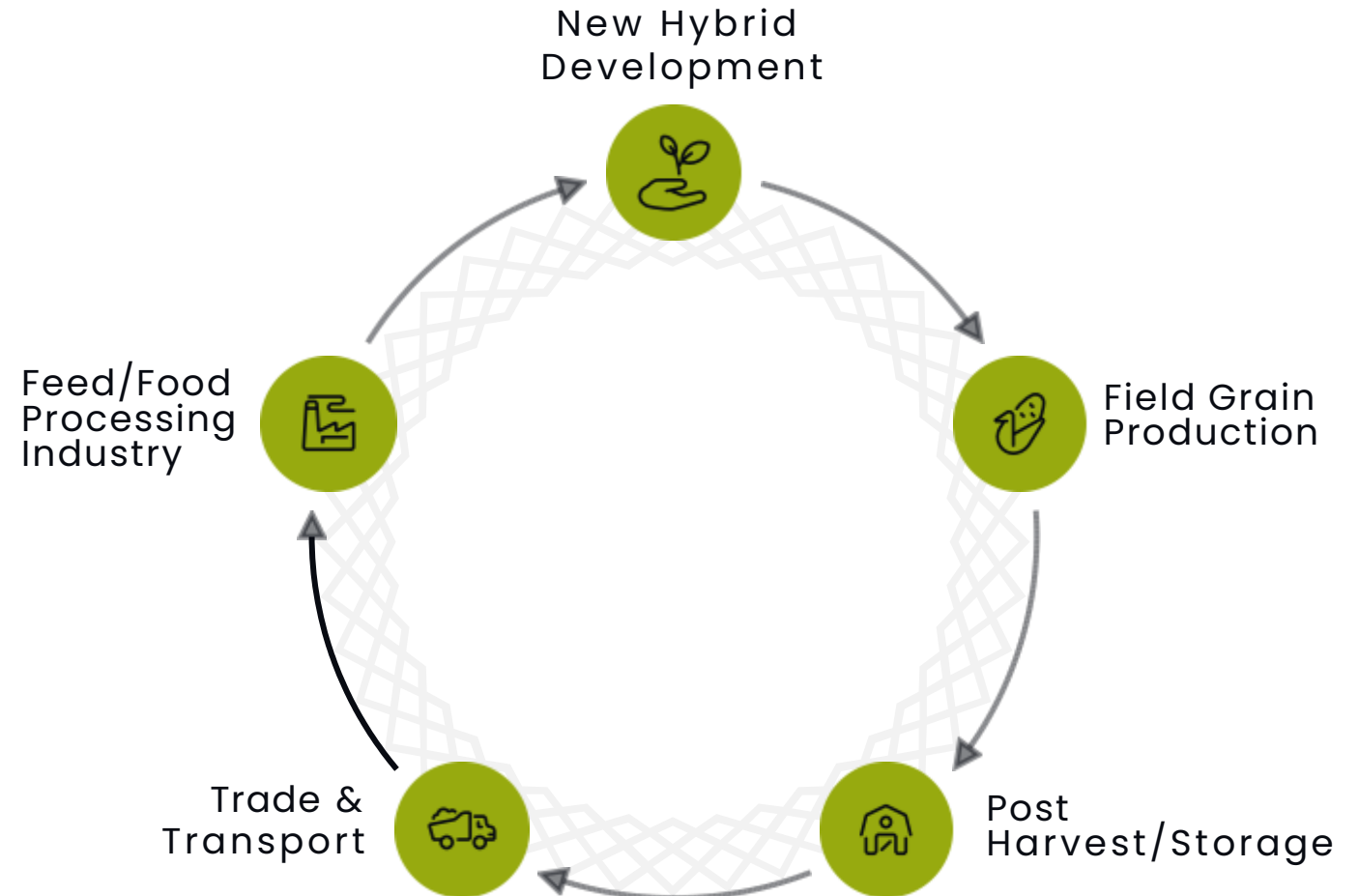
\$75B

Market size in China

Business Model of Supply Chain

The Origin Agritech Advantage

- With innovation, we control more of the supply chain
- We grow NEC corn, rather than simply sell seed
- This increases both our revenue and profit potential



Expanding to NEC Corn Production Dramatically Increases Market Size

*Market size in billions of dollars



Initial Rollout of NEC Corn Supply Chain



Growing ~5,000 Acres of NEC in Xinjiang

- Grown by Origin's joint venture, Baodao Origin Agritech and Livestock Co. Ltd.



Expands Origin's Market Opportunity >20x

- 112 hybrids approved as new varieties in last 26 years
- 4,000 new hybrids being tested across major corn production regions in China each year
- Origin's hybrids cover all major prod. regions in China



Constructing 100,000 Ton Corn Drying Base

- Also in Xinjiang, with the \$11.1 million investment being funded by our JV partner and local banks



In Negotiations for Similar Deals Nearby

- Our goal is to expand NEC production into all major corn growing regions across China's various provinces

Strategic Alliances

*More partnerships in the works!



China Academy of
Agricultural Sciences



China Agricultural
University



National Maize
Improvement Center



Henan Agricultural
University

Origin Agritech Investment Highlights



Nascent multi-billion dollar market for GMO corn



Leader in gene editing

Speeding up the pace of innovation and staying ahead of competitors



Seeds -> Vertically Integrated Corn Company



NEC corn to drive growth

Harvesting 5,000 acres in Xinjiang



GMO revenues to kick in

Big growth driver



Low-cost structure

Should drive significant margin expansion & profitability



US traded on NASDAQ

Ticker: SEED

You've heard from us.
we want to hear from you.

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