



Kaiima: Improved Productivity through Enhanced Ploidy

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Presentation Outline:

- Introduction to Kaiima
- Technology
- R&D Program Overview

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●● High Impact Food



●● Energy



●● Environment



kaiima

*a next-generation seed and
breeding-technology company*

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kaiima
SUSTAINABILITY MULTIPLIED

1. Kaiima in a nutshell

Kaiima is an innovative Israel-based breeding-technology and seed company that dramatically boosts plant productivity with its breakthrough **non-GMO Enhanced Ploidy (EP™) technology platform**.

Our mission is to help feed the world and energize it by introducing new varieties of key agricultural crops – specifically designed for sustainable agriculture – and with vastly improved yields.

Kaiima is addressing: **a. High-impact food crops**, such as wheat, rice and corn, which are critical for basic global nutrition, **b. Energy crops**, such as castor and sugarcane, which can scale to become a substantial part of the global energy economy, and **c. Vegetables**, which the Company is now selling in multiple markets around the world.

We are particularly driven to deliver on our promise in those countries and regions where the need is greatest.

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Polyploidy – Nature’s Way of Enhancing Plant Productivity



“Mother of Wheat” – Diploid
(2 sets of chromosomes per cell)

Nature over 10,000 years ago

Today’s “Bread wheat” – Hexaploid

2 years with Kaiima Enhanced Ploidy platform

non-GMO high-ploidy wheat

Kaiima’s Enhanced Ploidy boosts yields

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The Team

Key Executives

Dr. Doron Gal: CEO; PhD, Stanford University; CEO of software company; energy and sustainability expert; Senior Fellow, Institute for Policy and Strategy; Lecturer (Energy) at IDC..

Amit Avidov: CTO; Chief Breeder at De Ruiters Seeds (sold to Monsanto); CEO & Chief Breeder AB Seeds; CTO, Top Seeds; CTO, Morning Seeds; More than 400 commercial varieties.

Dr. Remy Bitoun: VP BD; PhD Weizmann Inst., Head of Limagrain India, VP R&D, Hazera Genetics; VP Finance and HR at Clause Tezier

Omri Rothman: CFO; CFO at: AGI Ltd.; Noga Group Ltd. Negevtech Ltd. Challenge Fund L.P. CPA Israel.

Key Investors

Kleiner Perkins, DFJ-Tel Aviv, Draper Fisher Jurvetson, Mitsui

Industry Experts:

Dr. Ganesh Kishore: Managing Director, Burrill & Co; Chief Biotechnology Officer, DuPont; Chief Biotechnologist, Monsanto (Round-up Ready project head); Member of Academy of Sciences.

Jeffrey Beard: Director General of International Baccalaureate; President, Seed Division, Syngenta; Pioneer HiBred, Director of Central European Operations.

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2. Technology : Enhanced ploidy EP™ Process

Key benefits of EP™

- Sharp increase in yield potential compared to isogenic ordinary-ploidy control
- Wider adaptability to climatic and osmotic stress
- Self-contained high-ploidy types protect local bio-diversity and stop GMO outcrossing
- Key to effective inter-specific hybridization: Restores fertility and genetic stability in long-distance crosses.
- Higher CO₂ intake rate

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3. Key R&D Programs

- Wheat
- Rice
- Corn
- Castor

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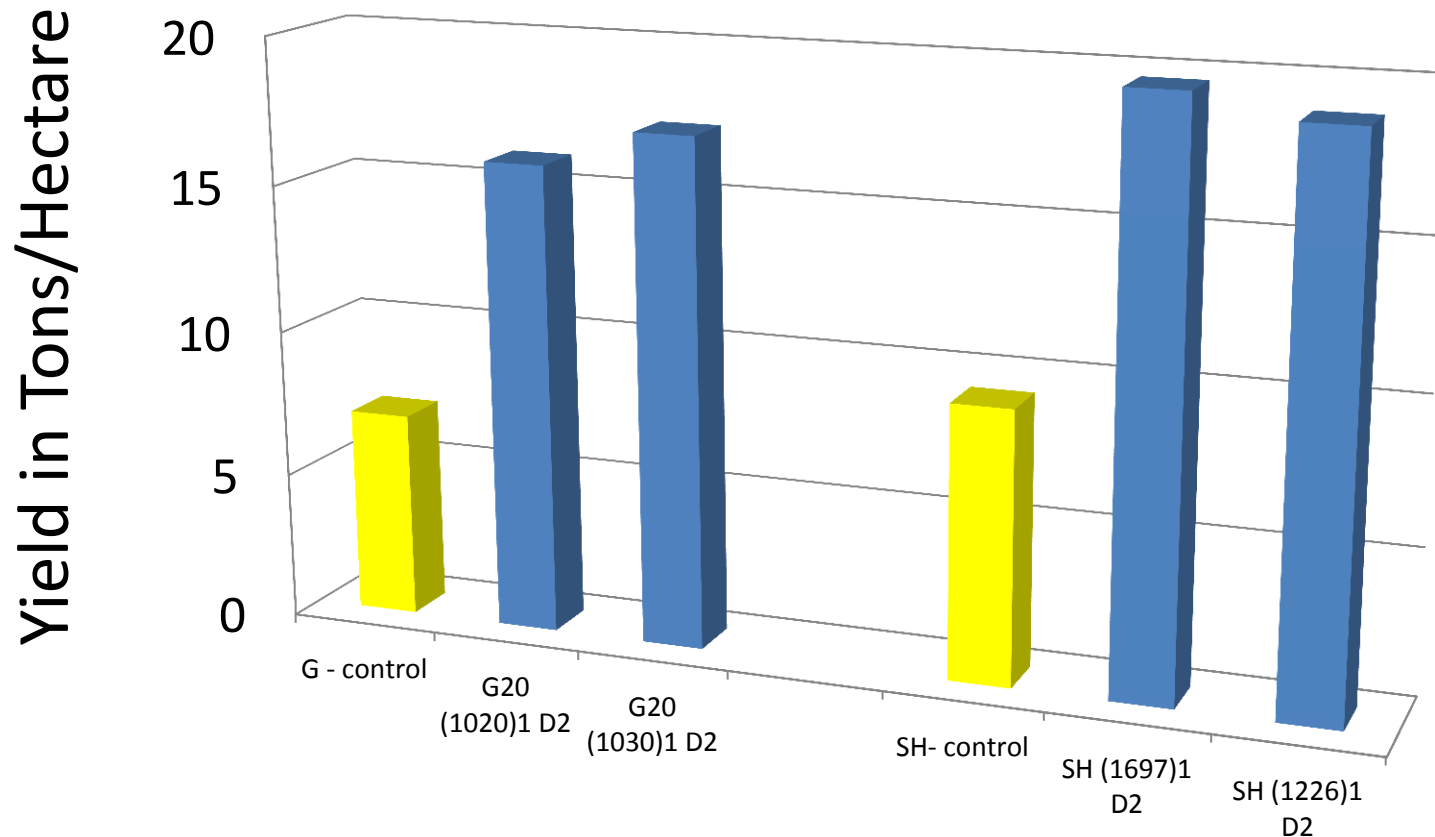


High-ploidy durum wheat (right) versus ordinary-ploidy control

High-ploidy bread wheat (left) versus ordinary-ploidy control

Wheat yield data (single rows)

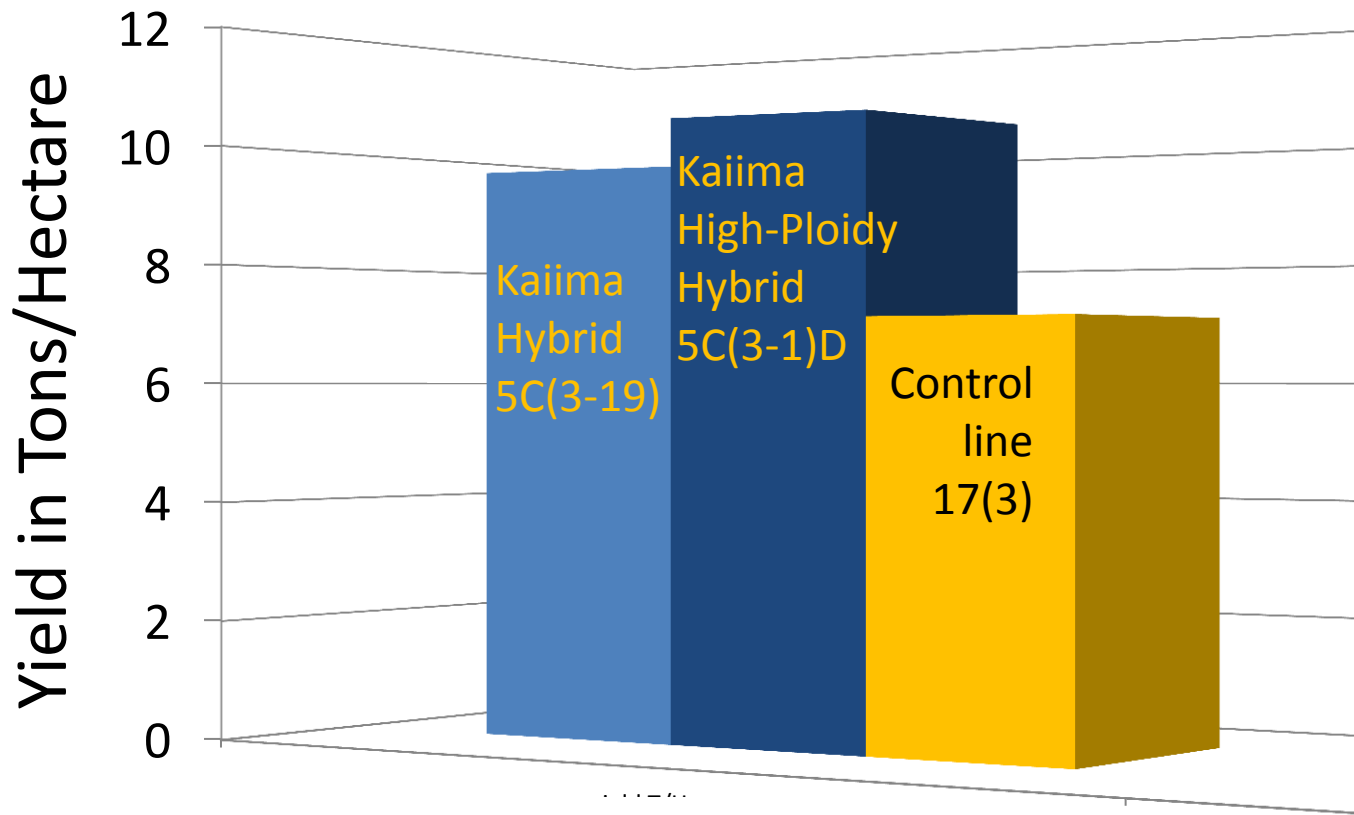
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High-ploidy wheat lines display more than 100% increase in yield compared to their isogenic control (2012 single row trials: At full scale yield advantage is likely to be much lower, but still substantial)

Wheat yield data (small plots)

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Our wheat hybrids give 37% higher yield compared to control while the high-ploidy hybrids increase yield by 48%. (2012 small plot trials: At full scale yield advantage is likely to be lower, but still substantial)

High-ploidy hybrid versus ordinary-ploidy control



Kaima 111 – High-ploidy hybrid



Ordinary ploidy control hybrid

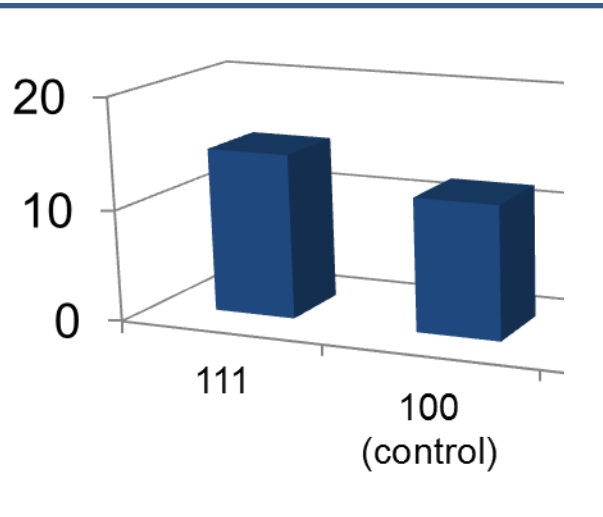
(pictures at same scale)

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Corn yield data (small plots)

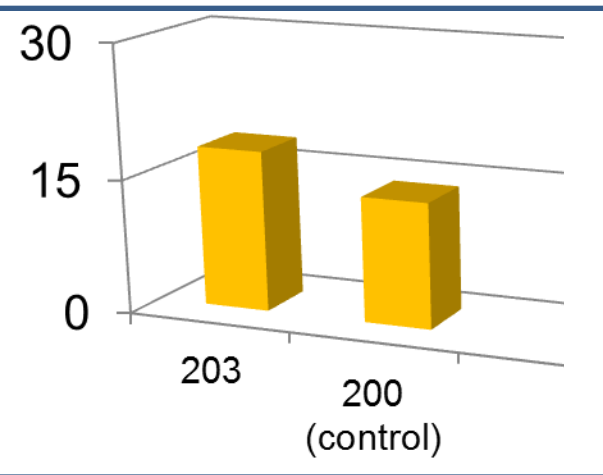
Results for early-type varieties – 23.4% advantage to high-ploidy hybrid

Plant code	Plant type	Yield (Ton/Ha)
111	High-ploidy hybrid	14.73
100	Ordinary-ploidy hybrid	11.93

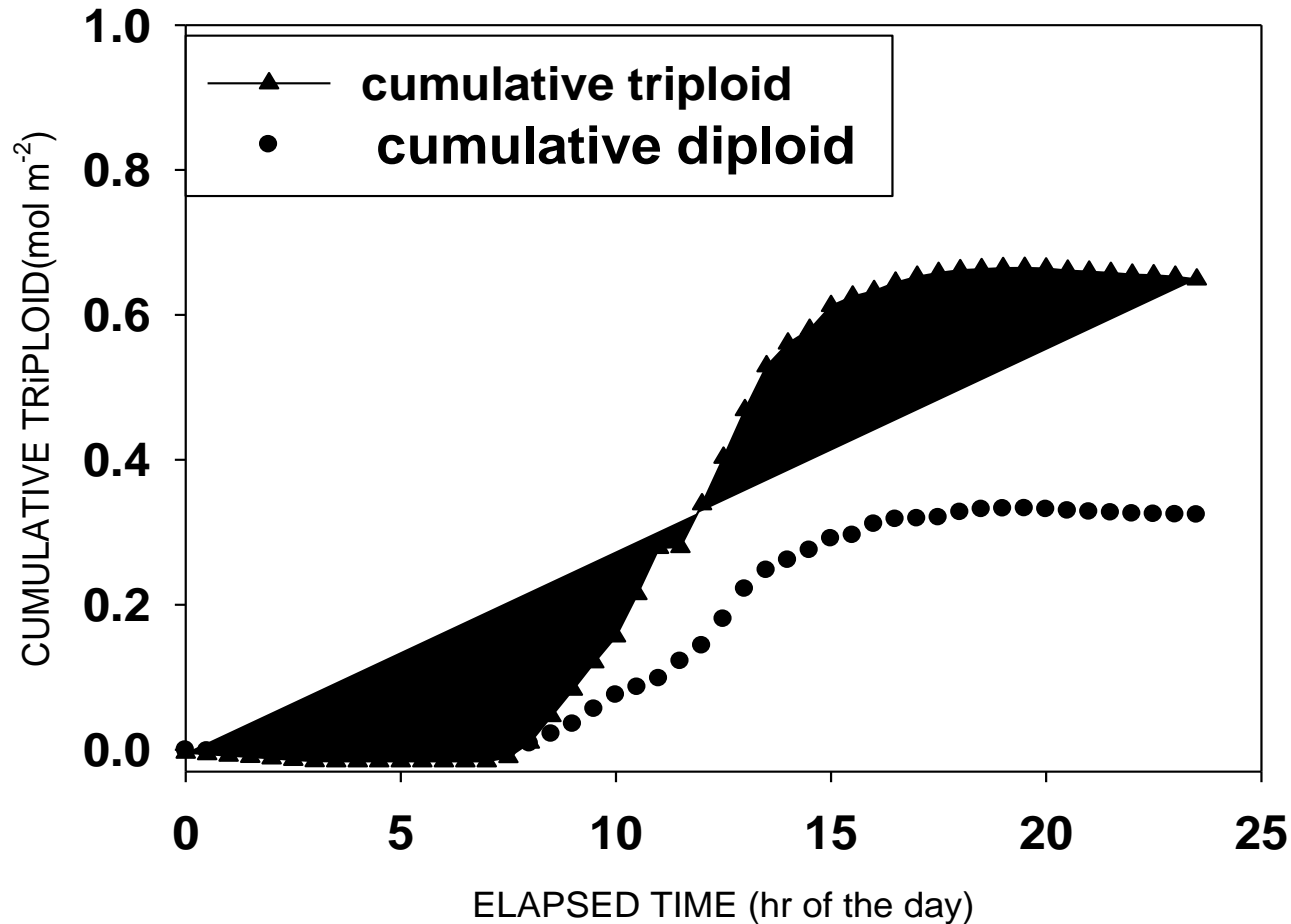


Results for mid-early-type varieties – 28.3% advantage to high-ploidy hybrids

Plant code	Plant type	Yield (Ton/Ha)
203	High-ploidy line	17.98
200	Ordinary-ploidy parent	14.0



Cumulative carbon dioxide intake in high-ploidy versus ordinary-ploidy corn



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Thank you