

nrgene

Capital Markets Presentation

AUGUST 2023



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Agenda

- About NRGene
- NRGene's Technology
- The Company's Activities
- Business Models
- Innovative End-Products Development
- IP Development Projects in Return for Royalties
- Global Trends Impacting the Company's Activities
- 2022 Financial Results Highlights



About NRGene

NRGene Technologies Ltd. is an AgTech company engaged in research and development of IP-based technological products. The company develops varieties and traits of crops and animals, using its technology in the field of artificial intelligence (AI), to analyze genetic information based on Big Data, in order to accelerate and improve the natural development of crops and animals in the global agriculture and food industry.

2009

Company founded

2015

Product launch

2021

IPO on the Tel-Aviv Stock Exchange (TASE)

+300

Projects completed between 2015-2022

30

Countries

\$47M*

Total bookings

* As of the reporting date (from commencement of commercialization); An amount of \$2.4M is included in the backlog as of the reporting date.



NRGene's Artificial Intelligence (AI) Technology was Validated by Leading Companies Worldwide

A proven technology that has been successfully implemented in over 300 projects across various industries

Accelerated

Significantly reduces the development time of new varieties

Reliable

Successful product implementation in the world's leading breeding companies

Unique

Unique technological solution that enables identification of the most relevant genetic composition, based on proprietary databases



2015

Launch of genomics analysis solutions (services)

2017

Multi-year subscription agreements of the AI-based technology solution (genomic platform)

2021

Strategic decision to focus on the IP development projects of varieties and traits of crops and animals

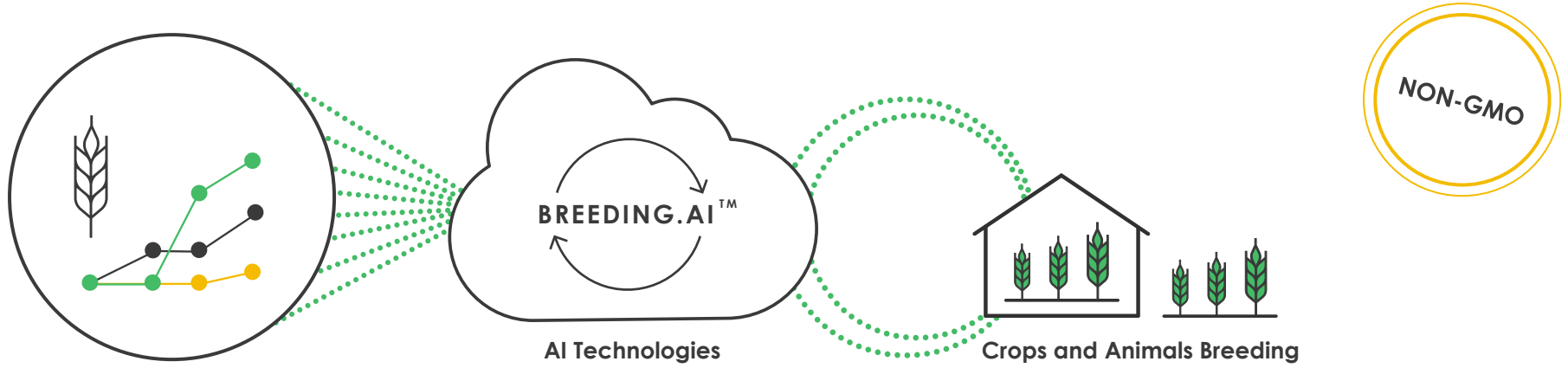
2022

Commencement of IP development for new varieties (end-products) in emerging markets

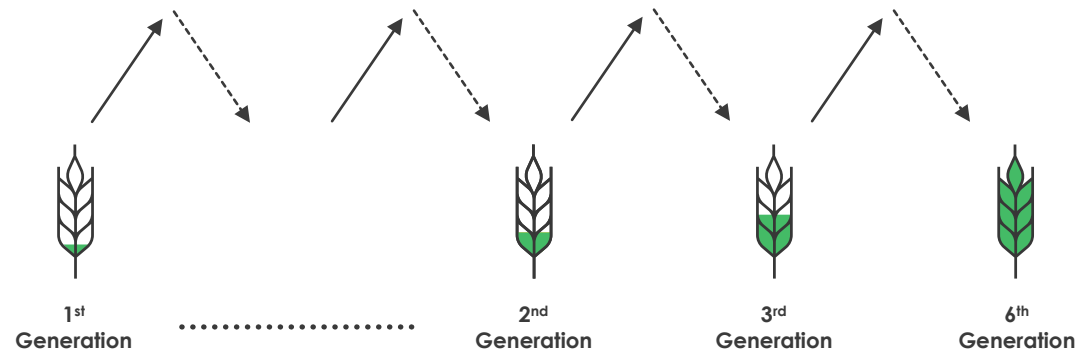
2024

Expected revenues from royalties and end-product commercialization (varieties and traits)*

NRGene's Technology



- Multi-year Data:**
- Field performance
 - Climate
 - Genomics data
 - Soil and Irrigation
 - Pests and diseases



Increasing productivity with each generation

NEW ENRICHED VARIETY



The benefits

- ✓ Reduces development time
- ✓ Reduces costs
- ✓ Increases likelihood of success

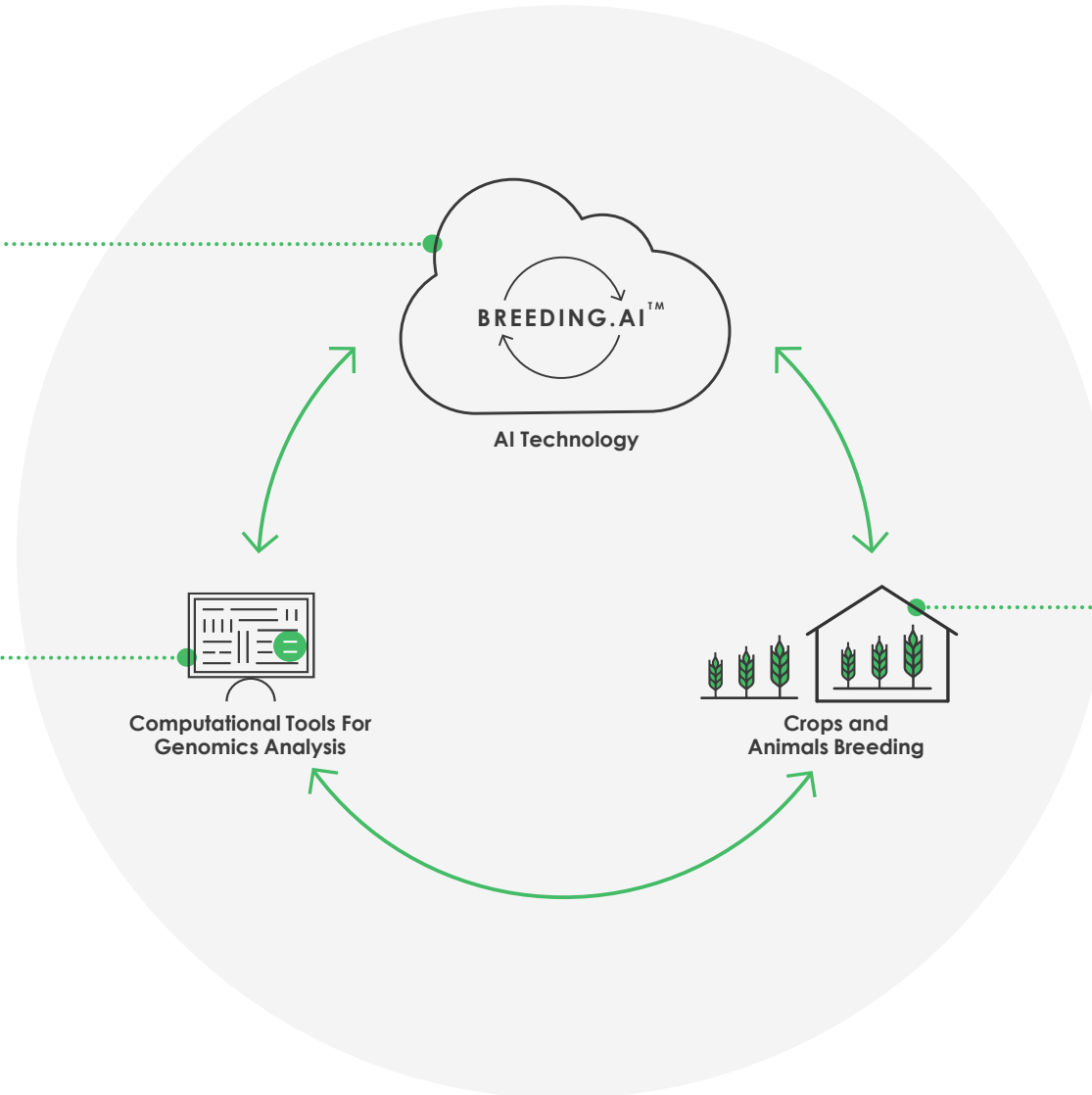
The Company's Activities

AI Technology

A cloud-based analytical platform with proven results in hundreds of projects across dozens of species (crops and animals). The system predicts improved genetic combinations and provides optimized and accurate natural breeding programs.

Computational Tools For Genomics Analysis

Utilizing AI and Big-Data solutions to analyze genetic information to accelerate and improve the natural breeding of crops and animals in the global agriculture and food industries.



Crops and Animals Breeding

Natural breeding activities in experimental greenhouses/fields to improve varieties and traits of crops and animals based on computational predictions and according to the project's goals.

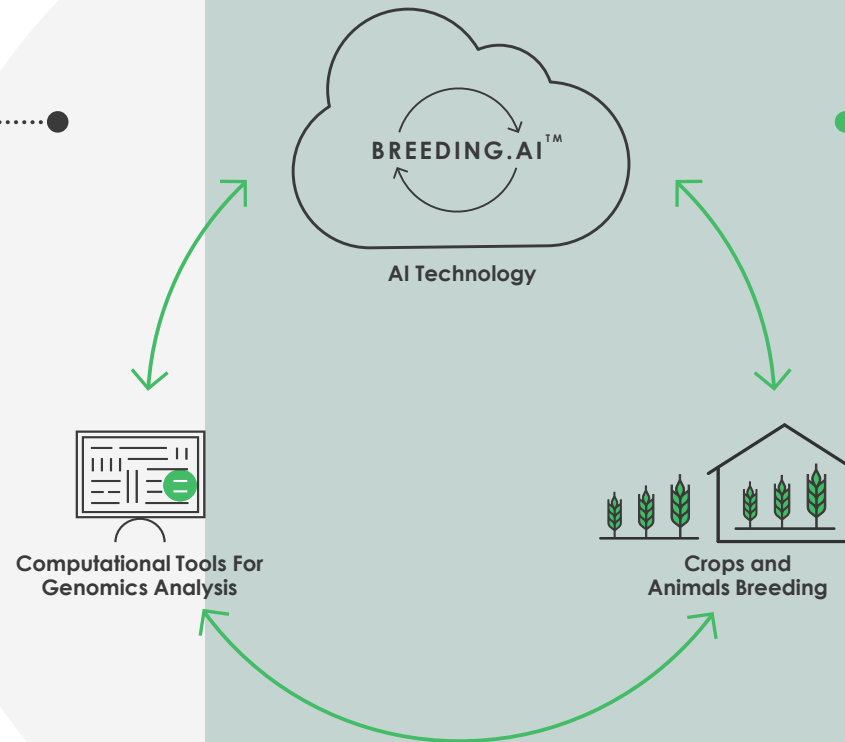
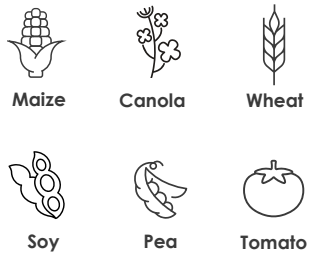
Business Models

Subscription agreements and genomics analysis services

- Strategic Collaborations



- Genotyping (DNA tests)



IP development of traits and varieties

Crops and Animals



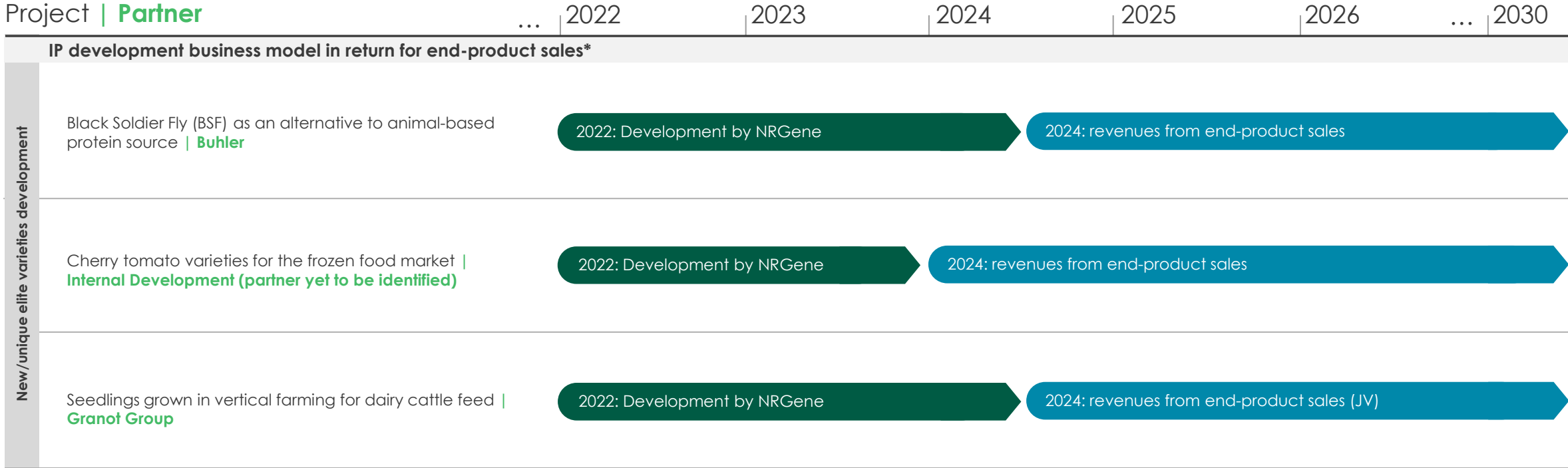
Revenues from royalties and/or end-product sales

NRGene Engages in Partnerships to Develop Varieties and Commercialize End-Products

Strategic collaborations ensure a complete presence in the agriculture value chain and maximizing value creation for the end-customer



Innovative End-product Development in Emerging Markets



* Revenues from end-product sales are subject to successful completion of a project's development, collaboration with partners, implementation, market conditions, and customers' demands.

** The Company is evaluating additional projects and partners in this business model, which may not occur, due to factors beyond the Company's control.

Black Soldier Fly (BSF) as an Alternative to Animal-Based Protein Sources

Animal feed derived from insects is considered nutritious, healthy, and sustainable.
Project Goal: reducing the larvae manufacturing costs through improved new BSF varieties.

 **\$3.4B**
Estimated BSF market size by 2030*

 **34.7%**
CAGR

 **\$2,500 per ton**
BSF protein's average price

TAM (2030)
\$0.6B

Potential cumulative revenues until 2030
\$300M

Main goals:

- ✓ Increasing larvae size and shortening the development and growth time
- ✓ Generating a genetic database representing the BSF's wide genetic diversity
- ✓ BSF adaptation to food/agricultural waste byproducts
- ✓ Nutritional improvement of larvae

* <https://www.globenewswire.com/en/news-release/2021/09/13/2295798/0/en/Black-Soldier-Fly-BSF-Market-is-Expected-to-reach-3-4-billion-by-2030-at-a-CAGR-of-34-7-During-the-Forecast-Period-of-2021-to-2030-Exclusive-Report-by-Meticulous-Research.html>

** The successful development of the BSF varieties, the development of improved BSF variety date, the completion of genomic infrastructure establishment date and the products' commercialization date, the Company's entitlement for revenues from end-product sales, the potential market size and the revenues from the products' commercialization, are based on the Company's estimations and forecasts, based on market research and assumptions of the market size and market penetration rate, and may occur in a different way than expected, or not occur, due to factors beyond the Company's control.

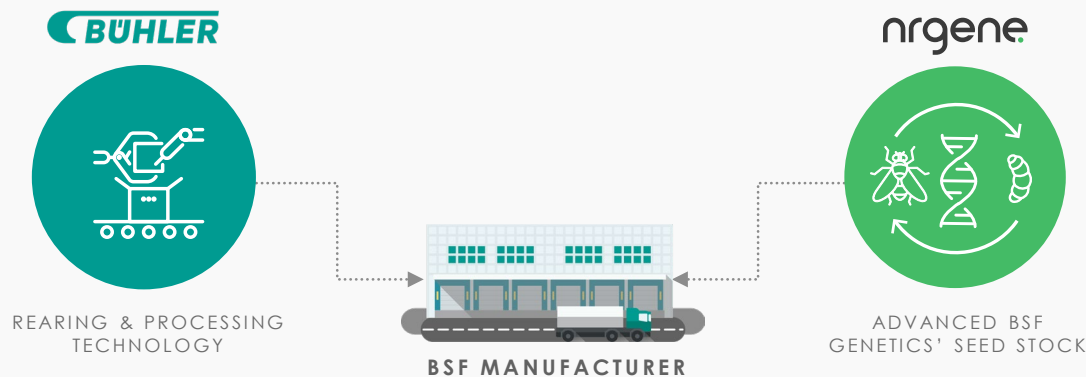
- **2022**
Development of BSF's genomics infrastructure
- **January 2023**
Joining the BSF consortium of the Israel Innovation Authority
- **August 2023**
First strategic partnership for BSF varieties commercialization with Bühler
- **September 2023**
Development of improved BSF varieties expected to reach first milestone and completion of genomic infrastructure establishment
- **2024**
Expected first elite varieties commercialization for customers and partners

Black Soldier Fly (BSF) as an Alternative to Animal-Based Protein Source

- The company has collaborated with the Buhler company, a leading global manufacturer of animal feed equipment, to provide an end-to-end solution to customers in the industry who produce BSF larvae as an alternative to animal-based protein sources
- A North America Insect Center will be established by the company to demonstrate the performance of NRGene varieties using Buhler's technology
- Based on NRGene's estimates, BSF producers using the company's varieties are expected to enter into a long-term agreement that can generate revenues of several million dollars per year



The Buhler company was founded in 1860 in Switzerland by the Buhler family, currently privately owned. Buhler is a world-leading company providing solutions to the food, feed, and mobility industries. The company is active in over 140 countries, employs 12,490 people, and owns 30 manufacturing sites around the world. In 2022, the company's revenue was approximately 3 billion Swiss francs (USD 3.41 billion). The volume of orders was approximately 3.3 billion Swiss francs (USD 3.75 billion) with a net profit of 154 million Swiss francs (USD 175 million). In the past 10 years, Buhler has been developing its capabilities in the insect protein industry and has already completed a number of relevant projects in the field.



Cherry Tomato Varieties for the Frozen Food and Catering Market

Project Goal: Expanding the use of "semi-dried" tomatoes by developing and commercializing higher-quality tomato varieties. Marketing frozen tomatoes reduces loss in the entire supply chain



x4

More vitamins (compared to common cherry tomato)



0

Chemicals



+1 year

Shelf life (stored frozen)



Main goals:

- ✓ Reducing production costs by implementing open field cultivation and mechanical harvesting
- ✓ Through improvement of the taste and texture, the product will remain fresh even after freezing
- ✓ Cost reduction of freezing, transportation logistics
- ✓ Designed for the institutional market (such as caterings companies, restaurants and hotels) and the end-customer

* The successful development of elite varieties, the production date of Alpha varieties, product commercialization dates, production date of Beta varieties, the Company's entitlement for revenues from end-product sales, potential market size and revenues from product commercialization, are based on the Company's estimations and forecasts. We use our past experience, research, and assumptions regarding market size and market penetration rate. These goals might be delayed or not occur due to factors beyond the Company's control.

February 2022
Project launch

November 2022
Alpha hybrid varieties selection

February 2023
Production of Alpha hybrid varieties

2024
Expected commercialization in Israel

2025
Expected commercialization in Europe

2025
Expected production of Beta hybrid varieties

Seedlings Grown in Vertical Farming for Dairy Cattle Feed

Strategic collaboration with the Granot Group to develop and commercialize elite wheat varieties and dairy cattle feed using vertical farming*



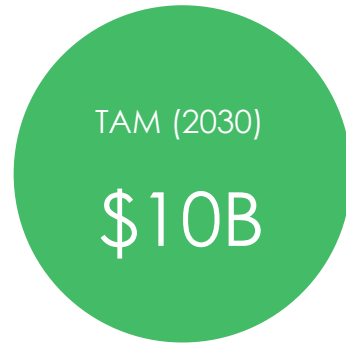
Dairy cattle feed market**
\$68.5B in **2021**
expected to grow to
\$78.3B by **2026**



A dairy cow's daily feed cost
\$6 to **\$9**



Seedlings can replace up to
30% of cow's feed



Main goals:

- ✓ Reducing dairy cattle feed cost
- ✓ Improving cow's nutrition and health
- ✓ Minimizing the environmental footprint

* By the Company's subsidiary in Canada.

** <https://www.marketdataforecast.com/market-reports/dairy-cattle-feed-market>

*** In comparison to hundreds of commercial elite varieties tested by the Company.

**** The dairy cows daily feed cost, the percentage of feed replacement, the successful development of the elite varieties, the establishment of the equally owned company, the products' commercialization date, the Company's entitlement for revenues from end-product sales, the potential market size and the partnership's revenues from the products' commercialization, are based on the Company's estimations and forecasts, based on market research and assumptions of the market size and market penetration rate, and may occur in a different way than expected, or not occur, due to factors beyond the Company's control.

● **August 2022**
Collaboration agreement with Granot Group

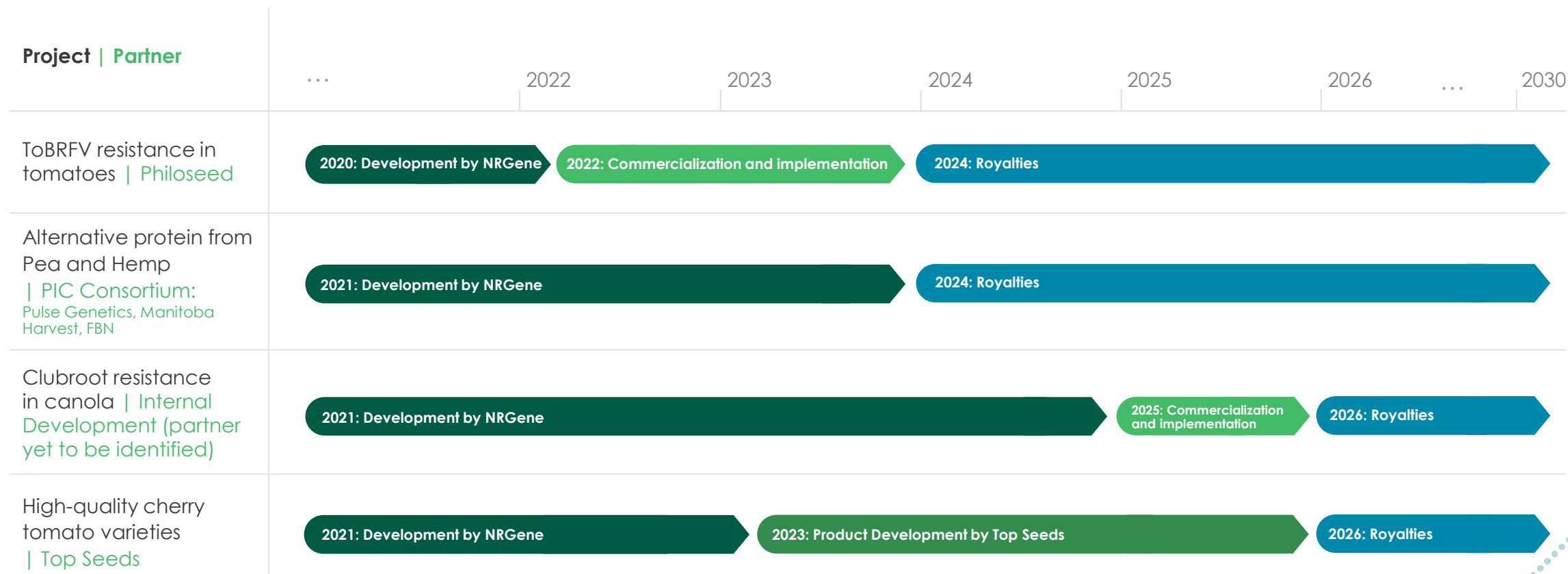
● **November 2022**
First milestone: identification of wheat varieties that are optimal for seedling growth***

● **2023**
Evaluation of additional crops suitable for vertical farming

● **2024**
Expected establishment of a JV (50%-50%) for worldwide wheat grains production and commercialization

● **2024**
Expected launch of the first elite varieties for commercialization

IP Development Projects in Return for Royalties - Status



• Revenues from royalties are subject to successful completion of a project's development, the Company's partners, implementation, market conditions, and customers' demands.

** The company intends to grant an exclusive license to the know-how and technology in this project as part of the Above Food transaction, as detailed in slide 18.

*** For additional information about other projects in this business model, also see chapter A of the Company's 2022 Annual Report.

IP Development Projects in Return for Royalties

The revenue potential in significant projects (to date):

Project	Expected development period*	Commercialization status	Expected year of initial royalties	Potential annual market size (seeds/varieties)**	Expected royalties (throughout the project's lifetime)**
ToBRFV resistance in tomatoes	2020-2022 (Completed)	In commercialization (10 signed agreements)	2024	\$500M <	\$24M
Alternative protein from Pea and Hemp***	2021-2023	Not started (A commercial arrangement within the consortium in Canada)	2024	\$350M <	\$20M
Clubroot resistance in canola****	2021-2025	Not started	2025	\$550M <	\$115M
High-quality cherry tomato varieties	2021-2023	Not started (A commercial arrangement with partner)	2026	\$25M <	\$10M

* Until the completion of an Alpha product for its commercialization.

** Based on the Company's estimation of market size, market penetration rate, market share potential and average royalties' rate.

*** Company's estimation is that the project's lifetime is at least 10 years from the commencement of commercialization. The expected revenues from royalties in the table are based on the above estimations.

**** The company intends to grant an exclusive license to the know-how and technology in this project as part of the Above Food transaction, as detailed in slide 18.

***** The Company is evaluating additional projects and partners in this business model, which may not occur, due to factors beyond the Company's control.

IP Development Projects in Return for Royalties



**ToBRFV resistance
in tomatoes**

- A milestone has been reached in the development of the virus resistance trait, with customers reporting high virus resistance in plants they grow using company seeds.
- Together with its partner in the project, Philoseed, the company continues to protect the IP through patent applications.
- Efforts are being made by the company to market the trait and find additional customers.



**Alternative protein
from Pea and
Hemp**

- An agreement was signed to grant an exclusive license to the company's know-how and technology in this project as part of the Above Food transaction (see next slide).



**Clubroot resistance
in Canola**

- July 2023 – The company announced another milestone in the project, including the completion of trait mapping, identifying genes that may confer resistance to the plant, and developing unique DNA markers.
- Patent applications were submitted by the company to protect the IP related to the trait of resistance to clubroot disease*.
- An agreement was signed to grant an exclusive license to the company's know-how and technology in this project as part of the Above Food transaction (see next slide).

* The information concerning the success of product development, the company's entitlement to royalty payment, and the likelihood of receiving patent applications are based on the company's estimations and forecasts, among other things, based on market research and assumptions of market size and market penetration rate, and it may not occur or be partially occur due to factors beyond the company's control.

** Based on ongoing tests performed by the company, patent applications competing with the company's patent applications were found. As of the reporting date, the company is unable to estimate the impact of these patent applications.

*** Information concerning the success of product development, the company's entitlement to royalty payment, the success of expanding business agreements, and the likelihood of receiving patent applications are based on the company's estimations and forecasts, past experience, and based on market research and assumptions of market size and market penetration rate. These goals might be delayed or not occur due to factors beyond the Company's control

Asset Purchase Agreement and Grant of Licenses for Technology and Projects to Above Food

The agreement's main terms and conditions

Below is an overview of the main assets, technology and projects that will be transferred to Above Food:



A non-exclusive and non-transferable license to NRGene's TraitMAGIC™ technology



Mapping and developing a resistance trait for Canola fungal disease



Developing Pea and Hemp traits for the alternative protein industry



Mapping and development of high protein canola seeds



Facilities and personnel of the company's genomic lab in Canada



Transaction considerations:

A sum of CAD 12.5M (approx. USD 9.2M) will be paid out as follows: CAD 10M will be paid by Above Food's shares, subject to the completion of its IPO on the NYSE*.

NRGene will be entitled to 60% and 10% royalties for an unlimited period from any commercialization of Canola projects and Pea & Hemp Projects, respectively.

Above Food has committed itself to meeting milestones and minimum targets with respect to the projects for the years 2024-2025. If any of the above obligations are breached, Above Food will return the commercialization rights for that particular project to NRGene and will only be entitled to 20% of (gross) sales.

Condition precedents to the transaction closing

IPO on the NYSE no later than November 30, 2023, or a later date, as agreed between the parties**

The representations and warranties of the parties contained in the agreement shall have been true and correct when made in all material respects and no Force Majeure event has occurred.

The acceptance of all third parties' approvals for the sale of the assets and grant of the licenses for the projects to Above Food.

Above Food Corp is a Canadian company that produces differentiated ingredients from grains and proteins for the global food industry. The company has over 260 customers worldwide and distributes its products to approximately 35,000 retail distribution points. Last May, the company reported its intention to merge with Bite Acquisition Corp as part of an IPO on the NYSE during the second half of 2023, under the name Above Food. The combination of the businesses of the companies resulted in a valuation of the issued company of approximately USD 319M. Above Food ended 2022 with revenues of USD 148M. Its revenue forecast for 2023 and 2024 is USD 294 and USD 482 million respectively. The company expects positive EBITDA in 2023.

* In the event that the IPO is not completed, Above Food has the option to complete the closing by way of cash payment in the sum of CAD 12.5M (approx. USD 9.2M).

** The closing of the transaction shall take place no later than 15 days from the date of the IPO. In the event of a delay in completing the IPO, the parties have agreed to extend the closing date for an additional 30 days, or any other date as agreed to by the parties. In addition, it was agreed that the closing date may be extended by up to 90 days if the only remaining requirement to complete the IPO is regulatory approval from the U.S. Securities and Exchange Commission.

*** For additional information about the terms and condition of the agreement with Above Food, see section 3 of chapter A of the Company's Board of Directors Report for H1-2023.

**** The estimations of the Company with respect to the closing of the Agreement in accordance with its terms and conditions and the date of the closing, cannot be estimated accurately in advance and its materialization or non-materialization will be affected, inter alia, by factors which are beyond the Company's control, including the non-fulfillment of the condition precedents.

Genotyping (DNA Tests)

Leveraging NRGene's technology to generate recurring revenue through long-term engagements with customers

Overview of genotyping's market penetration (starting in Q4, 2020)

\$3.6M

Total booking*

12

Number of genotyping customers

\$0.7M

New agreements during H1

To clarify, the genotyping activity is not included in the Above Food transaction, and the company will continue to provide its services to its existing customers or partners by finding alternative solutions. Therefore, in the company's estimation, the current activity is not expected to be affected by this business move.

* In comparison to a total of 1.1 million dollars during the same period last year, and a total of 1.4 million dollars during 2022.



Food Security and Sustainability

Global Trends Impacting the Company's Activities



Increasing populations and rising living standards are driving an increase in the global demand for food.



Reduction in arable land and water resources for agriculture, combined with extreme climate changes, affecting global agricultural production.



The negative impact of animal-based industries on global climate change is fueling the rapid growth of plant-based food and alternative protein sectors.



A continuous shortage of wheat, maize, sunflower oil, etc., is expected due to the war between Russia and Ukraine.



The expansion of agricultural crops increases the risk of disease outbreaks, which results in higher chemical use and lower yields.



Significant increase in the use of fuel substitutes from soybean, corn, canola, and wheat as a result of increasing oil prices.



NRGene's technology **increases agricultural productivity, while reducing natural resources consumption and environmental footprint**

Financial Results Highlights* (US Dollars in Thousands)

Financial data	H1 - 2023	H1 - 2022	FY - 2022	Comments
Revenues	1,149	1,486	3,159	End of subscription agreement with Syngenta (January 2023) which led to a decrease in revenues from providing access to software, partially offset by first revenues recognized from royalty-bearing IP development projects
Adjusted Gross Margin	45%	57%	56%	Decrease in portion of revenues from providing access to software (Syngenta) out of total revenue mixture during the reporting period, and expenses related to revenue-sharing from royalty-bearing IP development projects
Adjusted EBITDA	(2,316)	(2,807)	(4,584)	Focus on building an infrastructure for medium/long-term growth via IP development business model while reducing S&M, G&A and software development related expenses, in accordance
Total Backlog**	2,424	3,602	2,895	Decrease in new service agreements in alignment with the strategy of focusing on royalty-bearing IP development projects and genetics testing. First revenues recognized from royalty-bearing IP development backlog
Cash and Deposits	8,979	15,801	12,284	Decrease in cash and short-term deposits is mainly due to investment in building infrastructure for royalty-bearing IP-based business model
Short-term and long-term loans	-	691	-	Repayment of a credit line and long-term loan to a banking institution.

* The complete financial results (reviewed) are included in the consolidated financial statements as of June 30, 2023. For additional information, also see the Company's Board of Directors Report for H1-2023

** The total backlog as of the reporting date is approximately \$2.4 million dollars. This backlog excludes the payments that the Company is expected to receive under the scope of the collaboration agreement with Granot Group. For further details, see section 2.2 in chapter B of the Company's Board of Directors Report for H1-2023

NRGene's Future Focus

Commercialization / Expected commercialization date

Project/Model Partner	2023	2024	2025
Subscription agreements and genomics analysis services	✓	✓	✓
IP Development Projects in Return for Royalties	ToBRFV resistance in tomatoes Philoseed	✓	✓
	Alternative protein from Pea and Hemp PIC Consortium: Pulse Genetics, Manitoba Harvest, FBN		✓
	Clubroot resistance in canola Internal development (partner yet to be identified)		✓
New/unique elite varieties development	Black Soldier Fly (BSF) as an alternative to animal-based protein source Buhler		✓
	Cherry tomato varieties for the frozen food market Internal Development (partner yet to be identified)		✓
	Seedlings grown in vertical farming for dairy cattle feed Granot Group		✓

The company estimates total cumulative revenues from IP commercialization and IP products, including royalty revenue and/or the sale of end-products, will be \$US 10-30M by the end of 2025.

* The company estimates that the development process of an IP development project of varieties and traits of crops and animals requires 2-5 years until commercialization begins.

** The company intends to grant an exclusive license to the know-how and technology in this project as part of the Above Food transaction, as detailed in slide 18.

*** Information about the success of product development, estimated start date for commercialization, and the company's entitlement to revenue from commercializing IP, including revenues from royalties and/or end products, are based on the company's estimations and forecasts, among other things, past experience. These goals might be delayed or not occur due to factors beyond the Company's control.

Questions?



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Thank you!