



castera

# Company Presentation

Yoash Zohar, CEO

---

January 2024



# Forward Looking Statement

This presentation contains "forward-looking statements" relating to future events, and Casterra AG Ltd. (the "Company") and its parent, Evogene Ltd. ("Evogene"), may from time to time make other statements, regarding our outlook or expectations for future financial or operating results and/or other matters regarding or affecting us that are considered "forward-looking statements" as defined in the U.S. Private Securities Litigation Reform Act of 1995 (the "PSLRA") and other securities laws. Such forward-looking statements may be identified by the use of such words as "believe", "expect", "anticipate", "should", "planned", "estimated", "intend" and "potential" or words of similar meaning. We are using forward-looking statements in this presentation when we discuss our value drivers, commercialization efforts and timing, product development and launches, estimated market sizes and milestones, the degree of the Company's ability to fill orders for its castor seeds, as well as the capabilities of Evogene's and our technology.

Such statements are based on current expectations, estimates, projections and assumptions, describe opinions about future events, involve certain risks and uncertainties which are difficult to predict and are not guarantees of future performance. Therefore, actual future results, performance or achievements, and trends in the future may differ materially from what is expressed or implied by such forward-looking statements due to a variety of factors, many of which are beyond our control, including, without limitation, those described in greater detail in Evogene's Annual Report on Form 20-F and in other information Evogene files and furnishes with the Israel Securities Authority and the U.S. Securities and Exchange Commission, including those factors under the heading "Risk Factors".

Except as required by applicable securities laws, we disclaim any obligation or commitment to update any information contained in this presentation or to publicly release the results of any revisions to any statements that may be made to reflect future events or developments or changes in expectations, estimates, projections and assumptions.

The information contained herein does not constitute a prospectus or other offering document, nor does it constitute or form part of any invitation or offer to sell, or any solicitation of any invitation or offer to purchase or subscribe for, any securities of Evogene or the Company, nor shall the information or any part of it or the fact of its distribution form the basis of, or be relied on in connection with, any action, contract, commitment or relating thereto or to the securities of Evogene or the Company.

This presentation contains statistical data that we obtained from industry publications and reports generated by third parties. Although we believe that the publications and reports are reliable, we have not independently verified this statistical data.

The trademarks included herein are the property of the owners thereof and are used for reference purposes only. Such use should not be construed as an endorsement of our products or services.

# About Casterra

**Our mission** is to provide elite castor seeds to the biobased industries



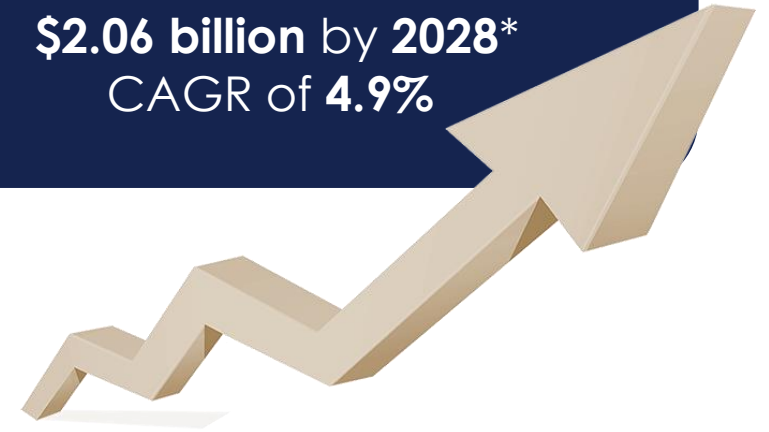
- A leading company supplying an integrated ag-solution, including proprietary castor seed varieties supported by agro-technical know-how and novel mechanical harvesting & dehulling machines, to address global demand for stable castor oil supply.
- The integrated ag-solution is aiming to enable high scale commercial cultivation of castor beans.
- A fully owned subsidiary of Evogene (Nasdaq: EVGN), utilizing its Computational Predictive Biology (CPB) platform for developing elite castor varieties.
- Currently commercially active mainly in Africa and Latin America with strong business partners.

# The Castor Oil Industrial Market

In recent years, castor oil is the 'oil of choice' for many applications in **biobased products, lubricants, cosmetics, pharma, electronics, aerospace and other industries.**

During the last year, there is a substantial increase in interest in using castor oil as a plant-based source for **biofuels**; a growing number of energy companies are establishing such activity.

The global castor oil & derivatives mechanized market is expected to reach  
**\$2.06 billion by 2028\***  
CAGR of **4.9%**



\*<https://www.marketreportsworld.com/global-castor-oil-and-derivatives-market-19862171>

# Castor Oil Value Chain and Uses



Superior seed development



Seed production



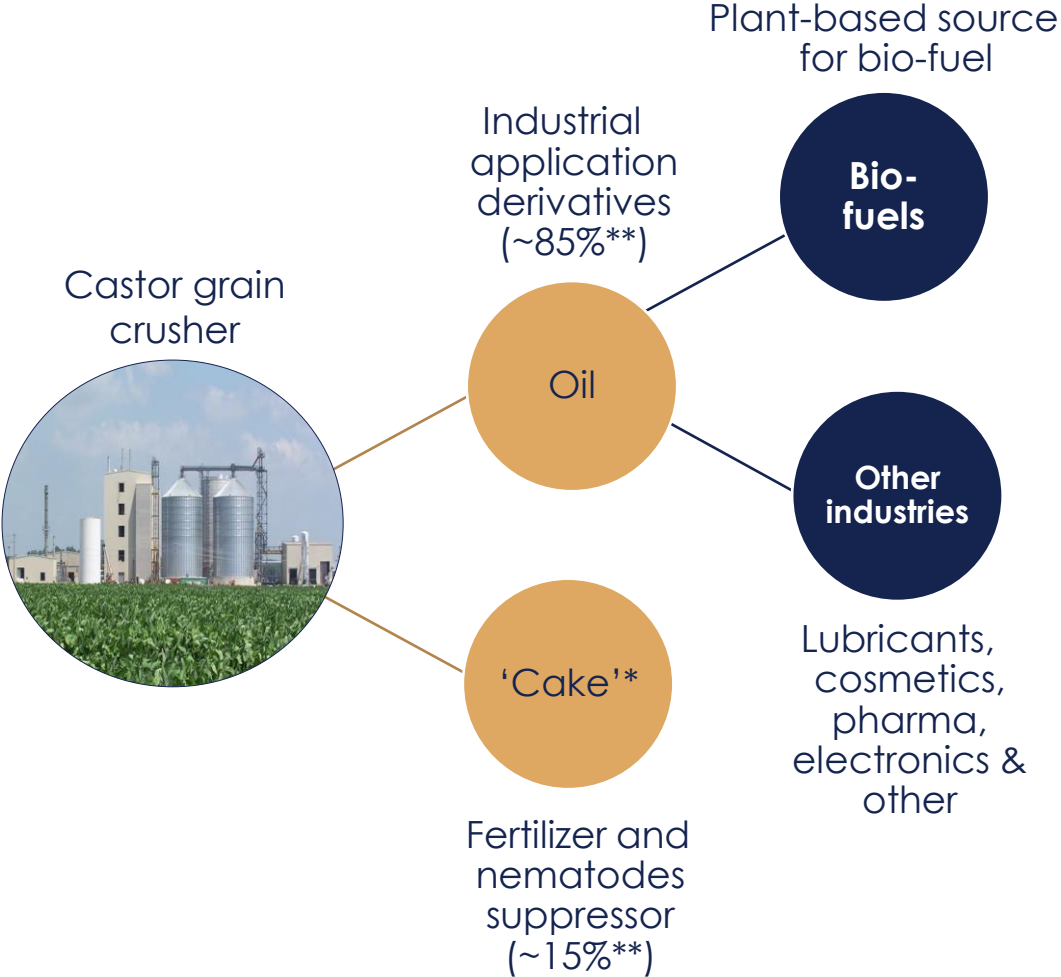
Castor growth protocol



Mechanical harvest



**Full value-chain solution**



\* Castor cake is nitrogen-rich organic fertilizer, obtained as a solid residue from the treatment of seeds for castor oil  
 \*\* Percentage of value



# The Challenge

## Existing castor seed supply does not meet increasing demand

- Global trend towards increased sustainability and decreased use of fossil fuel-based material for **industrial applications**
- Supply is mostly based on **traditional cultivation** and non-bred seed varieties (wild types - WT) in India

### Common castor cultivation:

- Traditional cultivation
- Small-scale farm
- Hand-picked
- Selective harvest



### Common castor WT plant:

- Low yield (0.6 MT/Ha.)
- Small shrub
- Perennial plant

# Our Solution

Casterra has established a **unique integrated ag-solution**, including proprietary castor seed varieties, supported by agro-technical know-how and a novel mechanical harvesting & dehulling machines, addressing the global increasing demand for **stable castor oil supply**

**Common castor family size  
tall shrub, hand-picked**



Traditional cultivation,  
low yield (0.6 MT/Ha.)  
perennial plant

**Current practice**

**casterra**



**Modern row-crop cultivation  
single-season**



Compact plants, high density  
high oil bred varieties  
adapted to commercial mechanical harvest

**casterra**

# Technology Platform & Integrated Ag-Solution

## BREEDIRECT – a Technology Platform for Developing Elite Varieties

- Combining deep scientific know-how with Big Data and computational technology, to tailor plant genetics for improved plant traits and develop unique castor varieties.
- A proprietary plant genomic and phenotypic diverse Big-Data, to support the improvement of traits of interest.
- Leveraging Evogene's tech-engines, *GeneRator AI* & *ChemPass AI*, to accelerate a breeding program for developing unique castor seed varieties.

## Integrated Ag-Solution for Commercial Cultivation

### Elite Seed Varieties

- ✓ Higher yield
- ✓ Concentrated ripening
- ✓ Compact plants
- ✓ Capsule shattering
- ✓ Earliness
- ✓ Higher germination rate

### Growth Protocol

- ✓ Herbicide solution
- ✓ Disease control
- ✓ Irrigation & fertilization protocols
- ✓ Crop rotation
- ✓ Rain-fed / Irrigated crop

### Mechanical Solutions

- ✓ Mechanical harvesting
- ✓ Dehulling machine





# Introducing



### Product Definition

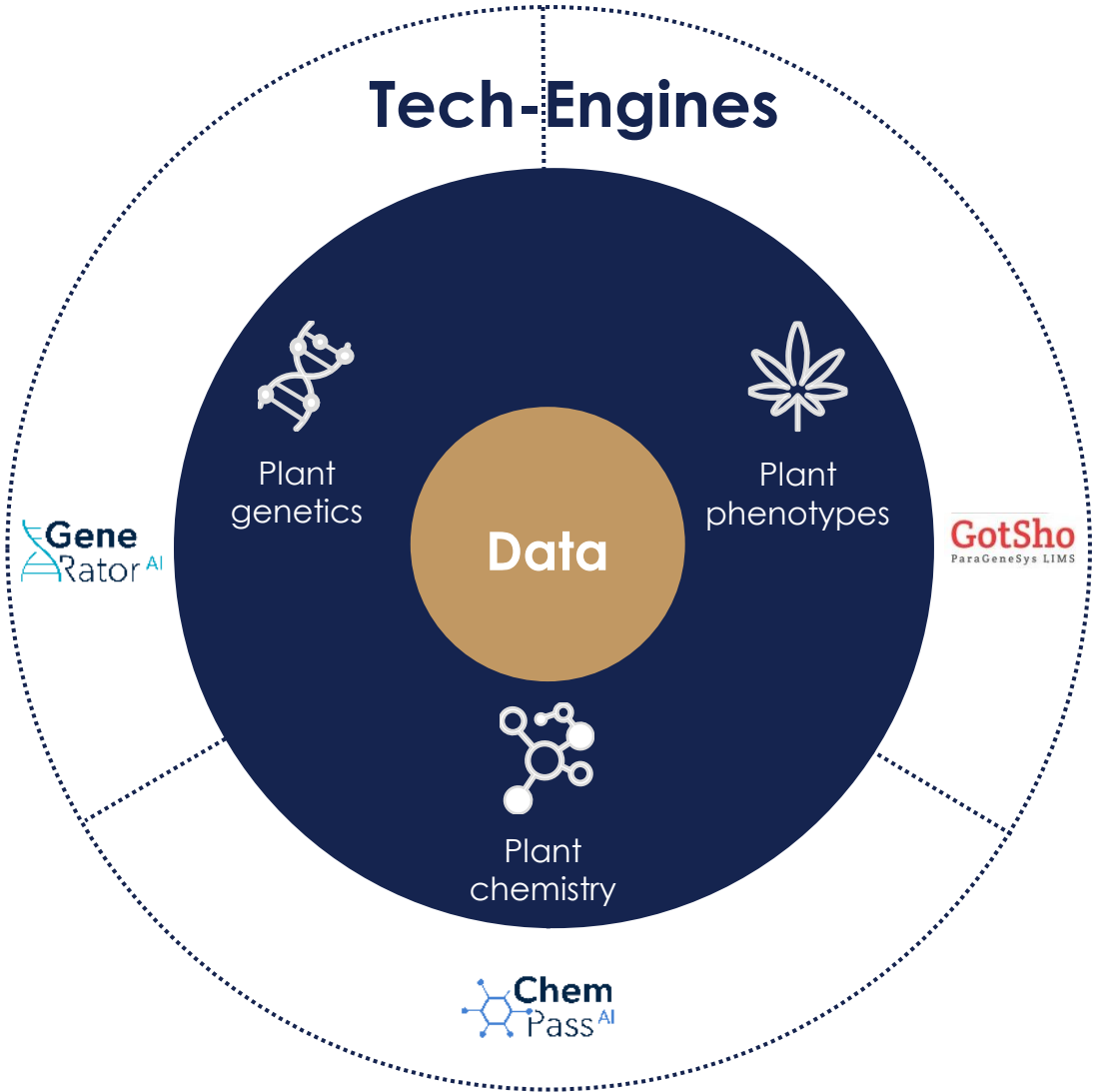
**Desired traits**

- Improved yield/ha.
- Improved oil content (%)
- Compact plants
- Early ripening

Genomic data



Phenotypic data

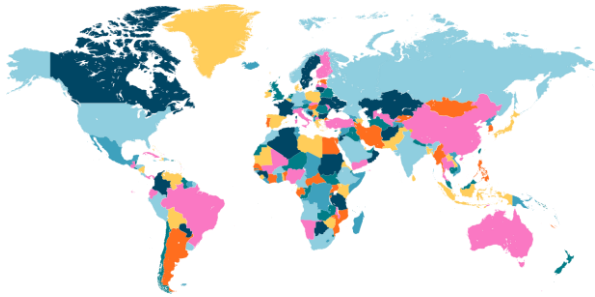


**Castor Variety EVF712**

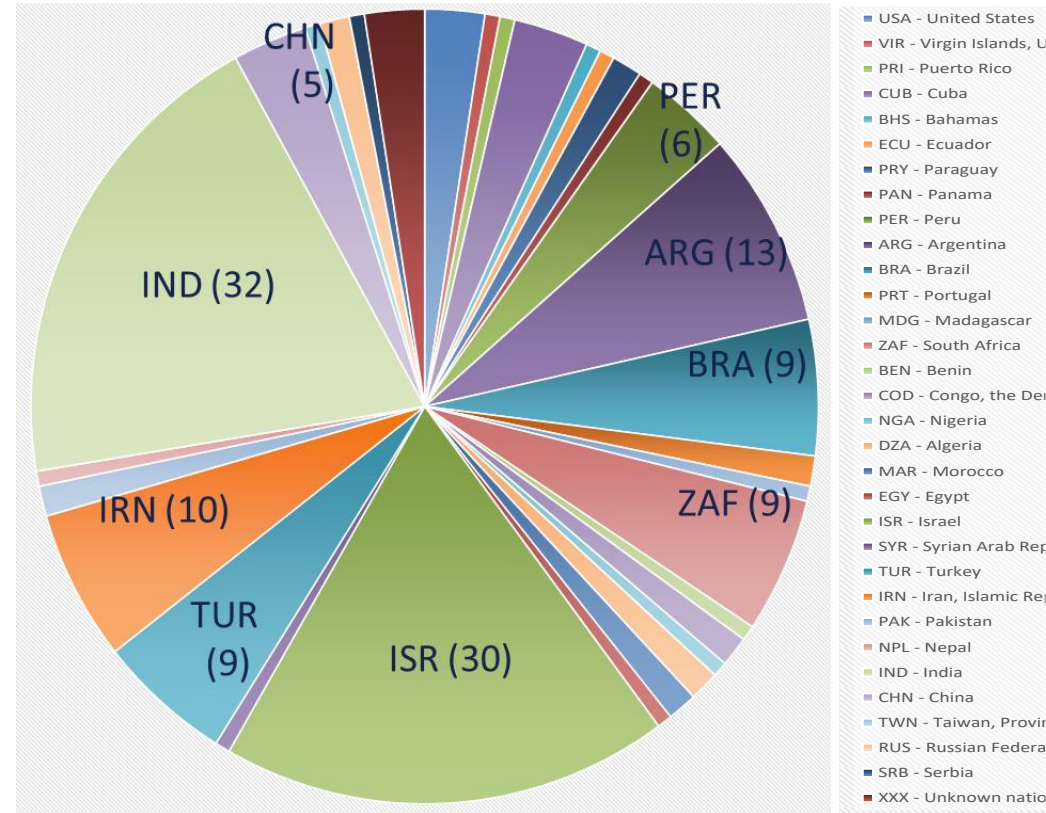
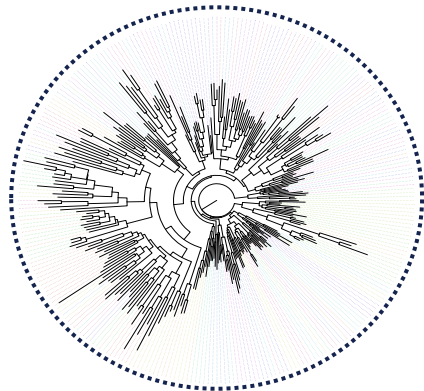


# Data – Proprietary Germplasm Collection (~200 accessions)

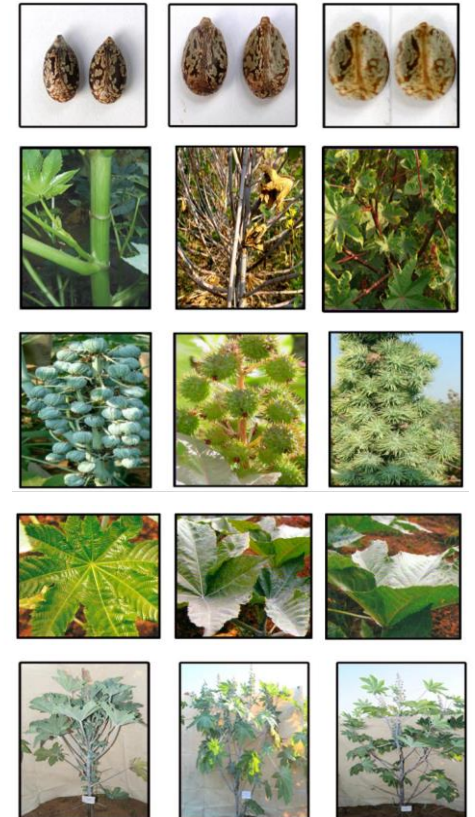
## Various geographic origins



## Diverse genetic backgrounds



## Distinct plant phenotypes



# Tech-Engines: When Data Meets Computational Biology



## Computational Genomics

Utilizing advanced **AI tech-engines** for identifying the most promising **genomic compounds**, significantly **increasing probability of success**, while directing and accelerating the breeding programs toward the target product and **reducing time and cost**.





# Casterra's Advance Breeding Capabilities



**Large pre-breeding collections**



**State of the art data collection systems**



**World-class computational genomics**



**Fully equipped molecular labs & tissue culture rooms**



**NBT's pipelines in place**

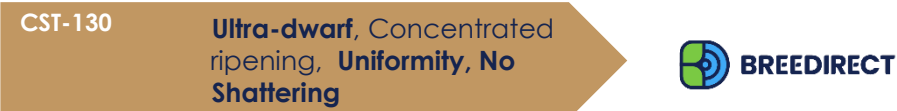
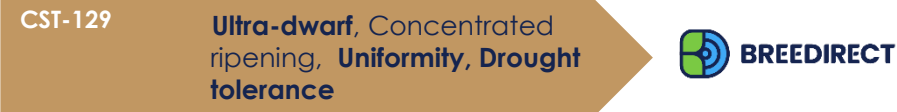
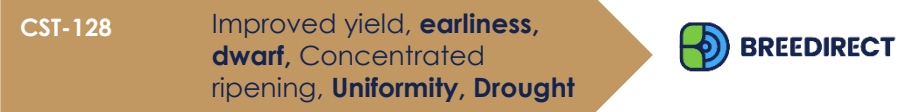
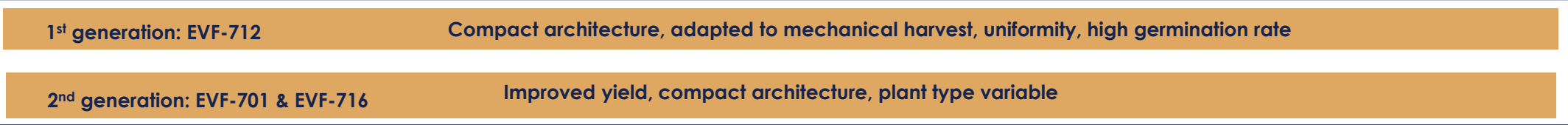
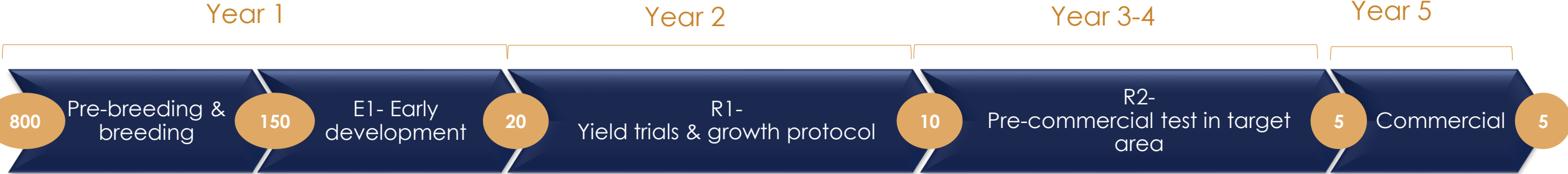


**Field and GH capabilities for seed production**



# Casterra's Product Pipeline

## Five-year breeding program





# Castor Varieties – EVF712

- **Average height:** 130 cm
- **Flowering:** 40-45 days
- **Total cycle:** 130 days
- **Oil content:** 48% - 50%
- **Grain yield:** ~ 2.5 Ton/Ha
- **Plant per Ha.:** 35,000
- **Drought tolerance:** Medium
- **Mechanical harvest**



\* Variety performance is subjected to weather conditions and to precipitation



## EVF712 Ricinus communis (castor beans) Quality Seeds EVF712

### Variety Characteristics\*

Average plant height (cm)	100-150 cm
Flowering (days from sowing)	40-45 days
Total cycle (harvest) (days from sowing)	120-140 days
Receme size	Medium
Number of Receme	3-4 racemes
Stem color	Light green
Drought tolerance	Medium
Oil content (%)	48-50%
Grain yield potential (t/Ha)	2-3 t/Ha

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability

### Cultivation\*

Recommended herbicide	Pendimethalyn
Hand weeding	Proceed when necessary
Fertilizers and liming	Follow local recommendation
Manual or mechanized harvesting	Fanliri headers

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability

### Technical Recommendations\*

Planting time	Early – mid rainy season
Planting system	Pneumatic seeders
Spacing (continuous grooves)	0.75-1 m among furrows
Plants / Hectare (Density)	35-40k
Seed consumption	10-14 kg/Ha
Seeding depth	-5cm

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability



### Explore all Castor Varieties

👉 EVF701 | 👉 EVF716

# Castor Varieties – EVF701

- **Average height:** 150 cm
- **Flowering:** 40-45 days
- **Total cycle:** 130 days
- **Oil content:** 48% - 50%
- **Grain yield:** ~ 3.5 Ton/Ha
- **Plant per Ha.:** 35,000
- **Drought tolerance:** High
- **Mechanical harvest**



## EVF701

Ricinus communis (castor beans) Quality Seeds EVF701

### Variety Characteristics\*

Average plant height (cm)	120-170 cm
Flowering (days from sowing)	40-45 days
Total cycle (harvest) (days from sowing)	125-145 days
Receme size	Large
Number of Receme	1-3 racemes
Stem color	Light red
Drought tolerance	High
Oil content (%)	48-50%
Grain yield potential (t/Ha)	2-3 t/Ha

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability

### Cultivation\*

Recommended herbicide	Pendimethalin
Hand weeding	Proceed when necessary
Fertilizers and liming	Follow local recommendation
Manual or mechanized harvesting	Fantini headers

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability

### Explore all Castor Varieties

🌿 EVF712 | 🌿 EVF716

### Technical Recommendations\*

Planting time	Mid – late rainy season
Planting system	Pneumatic seeders
Spacing (continuous grooves)	0.75-1m among furrows
Plants / Hectare (Density)	33-40k
Seed consumption	10-14 kg/Ha
Seeding depth	~5cm

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability



\* Variety performance is subjected to weather conditions and to precipitation



# Castor Varieties – EVF716

- **Average height:** 100 cm
- **Flowering:** 35-40 days
- **Total cycle:** 115 days
- **Oil content:** 48% - 50%
- **Grain yield:** ~ 2.5 Ton/Ha
- **Plant per Ha.:** 35,000
- **Drought tolerance:** Low
- **Mechanical harvest**



## EVF716

Ricinus communis (castor beans) Quality Seeds EVF716

### Variety Characteristics\*

Average plant height (cm)	70-120cm
Flowering (days from sowing)	35-40 days
Total cycle (harvest) (days from sowing)	100-115 days
Receme size	Small
Number of Receme	4-5 racemes
Stem color	Dark red
Drought tolerance	Low
Oil content (%)	48-50%
Grain yield potential (t/Ha)	2-3 t/Ha

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability

### Cultivation\*

Recommended herbicide	Pendimethalin
Hand weeding	Proceed when necessary
Fertilizers and liming	Follow local recommendation
Manual or mechanized harvesting	Fantini headers

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability

### Technical Recommendations\*

Planting time	Early rainy season
Planting system	Pneumatic seeders
Spacing (continuous grooves)	0.75-1m among furrows
Plants / Hectare (Density)	38-42k
Seed consumption	13-15 kg/ha
Seeding depth	-5cm

\*Variety characteristics are highly subjected to temperature, sun radiation and water availability



Explore all Castor Varieties

🌿 EVF701 | 🌿 EVF712

 [www.casterra.co](http://www.casterra.co)

 [info@casterra.co](mailto:info@casterra.co)

\* Variety performance is subjected to weather conditions and to precipitation

# Casterra's Breakthrough Product Pipeline

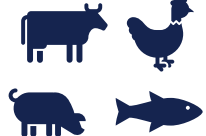
## New opportunities - new target industries



### Elite lines under development optimized for animal feed ('Cake' without ricin)

No-ricin, high yield, adapted for mechanized cultivation

CST-712NR



### Elite lines under development optimized for jet fuel

SAF-1 high yield, high oil%

CST-712SF1

SAF-2 high yield, low viscosity

CST-712SF2

SAF-3 high yield, low viscosity, high saturated oil

CST-712SF3



# Mechanical Harvesting Solution

## Proven commercial harvesting

Combining Casterra's proprietary castor varieties and growth protocols with an advanced harvesting solution

Initial results  
~50% yield loss



casterra



**fantini**  
the best harvest since 1968

Current results  
~5% yield loss



Commercial harvesting in Brazil



# Mechanical Dehulling Solution

## Proven commercial dehulling

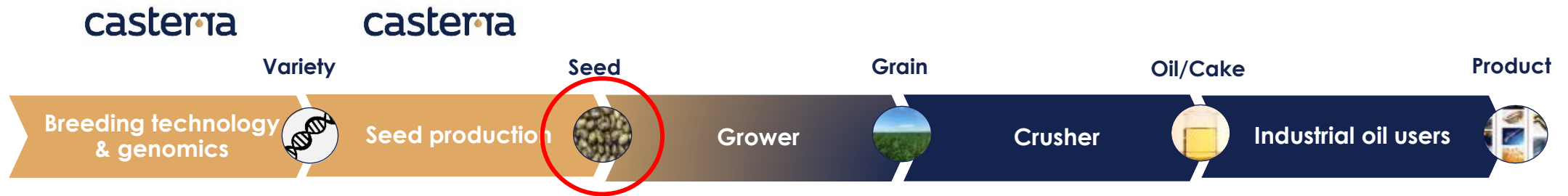
A proprietary dehulling machine, built based on the integration of accumulated worldwide knowhow of Casterra's team and top international engineering experts in seed/grain dehulling

- Higher % of clean grains
- Low % of broken grains
- High uniformity
- Machine is covered by IP application

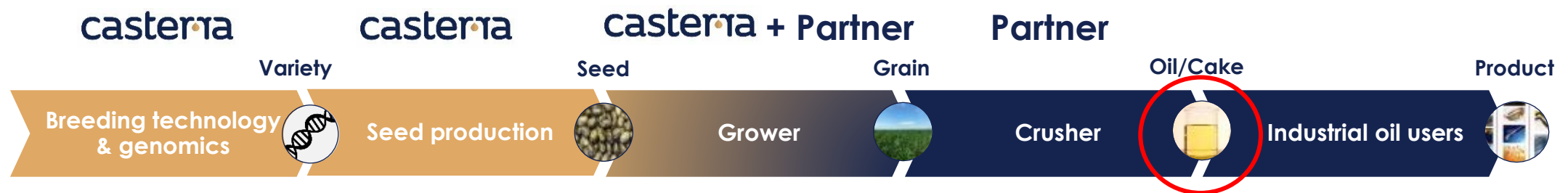


# Business Model

## Seed sales – complete solution



## Revenue sharing with oil producers



# Business Models Execution

## Seed sales – complete solution

Casterra Signs a Framework Agreement with a World Leading Oil and Gas Company to Sell Its Castor Seeds for Sustainable Biofuel Production, with Initial Purchase Orders of \$9.1 Million

JUNE 21, 2023

Casterra Announces Additional \$2.2 Million of Purchase Orders to Supply Castor Seeds for New African Territories

JULY 3, 2023

## Revenue sharing with oil producers

Casterra Signs Royalty Agreement with Titan for Castor Oil Sales in South-Eastern Africa

NOVEMBER 15, 2022

# Casterra's Team



**Yoash Zohar**

CEO



**Yaron Eldad**

CFO



**Liat Foigel Wejgman**

VP HR



**Yinon Plessner**

Director of  
Production & Logistics



**Eran Yossov**

Head of Breeding



**Karel Los**

Market Development  
Agronomist – Latin America

# Unique Castor Varieties & Full Value Chain Solution for Castor Oil

Casterra is the only company providing unique varieties & a complete value-chain solution for industrialized castor cultivation for a stable castor oil supply

**Superior varieties development**



**Seed production**



**Castor growth protocol**



**Mechanical harvest**



**Proprietary dehulling machine**



**casterra**



THANK  
YOU

casterra

## Video – Casterra's Dehulling Machine



## Video – Casterra's Harvesting Header

