



# Eden Research plc

## Investor Conference

30<sup>th</sup> June 2021

Hosted from Milton Park, Oxfordshire, United Kingdom

**Eden Research plc is an AIM-quoted company focused on sustainable biopesticides and plastic-free encapsulation technology for use in the global crop protection, animal health and consumer products industries.**

# About Us

Eden is the only UK quoted (AIM: EDEN) company focused on biopesticides for sustainable agriculture

- Intellectual property and expertise in plant-derived sustainable chemistry and delivery technologies
- Proven products
- Multiple regulatory clearances
- Strategic partnerships
- Two products commercially available

Fundraise of £10.4m (gross) in March 2020 to:

- Register and commercialise insecticide products
- Develop use of our microencapsulation technology, known as 'Sustaine®', with conventional agrochemicals
- Expand product portfolio
- Pursue opportunities with Corteva and other collaborations

## Our Partners

**EASTMAN**

**SIPCAM OXON**  
supporting agriculture



**K&NE**  
EARTH MATTERS

**Elanco**

**CORTEVA**  
agriscience

## Key Statistics

16

Countries have granted product authorisation

19

New local distributorships since 2018 including USA, Brazil, China and Japan



£14m

Invested in IP & registrations

110

Granted and pending patents



CROP PROTECTION



ANIMAL HEALTH



CONSUMER PRODUCTS

# Industry Applications

We work globally through multi-national and local partnerships to develop and launch solutions for challenges facing three key industries.



## CROP PROTECTION

- Foliar disease & insect control
- Open field & greenhouses
- Soil pests
- Post harvest shelf-life extension
- Seed treatments

**\$58 billion**



## ANIMAL HEALTH

- Shampoos/Conditioners
- Skin disease control
- Otic flush
- Flea & tick control

**\$33 billion**



## CONSUMER PRODUCTS

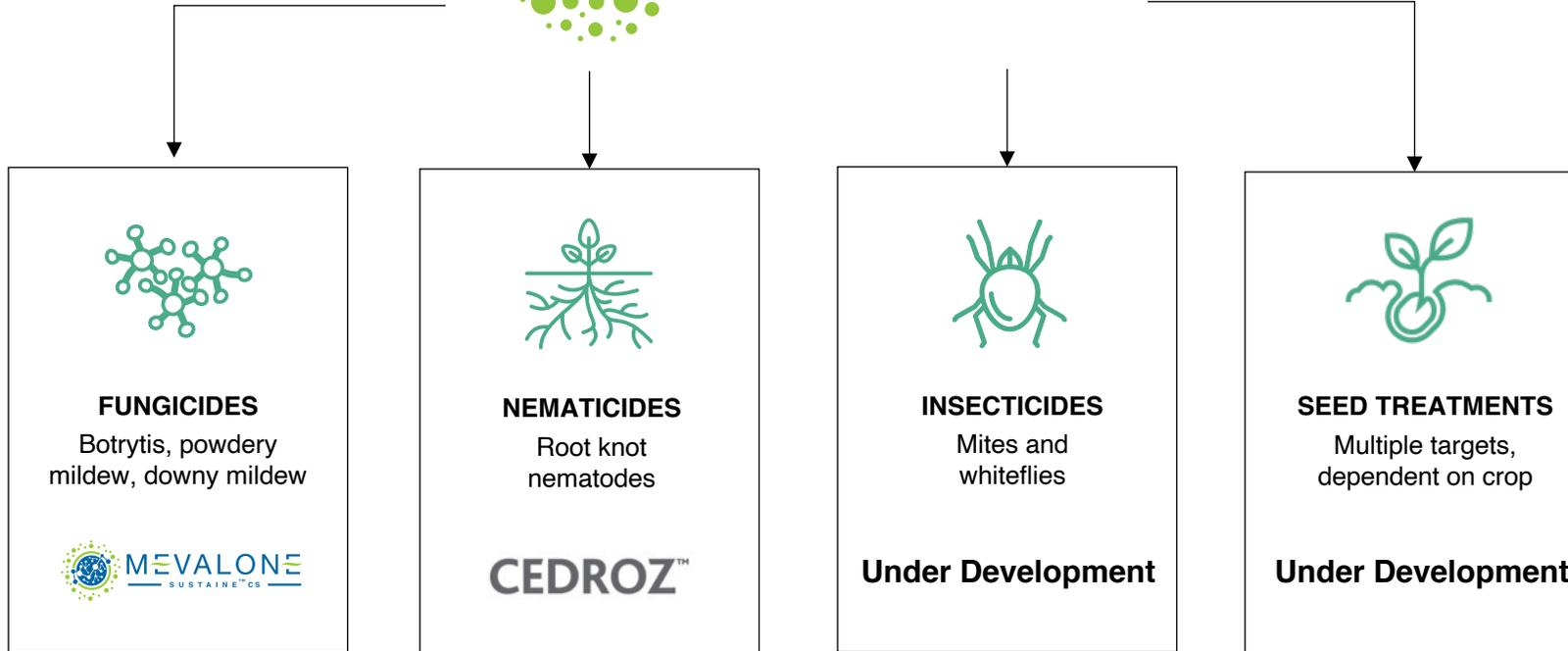
- Head-lice treatment
- Deodorants
- Odour neutralisers
- Fragrances

**\$50+ billion**

**Estimated addressable market size**

# Our Product Focus

Our focus is on developing products based on sustainable chemistries to protect crops from pests and disease, with equal or better performance when compared with conventional pesticides



## ACTIVE INGREDIENTS

Our products give growers reduced risk, increased flexibility and security.



Allowed in EU organic agriculture



Exempt from pesticide residue limits



Can be used up to the point of harvest



Equally effective vs conventional chemistry



# Products In Action

# The Drive Towards Sustainable Agriculture

- Farming practices which maintain yields while increasing benefits for the environment
- A reflection of society's increasing concern about the world's approach to food production and healthy eating
- Embracing farming practices that mimic natural ecological processes
- A win-win for farmers and the environment



By 2050, global food systems will be responsible for feeding more than nine billion people



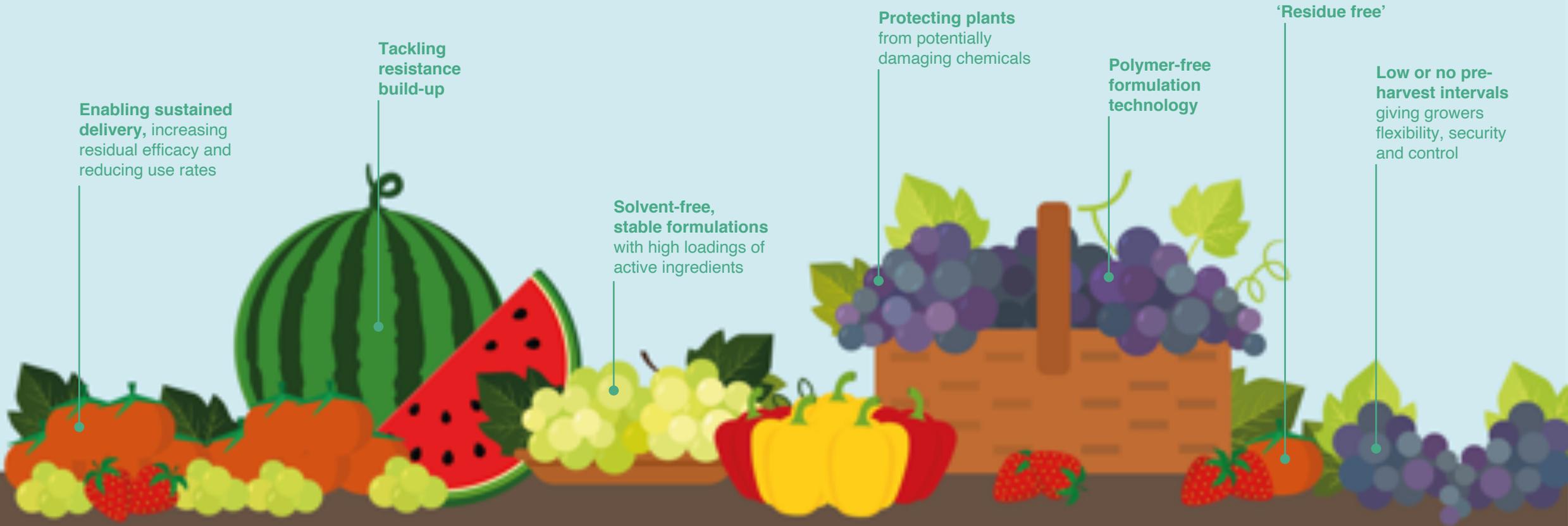
"Eden formulations are well suited for a wide range of crop protection applications. The fact that our Sustaine® encapsulation technology is completely free from microplastics is just one of the elements that makes them stand out in this rapidly evolving market."

**Sean Smith, CEO, Eden Research plc**

# Product Characteristics



**CEDROZ™**  
post-planting nematicide



# The Global Economic Impact of Botrytis



Botrytis cinerea is one of the most extensively studied fungal pathogens and causes “gray mold” rot in more than 500 plant species

**\$10-100 Billion**

The annual economic losses due to *B. cinerea*

**28%**

Estimated post-harvest apple losses caused by *B. cinerea*

**50%**

Potential *B. cinerea* yield losses in grape vines



## Sustainable Control

- Mevalone® is used as a preventative and curative solution for *Botrytis cinerea*.
- Terpene active ingredients, derived from nature, mean the product has a favourable environmental profile.
- The multi-site mode of action means risk of resistance is minimised.
- Free from residue limits and with short pre-harvest intervals – providing growers with maximum flexibility.

**8%**

The cost of control of Botrytis and related species accounts for about 8 per cent of the fungicide market worldwide.

# High Value Food Crops in Open Field and Greenhouse Environments

1

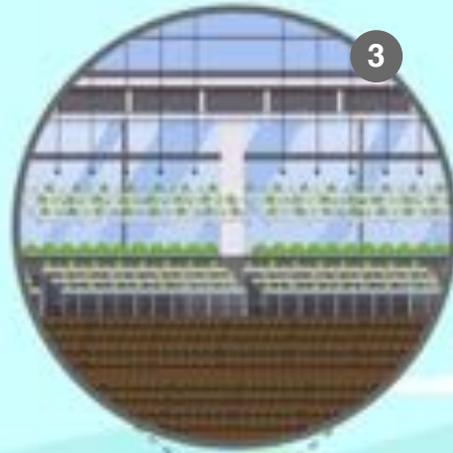
The majority of crops in Europe are grown in open field, however, there is an increasing level of investment in greenhouse and glasshouse farming, especially for salad vegetables.

2

The use of greenhouses will help to reduce emissions from the agriculture sector which is considered a “hard to treat” area of the carbon-cutting agenda. In addition, the use of greenhouses cuts down on agricultural sector’s land use.

3

Being able to control conditions indoors has proven to more than double yields in some cases, reducing the consumption of resources required to grow crops.



3

2

1



## **CEDROZ™** post-planting nematicide

### Science Spotlight

- Cedroz is a water-based formulation which utilizes Eden’s terpene technology to naturally fight nematodes, a pest known to cause severe damage to crops globally in both open fields and greenhouses.
- In line with consumer and regulatory drivers for safer products, Cedroz is an attractive alternative for farmers looking to fight nematodes in an environmentally friendly way.
- Cedroz can be used on a wide range of crops including tomatoes, strawberries, cucumbers, courgettes, peppers, aubergines and melons.

“In Cedroz, we have developed a biopesticide that meets the demands of modern-day farming, whether that is in an open field or greenhouse environment.”

**Sean Smith,**  
CEO of Eden

# Eliminating Microplastics in Soil

1

There is increasing consumer and regulatory pressure to cut out the use of plastic in supply chains. Food production has faced significant scrutiny due to its widespread use of plastics, from farming to packaging.

2

In farming, microplastics are used for encapsulation or seed coatings to boost the performance of agricultural inputs, including crop protection products. The direct application of these products to the environment causes agriculture to be a major contributor to microplastics pollution.

3

Sustaine® is one of the only viable alternatives to microplastics used in these agricultural products.



## Sustainable Control

- Sustaine microcapsules are naturally-derived, biodegradable micro-spheres produced from yeast extract.
- The technology produces stabilised aqueous emulsions which are easy to mix and apply and have phased release patterns.
- Sustaine is used to encapsulate active ingredients in Cedroz™ and Mevalone® and is effective with other natural and synthetic compounds.
- Eden is engaged in a number of projects around the world to test the compatibility of Sustaine with third party active ingredients.

## Changing regulation

Pressure is building to cut out the use of microplastics in agriculture. A landmark proposal from the European Chemicals Agency (ECHA) will restrict the use of microplastics in agricultural products as part of a wider ban on the intentional use of plastics.



# Strategy and Investment Case

# Our Strategy



## BUSINESS LINE DIVERSIFICATION

- Pursuit of opportunities in seed treatments
- Development of insecticides
- Ongoing work with Elanco Animal Health to launch new products
- Expand crops and diseases treated
- Geographic diversification (seasonal and climate variation)

## RESEARCH, DEVELOPMENT AND OPERATIONS

- Supply chain optimisation
- Expansion of in-house screening and field trials capability
- Accelerate commercialization of Sustaine® for conventional actives
- Increasing self-reliance for R&D
- Reduce time to market

## COMMERCIAL GROWTH

- Regulatory clearance in new countries, crops and diseases
- Accelerate Sustaine® development
- Partnerships for Mevalone® in new territories
- Pursue collaboration with majors and select national partners
- Route to market optimisation

## STRENGTHENING AND GROWING THE TEAM

- Added capacity in R&D, including microbiology, plant biology, agronomy, and analytical chemistry
- Robust approach to data quality
- Expand commercial team
- Addition of in-house regulatory expertise – accelerating time to market and reducing regulatory costs

# Commercial Footprint

Our presence in Europe grew in 2020 through new authorisations for both Cedroz™ and Mevalone®, and we anticipate further approvals in Europe and further abroad in 2021.



Total of seven approvals in 2020.



Our US EPA approval for the sale of Mevalone® and Cedroz™ is anticipated within the next year.



We have commercial partners in place across six continents to support future expansion.

## Commercial Approval



# Significant Market Potential

## A growing global market for sustainable products

**\$10  
billion**

The global biopesticides market is projected to be worth more than **\$10 billion by 2025**

**15%  
per annum**

The biopesticides market is growing at a CAGR of approximately **15% per annum**

**\$300  
million**

Increasing time and cost of bringing new agrochemical products to market: **10 to 12 years and around \$300 million**

Crop protection products formulated with Sustaine® and Eden's active ingredients can help address many of these issues:



Consumer concerns over food safety



Increasingly challenging regulatory requirements



Farmers seeking effective alternatives

# Enhanced Development Capabilities

- New offices and laboratories near Oxford – mid 2020: features high-tech equipment to undertake product testing before costly field trials
- Development of in-house R&D – reduces dependency on 3<sup>rd</sup> parties, CROs, etc
- In-house capabilities now include formulation, microbiological screening, plant and seed evaluations and analytical work
- Costs partially offset by reduced external spend on CROs, significantly reduces development cycle time, enables new IP development



# Seed Treatments

Exclusive Commercialisation, Supply and Distribution  
agreement with Corteva Agriscience

# Seed Treatments

## What are Seed Treatments?

- Physical, biological or chemical agents applied to seeds to provide protection and help improve overall crop performance
- Multiple functions: supporting greater uniformity of seed germination, plant height, vigour and biomass by protecting against pathogens and pests and/or can act as a source of crop nutrition or growth regulation.
- Treatments are typically applied either as a solid/dust or as a liquid.
- Colourants are used in seed treatments to give a clear indication that a seed has been treated and to confirm uniformity of the coating.

## Major Players



## Key Information

### SEED DRESSING



Application of low volumes of product to the seed surface.

Typically increases seed weight by <1%

### SEED COATING



Produces a continuous, thin film over the whole seed surface.

Can increase seed weight by up to 5%

### SEED PELLETING



Thick covering of the seed whereby all seeds become uniform.

Can increase seed weight by up to 5000%

# Exclusive Agreement with Corteva Agriscience



Agreed in May 2021 after a successful multi-year evaluation



## Highlights of the Agreement:

- Shared development activities – joint investment of time and resources
- Market-facing support from Corteva / Pioneer Seeds
- Purchase volumes defined
- Product sales price agreed
- Agreed ‘fast to market’ registration and launch strategy – targeting 2024 growing season or ASAP!
- Regulatory path built upon Eden’s portfolio of registered active ingredients

### Market Cap

£21.5bn

### Revenue

£19.7bn

### Global Ranking

No. 1

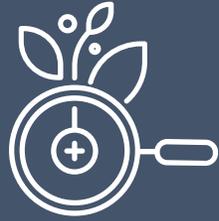
Corteva Agriscience combines the crop protection chemical and seed businesses of Dow Chemical and DuPont, which merged in 2017

# Market potential

- Eden and Corteva will collaborate on the evaluation of Eden's products and technology in the seed treatment market, which is worth approximately US\$6.5 billion annually with an estimated annual growth rate of between 10 and 12 percent.
- This project represents Eden's first foray into the use of its active ingredients and Sustaine® technology in seed treatments and the first use of its products and technology on broad acre crops, with promising future revenue potential in excess of €40 million in product sales per year.
- Accessing these markets will require multiple pest and crop specific field trials (to prove the product is safe and effective) and regulatory filings and approvals across the relevant countries.
- Corteva has a strong global market presence and is among the leading seed and crop protection companies in the world.
- Eden's active ingredients are already approved in the EU and are in the latter stages of approval in the United States, facilitating the registration of the formulated seed treatment product.



# 2020 Preliminary Results



TRAJECTORY  
OF FINANCIAL  
GROWTH



SIGNIFICANT  
MARKET  
POTENTIAL



UNIQUE  
TECHNOLOGY



CLEAR  
COMMERCIAL  
PROGRESS



SKILLED AND  
EXPERIENCED  
PROFESSIONALS

## 2020 AUDITED FINANCIAL RESULTS

Revenue

**£1.4m**

(2019: £1.8m)

Cash position

**£7.3m**

(2019: £0.5m)

GPM on product  
sales

**34%**

(2019: 34%)

Product sales

**£1.1m**

(2019: £1.4m)

Operating loss

**£2.2m**

(2019: £1.4m)

Loss per share

**0.66p**

(2019: 0.55p)



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TRAJECTORY  
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## 2020 HIGHLIGHTS

- Inclusion of Eden's three active ingredients, geraniol, eugenol and thymol, in the EU's Organic Production Regulation
- Commencement of a new agreement with Corteva Agriscience in the new area of seed treatments
- New authorisations for the use of Mevalone® in a range of new uses.
- Authorisation of Eden's nematocidal formulation, Cedroz™, in Greece, Spain, France, Italy and the Netherlands.
- The granting of patents for our Sustaine® encapsulation technology and compositions for insecticide products, in both the US and Australia



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TRAJECTORY  
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## 2020 HIGHLIGHTS (CONTINUED)

- The new [authorisation](#) of our bio-fungicide, marketed as [Novellus](#), in [Australia](#)
- Partnership with [M H Poskitt](#), to develop a [new bio-fungicide](#) derived from a common weed and designed to protect and improve the quality of vegetables
- The opening up of Eden's [new laboratory facilities](#) in Milton Park, Oxfordshire, allowing Eden to undertake more [in-house development](#) work, including new product formulation, microbiological screening, plant and seed evaluations and analytical work.
- The [expansion of our team](#), through the appointment of [Dr. Michael Carroll](#) as Director of Regulatory Affairs in April 2020 and [Dr. Aoife Dillon](#) to the role of Head of Biology in July 2020.



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## POST YEAR END HIGHLIGHTS (2021)

- **January** : Eden received [London Stock Exchange's Green Economy Mark](#) which recognises London-listed companies that derive over 50% of their total annual revenue from products and services that contribute to the global green economy.
- **March** : Eden's commercial partner, Sipcam Oxon, received [authorisation](#) for the sale of Eden's [bio-fungicide in Spain](#) for use on a range of [new crops](#) for the control of a larger number of fungal pathogens.
- **May** : Eden signed an [exclusive commercialisation, supply and distribution agreement](#) with [Corteva Agriscience](#), the fourth largest agriculture inputs company in the world, for Eden's [seed treatment](#) product based on Eden's active ingredients and Sustaine®.
- **May** : Eden's commercial collaborator, [Eastman Chemical Company](#), received [authorisation](#) for the sale of [Cedroz™](#) in Italy.



# Summary & Outlook

# Summary of Recent Developments

- Fund raise of £10.4m (gross) completed 3/2020
- Awarded Green Economy Mark status by the London Stock Exchange.
- New laboratories established near Oxford: in house capabilities replacing contracted services; GLP certification to ensure quality and reduce reliance on costly CROs
- Organic certifications received in key countries
- New authorisations received in multiple countries including Australia and Spain; more pending, including the United States and expanded labels elsewhere
- Impact of Covid-19 on regulatory approvals, promotional activities, field trials, import and export activities and agricultural production - continues in the short to medium term
- Exclusive, Commercialisation, Supply and Distribution Agreement signed with Corteva Agriscience covering seed treatments
- The agreement with Corteva is a significant milestone in the commercialisation of a formulation that has already undergone multiple successful evaluations.



## Portfolio Expansion

- The expansion of Eden's existing portfolio into seed treatments aligns perfectly with our values of focussing on sustainable solutions for agricultural challenges.

# Outlook



Strengthened balance sheet following capital raise



Moving forward with our new products, including insecticide products, seed treatments and optimised fungicides



Additional regulatory approvals expected 2021 with commercial impact in 2021 and beyond



In-house work including formulation, microbiological screening, plant and seed evaluations and analytical work now on-line and producing results and shortened development cycles



The background of the slide is a close-up photograph of several sliced strawberries. The slices are arranged in a somewhat circular pattern, showing the characteristic red flesh and white seeds. The lighting is soft, highlighting the texture of the fruit. A white rectangular border is overlaid on the image, framing the central text.

# Thank you