Development of Black Sigatoka resistant banana
Evogene-Rahan Meristem collaboration
Collaboration goal

Development of banana with resistance to Black Sigatoka disease
Black Sigatoka market opportunity

- Banana is one of the world’s most valuable food staples – annually ~2.5 billion USD*

- Black Sigatoka disease affects over 50% of the crop, reducing yield by 35%-50% and adding 15%-20% to final product cost*

- Current methods to control Black Sigatoka consist of massive use of chemicals

- Plant resistance trait to Black Sigatoka is expected to lead to higher yields

- Reduced use of chemicals is expected to lead to a healthier banana and less environmental contamination due to chemical residual

*Data based on industry research
Evogene – Rahan Collaboration at a glance

- Multi-year collaboration focused on developing banana with resistance to Black Sigatoka disease
- Leverages results of two successful field trials in banana for advanced product development using both genomic modification and genome editing
- Rahan Meristem has exclusive licensing rights for genes and edits in banana
- Evogene is entitled to royalties from banana sales
**Collaborating parties synergies**

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<tr>
<th>Evogene</th>
<th>Rahan Meristem</th>
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<td>- Leading biotechnology company for the improvement of crop productivity</td>
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<td>- Proprietary predictive computational biology platform including artificial intelligence for research and development of ag-seeds</td>
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<td>- Discovered and validated genes providing resistance to Black Sigatoka disease, derived mostly from wild banana</td>
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<td>- Unique advantage of discovering gene edits for trait improvement</td>
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<td>- World’s leading producer of banana plants</td>
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<td>- Access to market and proven track record of introducing new products</td>
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<td>- Field testing platform used to decrease time to market by early testing of promising genes</td>
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<tr>
<td>- <strong>Significant advantage in conducting genome edits in banana</strong></td>
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Combining Evogene’s innovative technology with Rahan Meristem’s product development expertise and access to markets sharply enhances the potential to benefit from the emerging field of genome editing in banana.
Positive results from two field trials

Evogene & Rahan Meritsim announce **positive results in 2\textsuperscript{nd} year field trials addressing black sigatoka disease in banana and the utilization of the results for genome editing**

*Genome editing technology is anticipated to reduce regulatory hurdle and improve market access*

**Rehovot & Rosh Hanikra, Israel – September, 2017** – Evogene Ltd. (NASDAQ, TASE: EVGN), a leading company for the improvement of crop productivity and Rahan Meristem (1998) Ltd., a leading fruit biotechnology and breeding company, announced today **positive results in 2\textsuperscript{nd} year field trials in banana demonstrating efficacy against Black Sigatoka disease.** The parties also announced their agreement to utilize revolutionary genome editing technology to leverage genomic knowledge gained from the field trials for the joint development of a potentially safer and healthier product, for both growers and consumers. The end product is targeted to be classified as non-GMO, which might significantly reduce regulatory barriers and improve market access.
Collaboration structure

**Genome modification**

- **Discovery**
- **Early development**
- **Development stage 1**
- **Development stage 2**
- **Pre-commercialization**
- **Product**

**Today**

**Genome editing**

- **Discovery**
- **Early Dev.**
- **Dev. stage 1**
- **Dev. stage 2**
- **Pre-commercialization**
- **Product**

**Today**
Genome Editing – new promising technology

- Novel method for improving seed traits
- Resulting products may be considered Non-GMO with shorter time to market
- Major opportunity for all crops and locations

Evogene’s unique advantage – What to edit
Technological capabilities, knowledge and proprietary plant genomics big data, allow the identification of required edit-targets for crop improvement

Rahan Meristem’s unique advantage – How to edit
Advanced technological know-how and genome editing conducting capabilities in banana
**Summary**

- Black Sigatoka resistant banana has the potential to be healthier with lower chemical residual.
- Collaboration focus is the development of banana resistant to black sigatoka disease, based on genome knowledge from **two successful field trials**.
- Rahan Meristem and Evogene are well positioned to harness the genome editing opportunity in banana by leveraging the successful field trial results for genome editing.
- Genome editing has dramatically evolved in recent years, and holds a significant opportunity for improving crop productivity; expected to be considered as Non-GMO.
- As part of the collaboration, Evogene will identify the edits and Rahan Meristem will perform the edits. The edited banana will be tested in the field trials with the goal of commercialization by Rahan Meristem.
Thanks