



HORIZON EUROPE AND MISSION “SOIL, HEALTH, FOOD”




Research Challenges in Agriculture and Sugar Beet Breeding

Dr. Hendrik Tschoep

Active in more than 50 countries

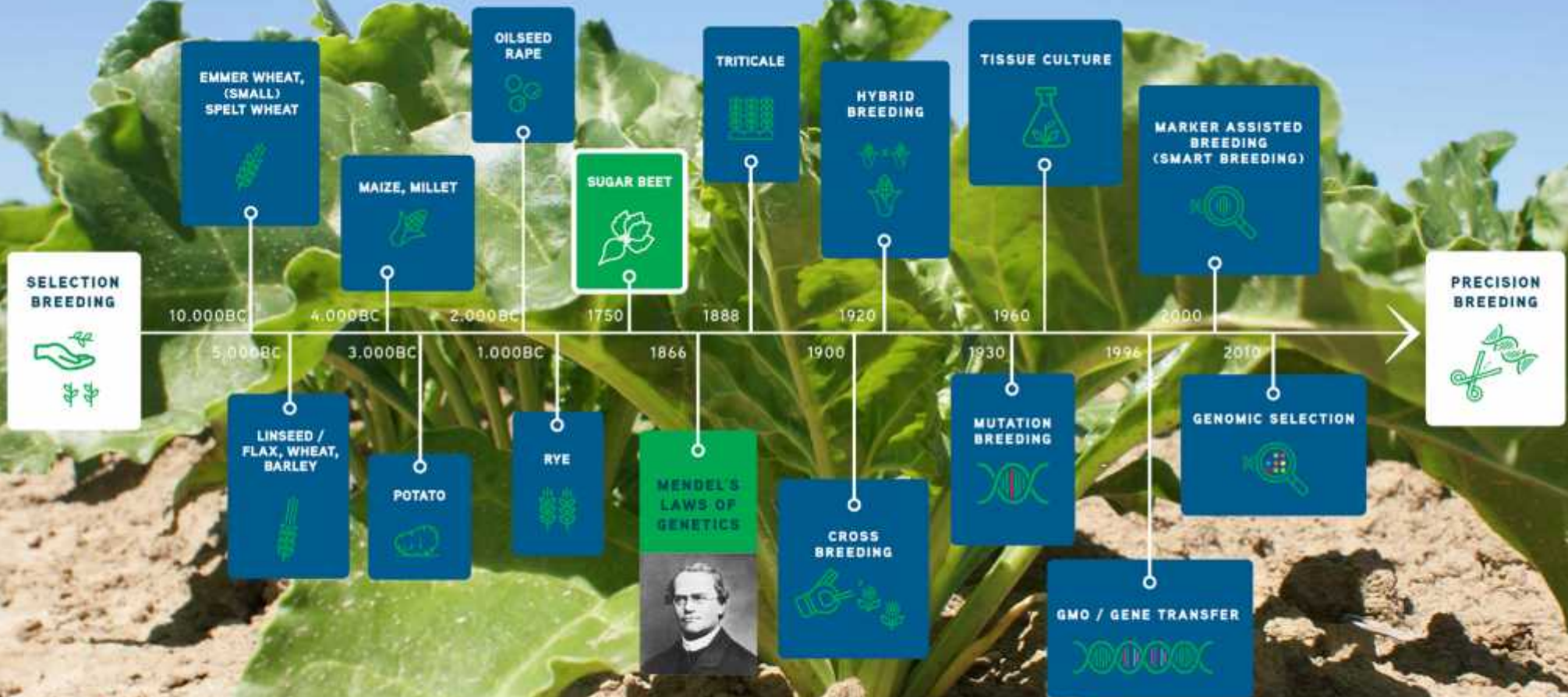


Everything in-house, from A-Z

-  R&D department = 32% of our worldwide staff
-  15% re-investment of our turnover into R&D
-  +40% R&D expenses over the last 10 years

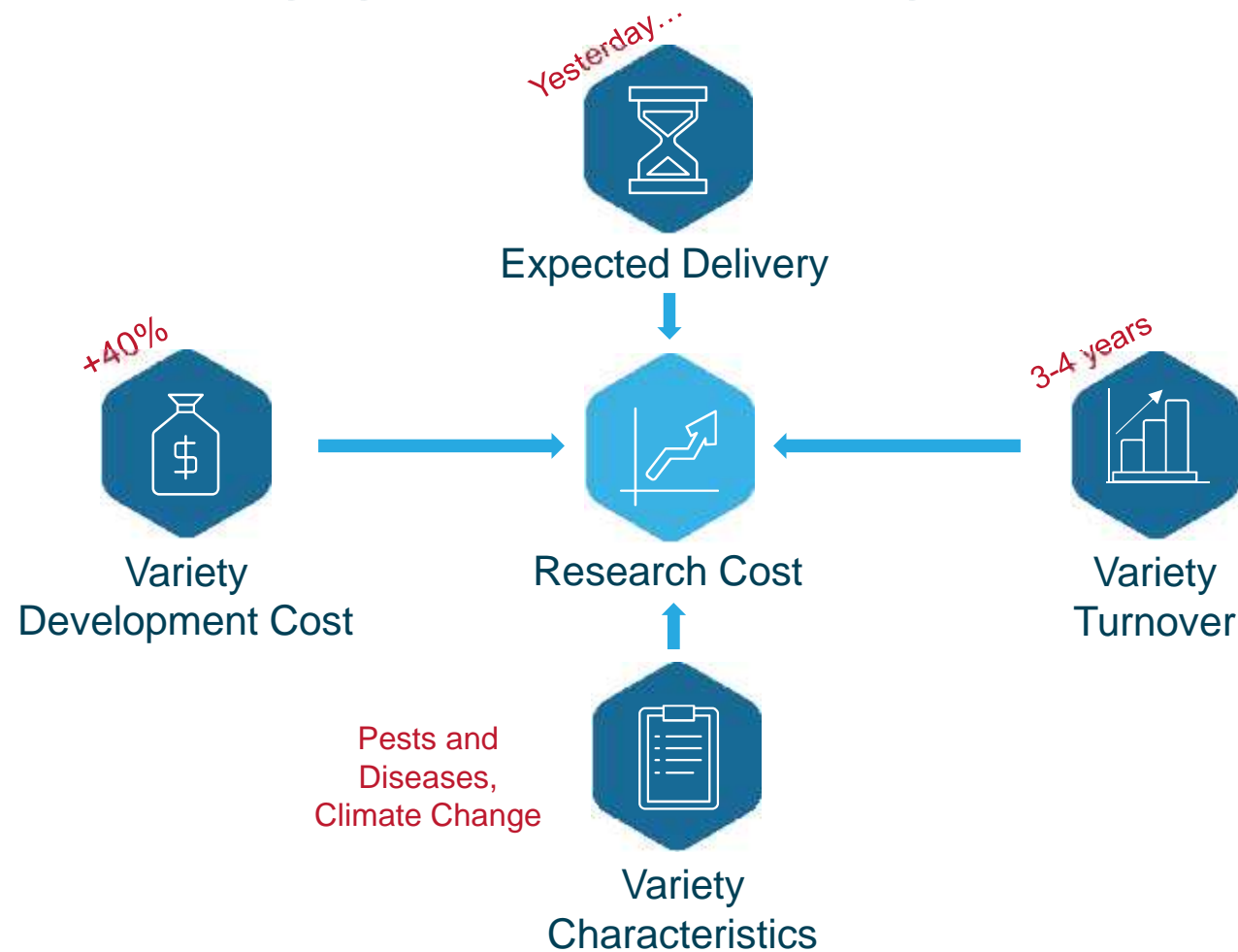


Milestones in Plant Breeding



EMBRACING
THE POWER
OF NATURE

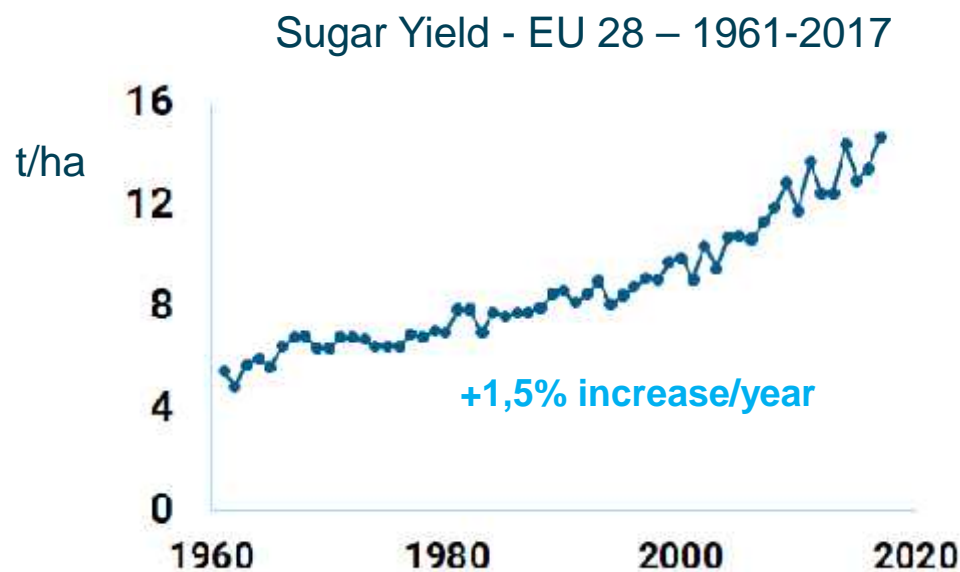
Plant Breeding gets increasingly complex...



Feb 18, 2020

European Parliament AGRI Committee Public Hearing

Plant Breeding's role in addressing competitiveness & sustainability challenges



Source: FAOSTAT

Disease Resistance



Source: SESVanderHave

Research and Innovation are key to address these challenges.

Challenges in (Sugar Beet) Breeding



Time

- Very rapid changes in requirements
- Variety development is too slow to cope with needs



Access to genetic diversity

- Access and benefit sharing – Nagoya Protocol



Detection, validation & exploitation of genetic diversity







- Pre-breeding using wild relatives
- Plant Breeding Innovation – Precision Breeding – NBT

Detection, validation & exploitation of genetic diversity is key



Source: SESVanderHave

Areas of Future Research in EU Framework Programme for R&I

-  Pest Monitoring
-  Soil Science - Microbiome
-  Weed Control Strategies
-  Creation and Exploitation of Genetic Diversity
-  Data Science
-  Education



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