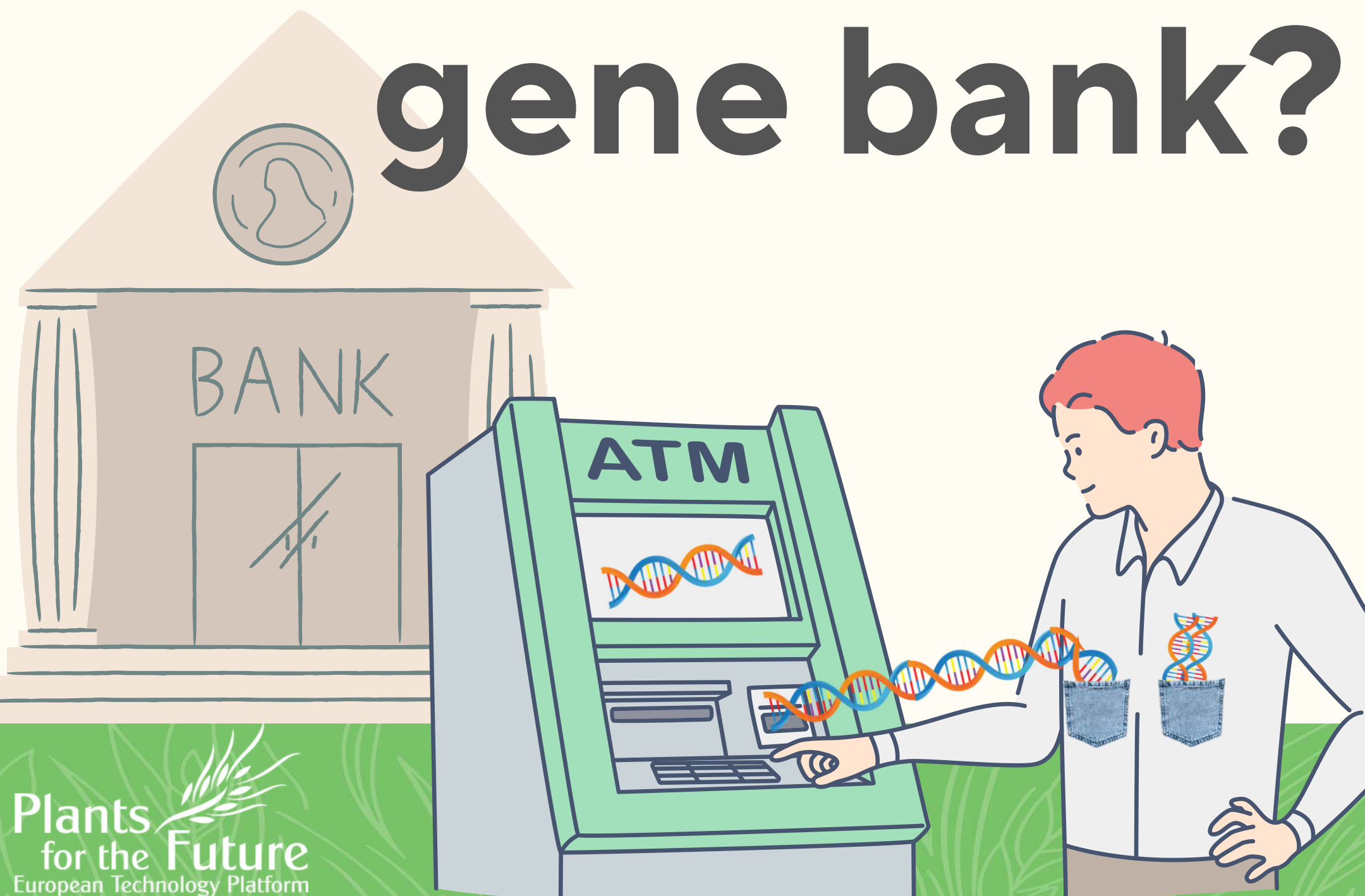


What is a

gene bank?



A gene bank is a facility that preserves and stores genetic material, such as seeds, tissues, or DNA samples, representing a wide variety of plant or animal species.

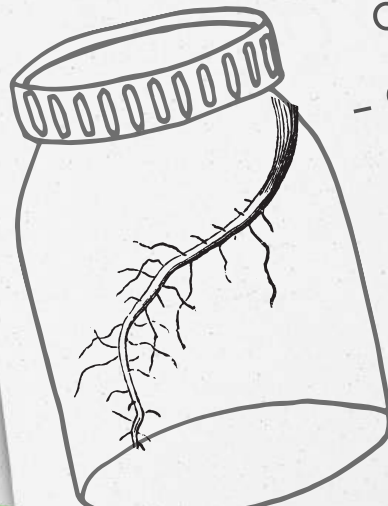
What can we find in a gene bank?

Seeds



- most common & widely preserved
- easy to store
- long lifespan
- example: cereals, legumes

Roots



- less common
- difficult to store
- can contain important genetic material
- example: sweet potato

Leaves

- less common
- cryopreserved (frozen at -150 to -200°C)
- example: orange, banana



Why do we need gene banks?




1 Conservation of Genetic Diversity

important for maintaining resilience to environmental changes, pests, diseases

2 Research and Development

gene banks provide valuable resources for scientific research

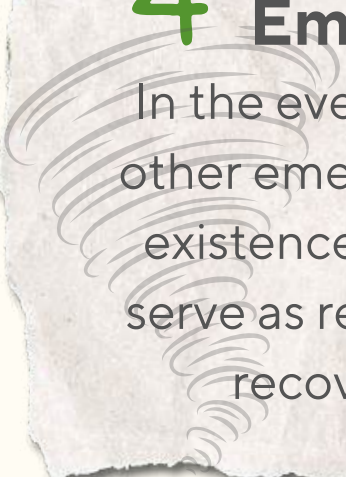


3 Preservation of Endangered Species



4 Emergency Response

In the event of natural disasters, wars, or other emergencies that may threaten the existence of plant varieties, gene banks serve as repositories that can be used for recovery and rebuilding efforts.



5 Support for plant breeding to develop new crop varieties



6 Global Collaboration

Many gene banks are part of international networks that facilitate the exchange of genetic material among regions. This helps ensure the global conservation of genetic resources.



One of the most well-known gene banks is the Svalbard Global Seed Vault



It is located deep inside a mountain in the Arctic Circle and serves as a global backup facility. The Vault stores duplicate samples from gene banks around the world to ensure our agricultural systems remain viable throughout the challenges we face.

4.5M

Variety capacity

1,214,827

Samples in the Vault

-18°C

Temperature required

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