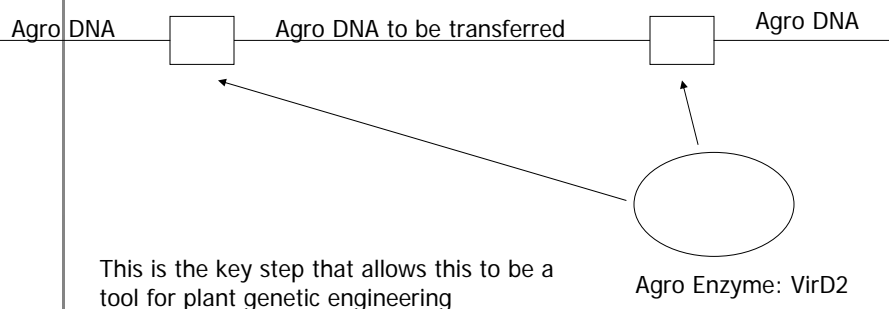


Genetic Engineering of Plants- Outline

- What is genetic engineering?
- Why genetically engineer plants?
- Advantages, Problems
- Methods
- Similarities and differences between wild Agrobacterium and lab Agrobacterium use
- Examples of g.e. of plants
- Examples of g.e. of trees

Step 3. Agrobacterium prepares a specific piece of DNA for transfer



Agrobacterium-mediated Transformation

- 1. Agrobacterium detects the plant cell
- 2. Chemotaxis and attachment
- 3. Prepares the T-DNA for transfer (recognition of border sequences)
- 4. T-strand is exported out of the bacteria and into the plant cell
- 5. Nuclear targeting signals guide it to nucleus
- 6. T-strand is integrated into plant genome

Study Guide

- What is “genetic engineering”
- How is it different from traditional breeding?
- Similarities and differences between what wild Agrobacterium does and how it is used in plant biotechnology?