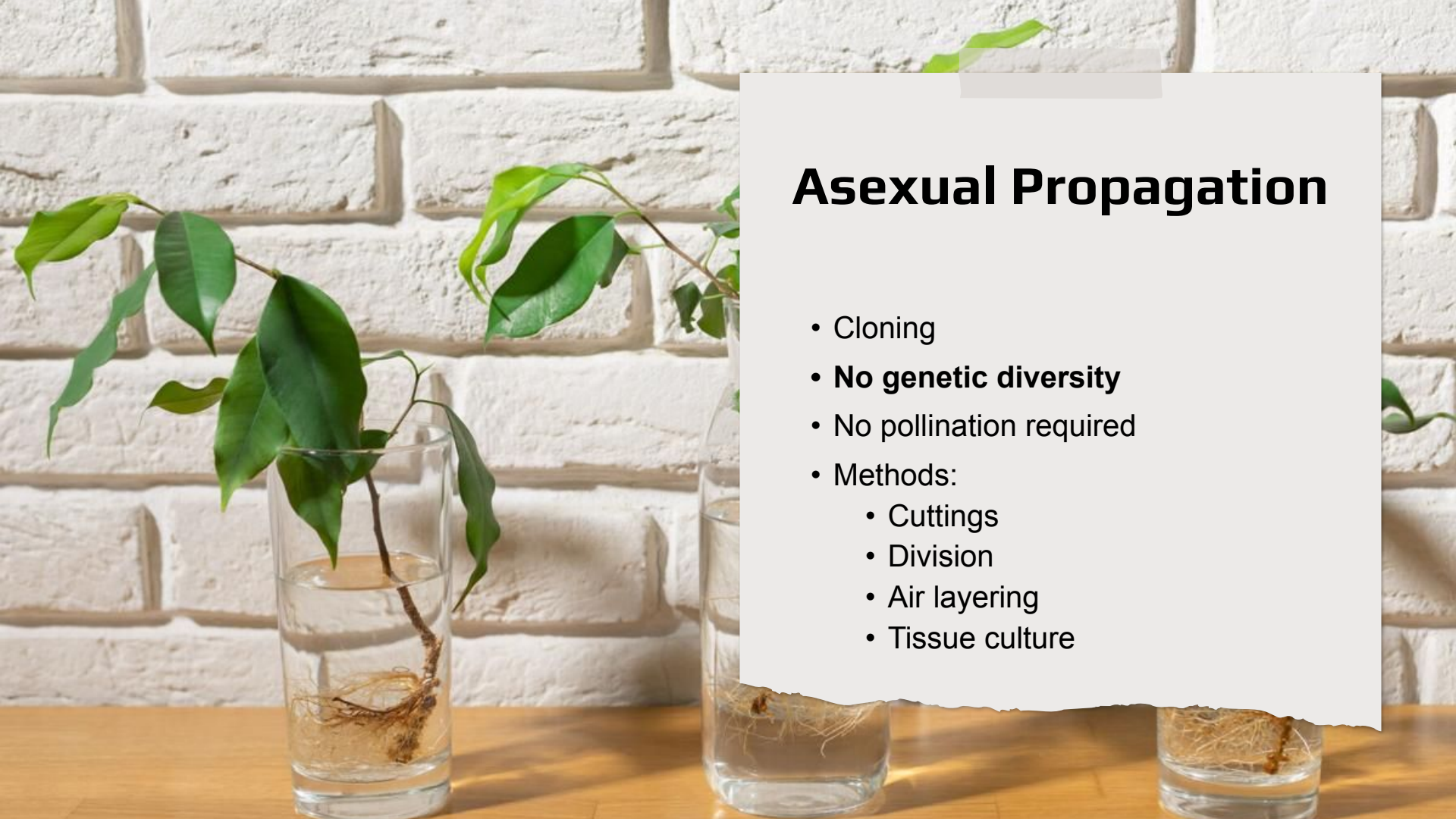
Plant Propagation Methods

Mvskoke Gardeners 2025

Sexual Propagation

- Pollination
- Seeds
- Genetic diversity



Asexual Propagation

- Cloning
- **No genetic diversity**
- No pollination required
- Methods:
  - Cuttings
  - Division
  - Air layering
  - Tissue culture

Cuttings

- Preparation:
  - Healthy plants – **not flowering**
  - New growth – **avoid woody if possible**
  - Tools :
    - Sharp shears
    - Cup of water (aloe water)
    - Scalpel
    - Rooting hormone (IBA)
    - Rooting media (soil, rockwool, water)
- Taking Cuttings:
  - **Cut just above a node**
    - Encourages growth
  - 4-8 inches long (depends on plant)
  - **Cut at a 45-degree angle**
  - Gently scrape bottom of cutting with scalpel
    - Woody vs herbaceous
  - Dip in rotting hormone
  - Plant

Cuttings

- Rooting Cuttings:
  - Humidity – domes, greenhouse, plastic bag
  - Foliar sprays
  - Transplant once rooted
    - Acclimate to life outside of dome/high humidity
- Acclimation:
  - Expose to new air gradually
  - Removing dome: (~1 day)
    - Remove dome for ~1 hour, cover again for ~1 hour
    - Remove dome again for ~2+ hours, cover again for ~1 hour
    - And so on…
  - Moving plants outdoors: (~3 days)
    - Set plant outdoors in a shady spot in the morning
    - Move indoors ~ noon
    - Set plant outdoors in a shady spot in the morning,
    - Move to sunny spot at noon
    - Move plant indoors in the evening
    - Set plant outdoors in sunny spot in the morning,

Rooting Hormone

- IBA
- Synthetic rooting chemical
- Available in:
  - Powder
  - Liquid
  - Gel
- Avoid Overuse
  - Lots of short roots
  - Stunted root elongation

Division

- Separating a plant into smaller individual plants.
- Ideal for plants with:
  - Suckers/offsets– raspberries, yaupon, snake plant, spider plant
  - Rhizomes/Tubers – iris, ginger, potato, bamboo, grasses
- Divide during dormant seasons
- Video

Air Layering

- **Cloning while still attached to the plant**
- Good propagating for woody / mature plants
- Should be done when plant is not flowering
- Takes 1-3 months to root
- Supplies:
  - Sharp knife
  - Rooting hormone
  - Soaked moss
  - Plastic wrap
  - Dark wrap (trash bag, bandana, foil, etc.)
  - String or zip ties
- Steps:
  - Select healthy branch
  - Gently girdle branch x2
  - Peel off bark in between 2 girdle rings
  - Apply rooting hormone to wound
  - Wrap with wet moss
  - Secure moss tightly with plastic wrap
  - Wrap with dark wrap
  - Once rooted, transplant to soil.
- Video

Tissue Culture

- Micropropagation
  - Produces lots of plants in vitro
  - Small pieces of plant tissue placed in sterile media and kept in ideal conditions until rooted + more mature
- Ideal for:
  - Woody plants
  - Diseased plants
  - Expensive plants
- Sterile conditions required
  - Tools, surfaces, air
- Gel media rich in nutrients and hormones
- Mostly used in commercial production + research
- Video