**Capítulo 15**

**Mejora genética de plantas autógamas {segunda parte}**

**Sesión 2025-10-01**

**15.6 Genetic improvement of self-pollinating plants**

15.7 Genealogical or pedigree method

15.8 Population or mass method

15.9 Backcrossing

15.10 Single seed descendant

**15.6 Genetic improvement of self-pollinating plants, Genealogical or pedigree method**

### [PDF] [Conventional breeding methods widely used to improve self-pollinated crops](https://www.researchgate.net/profile/Temesgen-Begna/publication/357505470_Conventional_Breeding_Methods_Widely_used_to_Improve_Self-_Pollinated_Crops/links/61d0b78fb6b5667157bfc0a8/Conventional-Breeding-Methods-Widely-used-to-Improve-Self-Pollinated-Crops.pdf)

T Begna - International Journal of Research, 2021 - researchgate.net

… **Plant** **breeding** is considered as the current phase of **crop** … The **pedigree** **method** is  
appealing to **breeders** because it allows … , it is possible to know the **genealogy** of each cultivar. …

[Guardar](javascript:void(0)) [Citar](javascript:void(0)) [Citado por 50](https://scholar.google.com/scholar?cites=7378734583482413388&as_sdt=2005&sciodt=0,5&hl=es) [Artículos relacionados](https://scholar.google.com/scholar?q=related:TPFbbAKIZmYJ:scholar.google.com/&scioq=+Genealogical+or+pedigree+method+plant+breeding+in+autogamous&hl=es&as_sdt=0,5) [Las 2 versiones](https://scholar.google.com/scholar?cluster=7378734583482413388&hl=es&as_sdt=0,5)

Guided activity

Access the article and answer the questionnaire

**Responda las preguntas en español inmediatamente debajo de cada pregunta**

1. Define self-pollination.
2. List three examples of self-pollinated crops.
3. What are the main goals of conventional breeding in self-pollinated crops?
4. Match the following methods with their descriptions:

|  |  |
| --- | --- |
| **Method** | **Description** |
| Pure Line Selection | A. Crossing followed by selection with pedigree records |
| Pedigree Method | B. Selection of best individuals and selfing over generations |
| Bulk Method | C. Crossing and growing progeny in bulk before selection |
| Backcrossing | D. Crossing a hybrid with one of its parents to recover a trait |
| SSD | E. Advancing generations using one seed per plant |

1. Which method is most suitable for rapidly achieving homozygosity?
2. What are the advantages of the pedigree method over mass selection in self-pollinated crops?
3. You are breeding a rice variety for drought tolerance. Which conventional method would you choose and why?
4. Describe how backcrossing can be used to introduce disease resistance into an elite soybean line.
5. What are the limitations of mutation breeding in self-pollinated crops?
6. \_\_\_ Marker-assisted selection is a purely conventional breeding method.
7. \_\_\_ Mass selection is highly effective in improving self-pollinated crops.
8. \_\_\_ Pure line selection leads to genetically uniform populations.