

## 'Road map' of pollen development could help breed more desirable food crops

...Sexual reproduction has evolved as nature's way of shuffling the genetic deck of cards, so to speak. That shuffling actually starts before organisms make sex cells (sperm and egg). In this process, called meiosis, matching chromosomes inherited from an organism's mother and father swap sections, yielding cells that are genetically distinct from either parent. This genetic rejiggering churns out diverse combos of traits that can be "winning hands" for offspring, giving them a competitive advantage.

Compared to animals, however, just how plants enter into this meiotic shuffling is poorly understood....Now [in a new study](#), Stanford researchers have constructed a timeline of cells from corn, or maize, plants undergoing the meiotic transition.

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The study provides a roadmap for following the early events during pollen development in plants. Getting a stronger handle on meiosis initiation could also help plant breeders better mix-and-match genetic combinations to create new crops with desirable traits. The genetic rearrangement during meiosis is inefficient; the few exchanges that do occur between chromosomes are often of a chunky variety, involving blocks of neighboring genes moving en masse....

**Read full, original article:** [New key stages discovered in how plants prepare to make sex cells for reproduction](#)