

Sexual Reproduction In Plants LR

Sexual reproduction implants. Objective, to understand the process of sexual reproduction implants. If we cut a mango, we can see that it contains a large seed.

Seeds are produced by sexual reproduction. In sexual reproduction, a male cell and a female parent produces a female cell. The male and the female cells fuse together and form a zygote, which develops into a seed.

Let's understand the process of sexual reproduction implants. In flowering plants, the flower is the part of the plant where sexual reproduction occurs. In a corn plant, the male and female reproductive organs are found in separate flowers.

Here's a corn plant. It has a male flower containing the male reproductive organ called the stamen. This stamen is made up of an anther and a filament.

The anther contains pollen grains, which produce the male gametes. The same corn plant also has a female flower, containing the female reproductive organ, which is called a pistil. The pistil is composed of the stigma, style, and ovary.

The ovary contains one or more ovules. The female gametes, also called the female egg cells, are formed in the ovule. When the pollen grains from the male flower, which contain the male gametes, fall on the stigma of the female flower, they travel through the style and ovary and then reach the ovules, where the female gametes are present.

The male and female gametes fuse to form a zygote. This whole process is called sexual reproduction. A corn flower contains either the male or the female reproductive organ.

Such flowers are called unisexual or incomplete flowers. Also, the male and the female flowers are present on the same plant. However, there are plants like the kiwi plant, in which the male and female flowers are found on different plants.

The flowers of these plants are also unisexual. In some plants, a single flower contains both the female and the male reproductive organs. Such flowers are called bisexual or complete flowers.

Let's understand how sexual reproduction takes place in bisexual flowers. The stamen, which is the male reproductive organ, is composed of the filament and anther. The anther contains the pollen grains, which produce the male reproductive cells called the male gametes.

These pollen grains fall on the stigma of the pistil, which is the female reproductive organ, travel through the style and the ovary of the pistil, and then reach the ovules containing the female gametes. Here, the male and female gametes fuse to form a zygote. This process is called sexual reproduction.

To summarize, when the male and female reproductive organs are found in separate flowers, the flowers are called unisexual or incomplete flowers. Flowers having both the male and female reproductive organs in the same flower are called bisexual or complete flowers.

Summary: Sexual Reproduction in Plants

Sexual reproduction in plants occurs through the **fusion of male and female reproductive cells**, leading to the formation of a **zygote**, which develops into a **seed**.

Reproductive Organs in Flowering Plants

- The **male reproductive organ** is called the **stamen**, consisting of:
 - **Anther** (produces pollen grains containing male gametes)
 - **Filament** (supports the anther)
- The **female reproductive organ** is called the **pistil**, consisting of:
 - **Stigma** (receives pollen grains)
 - **Style** (connects stigma to ovary)
 - **Ovary** (contains ovules with female gametes)

Types of Flowers Based on Reproductive Organs

1. **Unisexual (Incomplete) Flowers** – Have only male or female reproductive organs.
 - Example: **Corn, Kiwi plants**
 - Some plants have **both male and female flowers on the same plant**, while others (like kiwi) have male and female flowers on **separate plants**.
2. **Bisexual (Complete) Flowers** – Have **both male and female reproductive organs in the same flower**.

Process of Sexual Reproduction

- **Pollination**: Pollen grains from the **anther** (male part) land on the **stigma** (female part).
 - The **pollen** travels through the **style** into the **ovary**, where it reaches the **ovules**.
 - **Fertilization**: Male and female **gametes fuse** to form a **zygote**, which develops into a **seed**.
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Quiz Questions

1. **Which part of the plant contains the reproductive organs?**
 - (A) Root
 - (B) Stem
 - (C) Flower ☒
 - (D) Leaf
2. **What is the male reproductive organ in a flower called?**
 - (A) Pistil
 - (B) Stamen ☒
 - (C) Ovary
 - (D) Stigma
3. **Which type of flower contains both male and female reproductive organs?**

- (A) Unisexual flower
- (B) Incomplete flower
- (C) Bisexual flower ☒
- (D) Non-reproductive flower

4. **What is the process in which male and female gametes fuse to form a zygote?**

- (A) Pollination
- (B) Germination
- (C) Sexual reproduction ☒
- (D) Photosynthesis