What is Apospory?

Apospory refers to the development of gametophyte directly from the cell of sporophyte without spore formation or meiosis. When the gametophyte forms, the sporophytic generation marks its end. Moreover, this is important in the alternation of generations in plants.

Since the cells of sporophyte are diploid (2n), the developed gametophyte is also diploid in nature. Thus, the sporophyte and gametophyte share the same ploidy levels. However, this process does not involve the formation of gamete cells. So, it is asexual in nature. Apospory is an asexual reproduction method commonly seen in bryophytes.

What is Apogamy?

Apogamy refers to an asexual reproduction process in plants where the embryo forms without undergoing fertilization. In such plants, sporophyte develops from the gametophyte without undergoing fertilization. Thus, the formed sporophyte will have the same ploidy(n) level of the gametophyte.

What are the Similarities Between Apospory and Apogamy?

• Apospory and apogamy are asexual methods of reproduction.

• Both take place in plants.

• They participate in the alternation of generations in plants.

• In both phenomena, the gametophyte and the sporophyte share the same ploidy level.

• Moreover, there is no formation of gametes in both processes.

• Both these processes mainly take place in bryophytes.

|  |  |
| --- | --- |
| Difference Between Apospory and Apogamy | |
| **Apospory** | **Apogamy** |
| **Meaning** | |
| Apospory is an asexual method of reproduction in plants where the gametophyte develops from the sporophyte | Apogamy is also an asexual method of reproduction where sporophyte develops from the gametophyte. |
| **Ploidy** | |
| Produces a diploid(2n) gametophyte | Produces a haploid(n) embryo |
| **Implication** | |
| Gametophytes are produced without the formation of spore or meiosis. | The embryo is formed without the process of fertilization |