

Topic: Endosperm

B.Sc. Botany Subs. II

Group: B

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Endosperm

- The endosperm makes the main source of food for the embryo.
- In gymnosperms, the endosperm is haploid (n) and forms a continuation of the female gametophyte.
- On the other hand, in angiosperms it is formed mostly as the result of a fusion of the two polar nuclei and one of the male gametes.
- Since all the three nuclei taking part in the fusion are haploid,



the endosperm becomes triploid ($3n$).

- In normal cases, the endosperm is triploid but haploid, tetraploid and polyploid endosperms are also known.
- Generally the endosperm nucleus divides after the division of the oospore, but in several cases the endosperm is formed to a great extent even before the first division of the oospore.
- However, endosperm formation is suppressed in two angiospermic families, the Orchidaceae and Podostemonaceae.

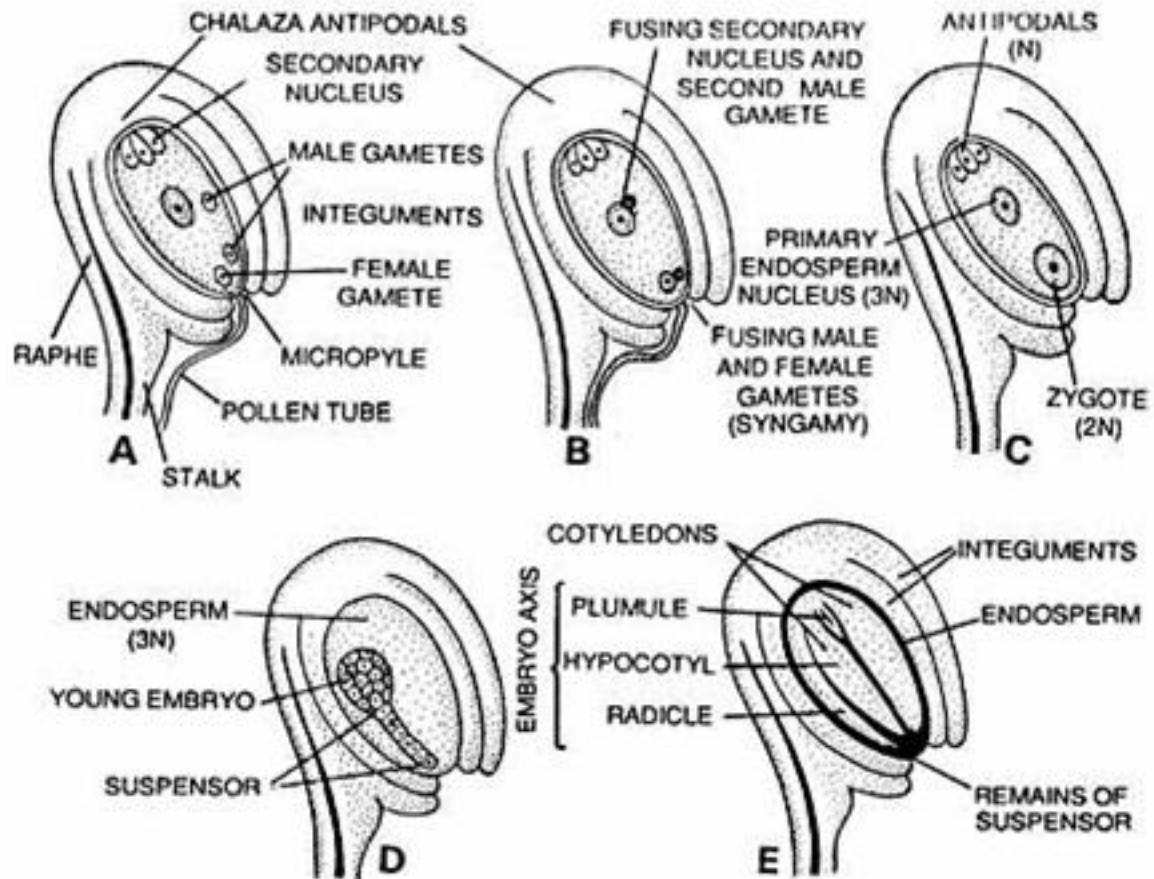


Fig. Fertilization and post-fertilization changes. A, two male gametes discharged in the embryo sac; B, syngamy and double fertilization; C, formation of zygote (2n) and primary endosperm nucleus (3n); D-E, post fertilization changes.