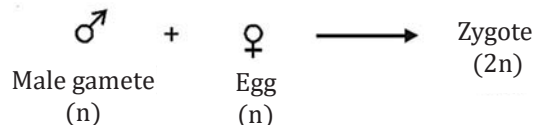


## DOUBLE FERTILIZATION

After entering one of the synergids, the pollen tube releases the two male gametes into the cytoplasm of the synergid. The next two events occur within the embryo sac:

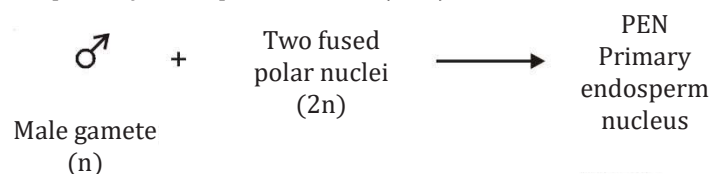
### Syngamy

The male gamete travels towards the egg cell and combines with its nucleus, leading to the creation of a diploid cell known as the zygote.

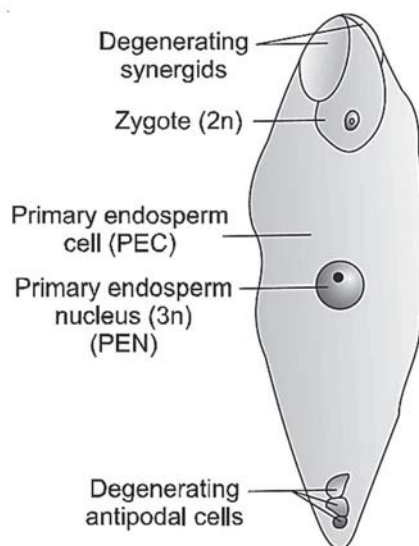


### Triple fusion

The second male gamete travels to the two polar nuclei within the central cell and merges with them, forming a triploid primary endosperm nucleus (PEN).



When two types of fusion, namely syngamy and triple fusion, happen in an embryo sac, it is called double fertilization.



**Fig.:** A Fertilized embryo sac showing zygote and PEN