

Topic: Endosperm

B.Sc. Botany Subs. II

Group: B

Dr. Sanjeev Kumar Vidyarthi

Department of Botany

Dr. L.K.V.D. College, Tajpur, Samastipur


L.N. Mithila University, Darbhanga

(b) Cellular Type:

- In this type, the first and most of the following divisions are accompanied by wall formation and thus the sac is divided into several chambers, some of which may contain more than one nucleus.
- The first wall is usually transverse but sometimes vertical or oblique, and in some other cases, the plane of division is not constant.
- On the basis of the orientation of walls following the first two or three divisions, this type of endosperm has been further divided into several subtypes.

(c) Helobial Type:

- This type is frequently found in the members of the order Helobiales.
- This type is intermediate between the nuclear and the cellular types. In this type the first division is followed by a transverse wall resulting in a micropylar and chalazal chamber.
- Further divisions are generally free nuclear and may be formed by the micropylar chamber only.
- Eremurus is an example of a typical Helobial endosperm.
- Here the primary endosperm nucleus divides transversely forming two chambers, a large micropylar and a small chalazal.

- 
- Free nuclear divisions occur in both but are more rapid in micropylar chamber. Thus, when four nuclei are formed in the chalazal chamber, eight nuclei are produced in the micropylar chamber.
 - When the chalazal chamber has eight nuclei, the micropylar chamber contains sixteen nuclei, and when there are 30 to 32 nuclei in chalazal chamber the micropylar chamber has considerably a large number of nuclei.
 - In older ovules, the chalazal chamber begins to degenerate. Finally, when cell formation takes place in the micropylar

- chamber, the chalazal chamber is almost crushed and shows only a few disorganized nuclei.

