Hermaphrodite can reproduce singly by itself while, there is another term DIOECIOUS (Gr. twice, two + oikos = Home), in this type of sexual organs, male and female sex organs are present separately on separate thalli.

Terminologies:-

(1) Gametangia (sing. Gametangium); Sex organs of fungi are called gametangia. Gametangia reproduce and form gametes. If gametangia and gametes are morphologically same are called isogametes or isogametangia. If are different, these are called Heterogametangia. male gametangia is also called Antheridia (sing. Antheridium (Gr. ~~antheridium~~ = antheros = flowery + idion, dimin suffix). The female gametangia is called oogonia (sing. oogonium) Gr. (oon = egg + gennao = I give birth)

(2)

(3)

Sexual compatibility:-

Some fungi do not produce sex organs or fungi are sexually self-sterile. on the basis of fungi may be classified into three-categories.

A-Hermaphroditic: (monoecious), in which each thallus bears both male and female organs that may or may not be compatible

B- Dioecious, male and female sex organs are separately present on different thalli very less fungi occur in this category.

Sexually undifferentiated:-

Sex organs, which can not be differentiated into male and female or sex organs are morphologically same and can not be differentiated into male and female structures.

On the basis of compatibility fungi may be devided into following categories:

① Homothallic fungi:-

In which every thallus is self-fertile and can, therefore, reproduce sexually by itself without the aid of another thallus. Obviously no dioecious fungus may be homothallic.

② Heterothallic fungi:-

Those fungi in which each thallus is sexually self-~~fertile~~ sterile and require the aid of another thallus.

③ Secondary Homothallic fungi:-

In some heterothallic fungi during spore formation, two nuclei from different mating types are incorporated into single spore or at least some spores. Germlings emerge from these spores act as self-fertile, while in fact they are heterothallic. This condition is known as secondary homothallism or pseudohomothallism.

Heterothallic fungi belong to one of the other two groups. One group includes, in which mating is controlled by one pair of loci, known as Unifactorial or bipolar heterothalism. On other group, mating is controlled by more than one loci located on different chromosomes, known as bifactorial or tetrapolar heterothallism.

Some fungi do not pass through sexual cycle, but may drive benefits of sexual recombination through a process known as parasexuality (Gr. Para = beside sex). On this process, plasmogamy, karyogamy and haploidization take place, but not at specific points in the thallus or life cycle. Parasexuality may occur in sexual fungi.

The End