CYBRID

Ans ⇒ In the species which can be crossed sexually, viable somatic hybrids can be expected but in other cases, cell lines possessing nuclei of only one of the two parental protoplasts get perpetuated while chromosome of other parent get selectively eliminated. Thus, after this, there is situation, where the nucleus belongs to one species but the cytoplasm is hybrid and possesses the mixed organelles of both the original species. Such plants with the hybrid cytoplasm but containing the nucleus of only one of the parents are called cytoplasmic hybrids or simply Cybrids.

Soybean : corn, Soybean : tobacco, etc., In all these examples cell fusion & formation of heterokaryon have been achieved but not nuclear fusion. Further in many of these cybrids, chromosomes of one or more of the other parental genome is progressively eliminated. Melchers et al (1975) were the first to use the term cybrid.

Q. Gene bank & functions

Ans ⇒ Gene bank ⇒ It is an institution where valuable plant material, likely to become irretrievably lost in the wild or in cultivation is preserved in a viable condition. Gene banks conserve stocks of both seeds and vegetative material.

Function ⇒ It needs an easy access to germ plasm collections to develop new and better yielding varities which are resistant to stresses, pests and diseases.