

Budding

Budding is a form of asexual reproduction in which a new organism is formed from an outgrowth or bud that is formed by cell division at one particular site on an organism. This bud remains attached to the parent organism as it grows and only separates when it is mature.

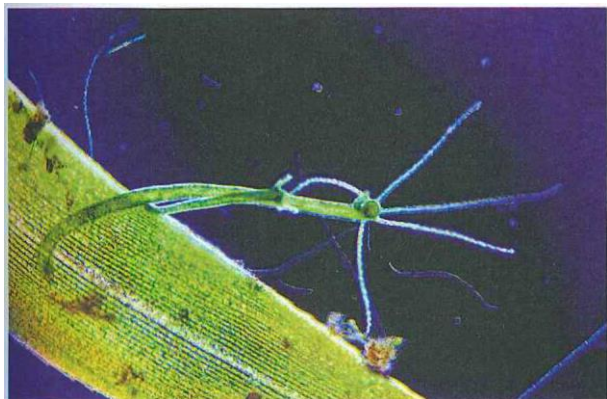


Figure 9.2 An example of Hydra, a simple organism, with two buds

Spore formation

In asexual reproduction in yeast, spores are formed in special fruiting bodies called sporangia.

In sexual reproduction, spores are formed by the fusion of male and female gametes.

Table 9.1 Advantages and disadvantages of vegetative propagation

Advantages	
	- The offspring are genetically identical and so advantageous traits can be preserved. - Only one parent is required, which takes away the need for pollination. - Many plants are able to tide over unfavourable conditions such as extreme cold or drought. This is because of the presence of organs of asexual reproduction such as tubers, corms and bulbs, which are underground. - Vegetative propagation is beneficial as you can grow crops such as bananas and sugarcane that do not produce viable seeds. An example of vegetative propagation is seedless varieties of fruit. - Tissue culture can be used to grow disease-free plants.
Disadvantages	
	- There is no genetic variation and so plants can become weaker. They are more prone to diseases that are specific to their species. This could mean the loss of an entire crop. - If many plants are produced, it could result in overcrowding and a lack of nutrients.

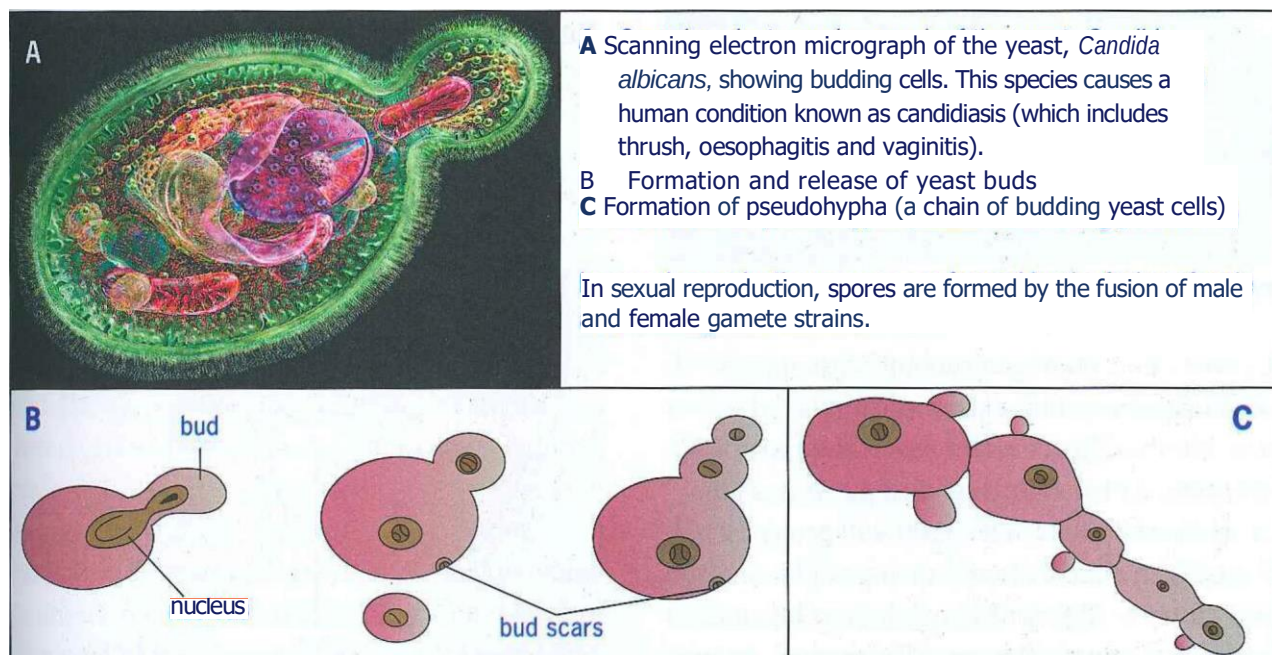


Figure 9.3 Reproduction in yeast

