

1. [Nov/2023/Paper_9700/42/No.2](#)

Yeasts are unicellular organisms from the kingdom Fungi. *Saccharomyces cerevisiae* is one species of yeast that can carry out either asexual reproduction by mitosis or sexual reproduction by meiosis.

Budding in *S. cerevisiae* is a process where a small daughter cell forms as a bud on the parent cell. The bud contains a copy of the parent cell nucleus and it eventually separates from the parent cell to form a new cell.

S. cerevisiae can exist in two forms: haploid cells or diploid cells.

- Haploid cells can be one of two different mating types: **a** and **α**.
- Haploid cells can only mate with other haploid cells of the opposite mating type.

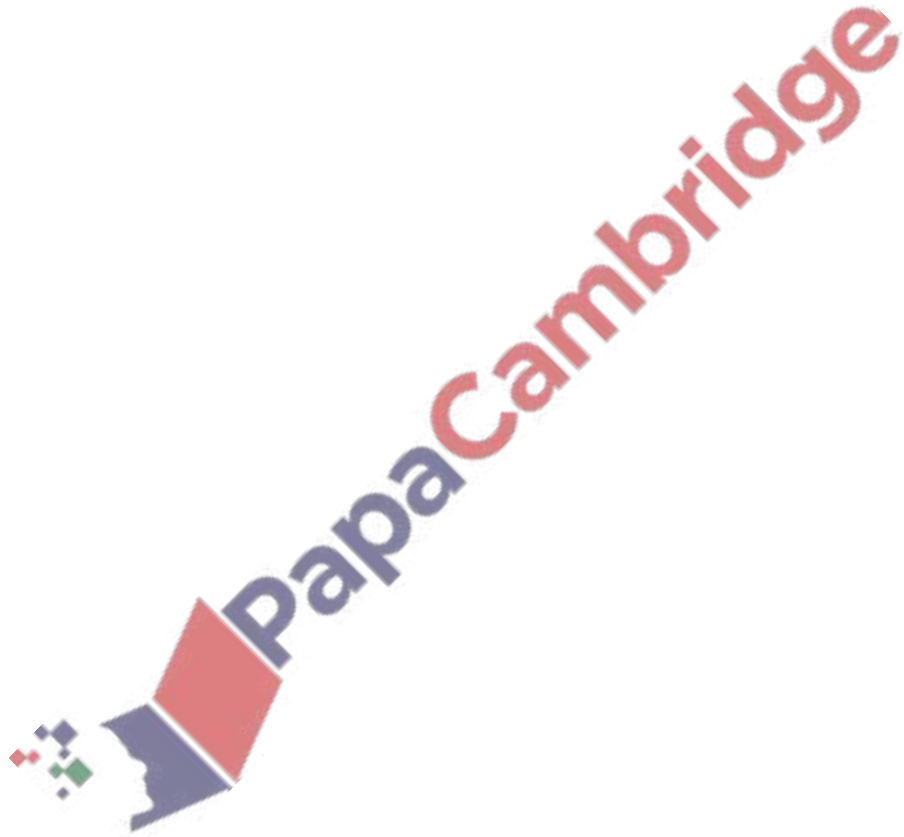


Fig. 2.1 shows the life cycle of *S. cerevisiae* with its asexual and sexual reproductive stages.

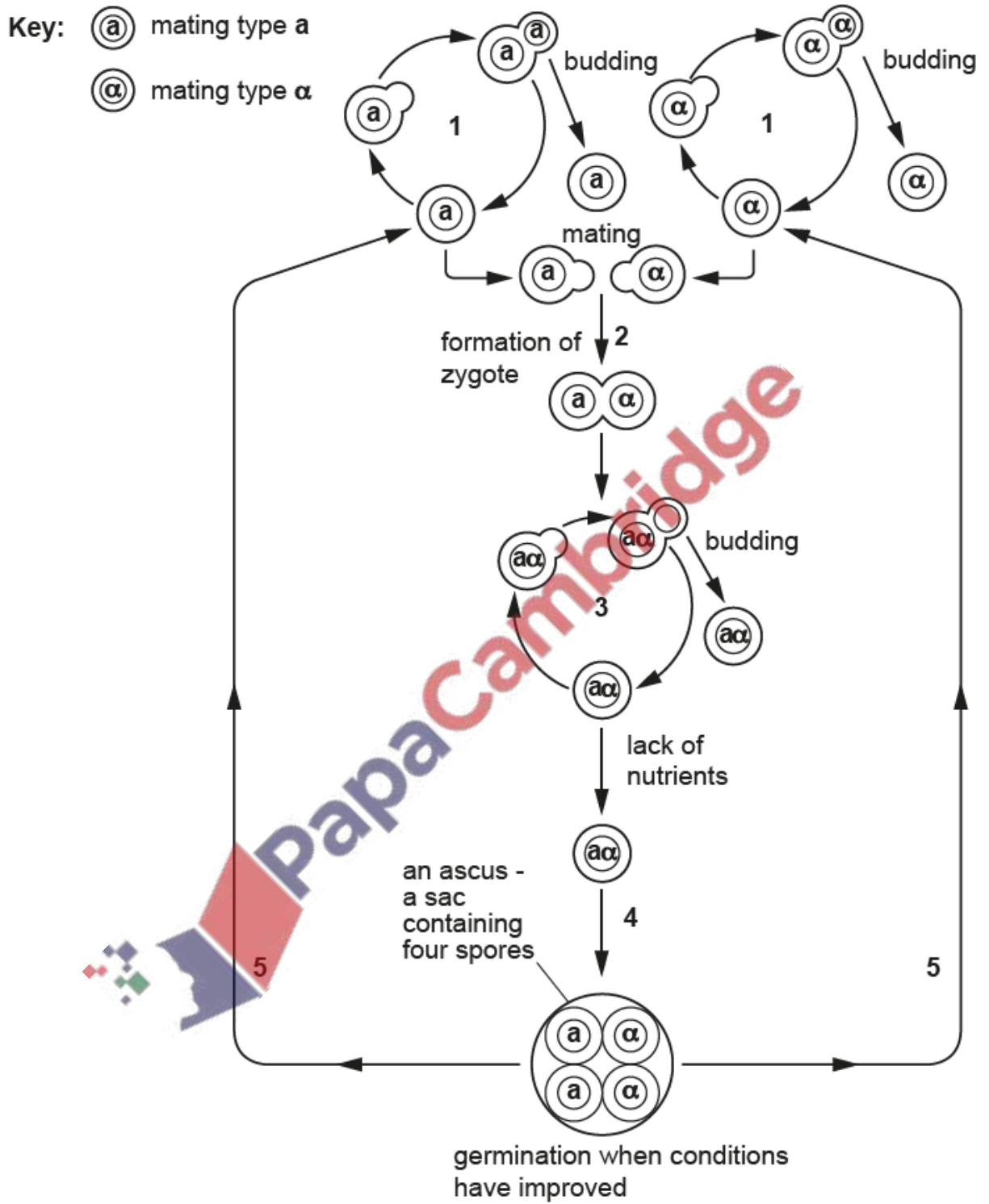


Fig. 2.1

(d) State **two** features, other than reproduction using spores, of the kingdom Fungi.

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