

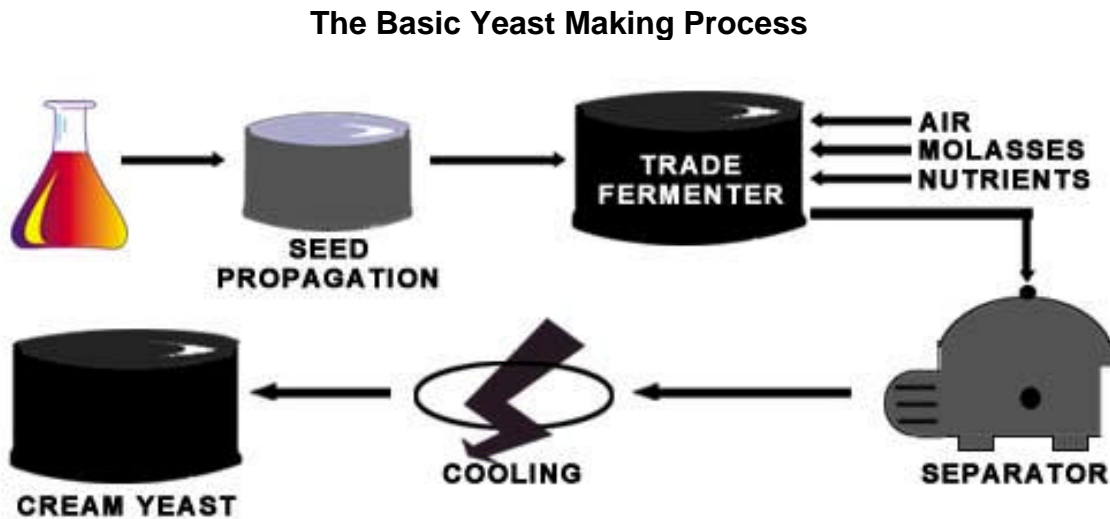
The Manufacturing of Yeast

The manufacturing process for yeast can be likened to farming – it involves preparation, seeding, cultivation and harvesting.

As you learned in The Story of Yeast, the favorite food for yeast is sugar. In the commercial production of yeast, molasses is used to provide this sugar source. Molasses is a by-product of the refining of sugar beets and sugar cane. Either cane molasses or beet molasses can be used, however, some yeast manufacturers prefer a mixture of the two varieties.

Quality Assurance

In all the yeast processes, utmost care is taken to produce a product of the highest possible quality and purity. Samples are routinely checked by the laboratory and frequent cleaning and sterilization of the equipment are conducted to assure the proper standards are met.



Step #1: Preparation

Before feeding molasses to the yeast cells, it must be clarified and sterilized. This is done in order to assure the final yeast color. The sterilizing also prevents bacteria and other organisms from being introduced during manufacturing.

The molasses is then diluted with water, adjusted for acidity, heated until almost boiling and filtered through heavy clothes.



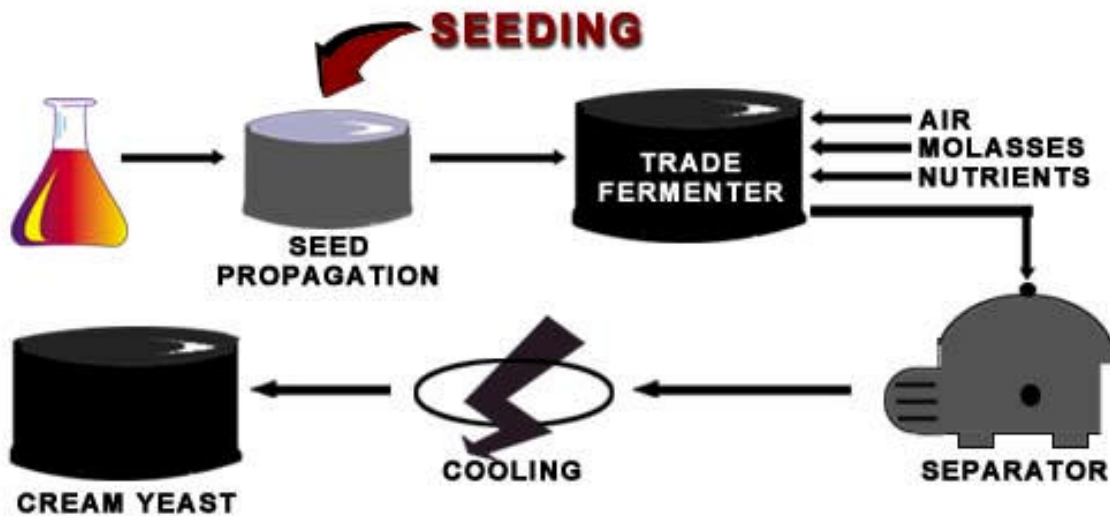
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Step #2: Seeding

The seed yeast is a carefully maintained laboratory culture so as to avoid contamination by “wild” yeast present in the air. Yeast seeds are selected with care according to the type of yeast to be produced and the specific characteristics desired. All cultures are laboratory pure; all transfers are made with absolute sterility; all vessels are completely sterilized.

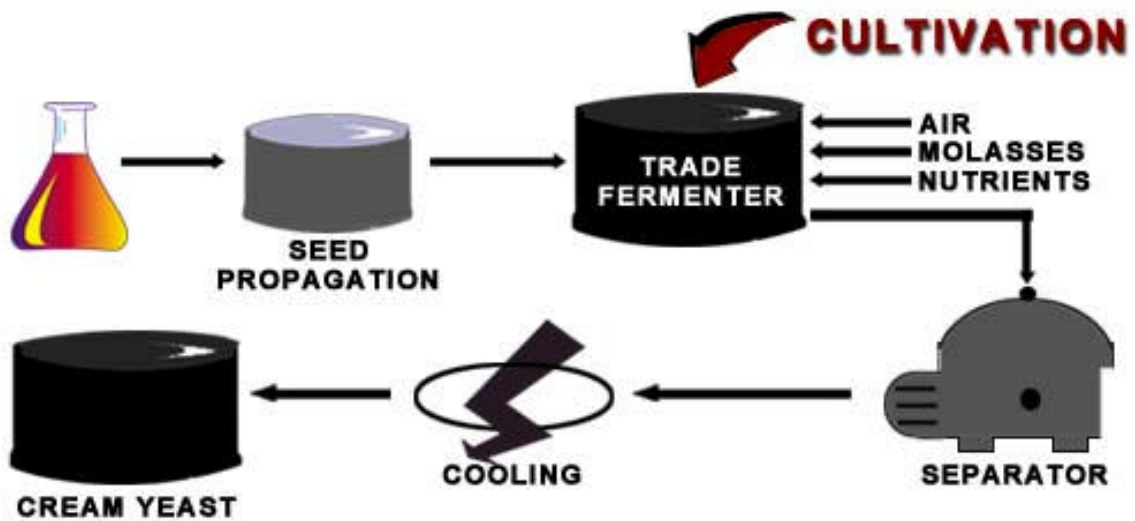
The “seed yeast” is placed in small flasks where it is allowed to grow. It is then transferred in a series of steps from these small flasks to tanks of about 1,000 gallons in volume. Now known as “stock yeast”, it is separated from the alcohol generated by the fermentation and stored in refrigerated tanks for the subsequent fermentation cultivation.



Step# 3: Cultivation

The cultivation or advancement of the fermentation process is accomplished in large 40,000-gallon vessels. It is impractical at this point to sterilize such large vessels but careful cleaning with steam assures cleanliness and quality.

The “stock yeast” is fed measured quantities of molasses and large quantities of air. The temperature is carefully controlled and acidity (pH) frequently adjusted through the addition of ammonium salts. This process is continued until the yeast achieves the capacity of these 40,000-gallon fermenting tanks. The yeast is then harvested.



Step# 4: Harvesting

The harvesting of yeast is nothing more than concentrating the yeast cells by passing the fermented liquid through large centrifugal pumps called “separators”. This process is similar to spinning clothes dry in a washing machine. The result is an off-white liquid called “cream yeast”. Further processing is dependent on the type of yeast desired.

