

## SOME NOTES ON STARTERS FOR CHEESE- MAKING

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To any cheesemaker following closely the work it must have become apparent at some time or other that it does not necessarily follow that because cooking-temperatures and acidity are the same with different starters the cheese will show the same degree of acidity. Cases are known of starters doing good work at one factory but failing to show much of their vigour at another, yet where a starter known to be clean by a bacteriological examination was taken to another district good results were obtained.

It appears to be fairly common in most districts for cheesemakers to obtain starters from one another. While this practice in some cases is sound, it does not tend to improve the vitality of starters as a whole, especially when such starters may be contaminated. While much care and attention has been and is being given to the daily propagation of starter, there still remains room for further advancement by giving stricter attention to the daily propagation of mother starters, especially when a fresh starter has been obtained from a reliable source.

Practical cheesemakers are fully alive to the necessity for obtaining absolutely clean fresh milk for the making of starter. With a view to making sure that the milk attains such a standard, curd tests could be made or samples submitted to the reductose and fermentation test. Extra care could be given along the line of making sure that the milk used for the daily propagation of the mother starter was kept as free from contamination as possible. Pasteurizing and cooling in a separate vessel or container would ensure this to a large extent. By such treatment a higher pasteurizing-temperature would be more quickly obtained and cooling be more rapid. Such a procedure would afford a more reliable method of obtaining suitable milk for the propagation of a new starter from a culture of lactic ferment.

Good results can be obtained by pasteurizing half a gallon of fresh milk at a temperature of about 190° F. for one hour and a half, then cooling down to 100° to 110°, at which temperature the milk is held for one hour before pasteurizing again at a temperature of 190° for one hour. The milk is then cooled to 85° as quickly as possible and the culture powder added, the temperature being maintained until coagulation has taken place. Should there then be any danger of acidity developing too far the culture can be cooled down.

The milk could be pasteurized in the same manner for the second and any further propagations desired, until such time as the starter was ready for general use.

It is a well-known fact that a starter if allowed to become overripe loses its vitality. Hence the necessity for guarding against this by keeping the starter at an even temperature and using only the minimum amount of culture required to have sufficient acidity