

## Fresh milk preservation using lactoperoxidase system at different storage conditions

**Tadesse Bekele and irew Kassa**

Ethiopian Institute of Agricultural Research, Ethiopia

Lactoperoxidase, bacteria static enzyme naturally present in milk was evaluated at different storage conditions as milk preservative. Milk collected from local and crossbred cows at the research and collection centers on farm was either treated with Lactoperoxidase System (LPS) or control. For both sites, LPS treated and control milk was kept at room temperature and inside cold water. Alcohol and clot-on-boiling tests were used to detect milk deterioration after preservation. LPS treatment resulted in increased milk shelf life. Its effect, as observed from both on-station and on-farm, LPS was more effective at lower temperature. Milk treated with LPS under on station or on farm had longer shelf life (22%) and higher pH value than untreated milk. Milk kept inside water had longer (17%) shelf life and lower temperature as compared to milk kept under room temperature ( $P<0.05$ ). Alcohol and clot on boiling quality tests used to detect milk shelf life, temperature and pH value were statistically not significant ( $P<0.05$ ). LPS can be applied to extend the shelf life of milk. This brings multiple advantages for smallholder farmers lacking milk cooling facilities can keep evening milk overnight to deliver the following morning by treating with Lactoproxidase.

### Biography

Tadesse Bekele has completed his M.Sc. at the age of 30 years from the University of Guelph. He is a researcher in the Ethiopian Institute of Agricultural Research. He has published more than 15 proceedings and 6 papers in reputed journals and is a member of Ethiopian Society of Animal Production.

[tadesselutta@yahoo.com](mailto:tadesselutta@yahoo.com)