

Influence of Yeast Strains on the Quality of Sorghum Beer.

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Abstract:

Studies were carried out on the influence of two commercial yeasts and palm wine yeast isolate (Saccharomyces cerevisiae) on the quality of sorghum beer. One of the two commercial yeasts was obtained from Africana Brewery, Ibadan and the other was a Bavarian bottom fermenting yeast purchased from host Germany. The sorghum wort samples were fermented at selected temperatures of 9°C, 15°C and 15°C /9°C (alternating both 15°C and 9°C) for 6, 4, 5 days respectively.

The sorghum beer samples were evaluated for pH, acidity, alcohol content, sugar and protein content. The specific gravity of the samples and the yeast count of each culture were also monitored daily. Organoleptic tests were also carried out on the finished products. The results indicated that the different temperatures employed, produced differences in the levels of alcohol content, unfermented carbohydrate, protein, acidity and overall flavour of the products. The two commercial yeasts were observed to utilize more sugars and to produce more alcohol than palm wine yeast. The Africana brewery yeast particularly utilized the highest amount of sugar at all the three temperatures and produced the highest percent alcohol at 9°C and 15°C while at 15°C /9°C, the Bavarian yeast produced the highest amount of 6.8% alcohol.

The result obtained from the protein analysis of the final beer; samples showed that beer of better stability can be obtained at 15°C and 15°C /9°C. The pH values of the beer samples ranged between 3.95 and 4.20. At 15°C and 15/9°C the palm wine yeast produced the lowest pH values of 3.95 and 4.05 respectively. It also produced the highest amount of titratable acidity at the three temperatures.

The quality evaluation of flavour, taste and acceptability of the finished products indicated that the palm wine yeast gave products of highest quality. This shows that the use of palm wine isolate may produce beer of acceptable quality.

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