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**LIST OF ABBREVIATIONS**

|  |  |
| --- | --- |
|  |  |
| % | Percent. |
| CVASU | Chittagong Veterinary and Animal Sciences University |
| GDP | Gross Domestic Product. |
| DLS | Department of Livestock Services. |

**Abstract**

This study was conducted to evaluate the insemination scenario of smallholding cattle farming in hill and plain land and to assess reproductive performances based on the insemination practices. Data were collected from the field level from three district of Bangladesh, of which two districts Pirojpur sadar and Matlab, Chandpur are of representative of plain land and Khagrachari sadar is a hill area. In total 235 cattle’s data were studied in this study. Results show that >20% cattle were inseminated artificially in hill area and >80% cattle were under artificial insemination in plain land. Service per conception in hill was found 1.45±0.05 whereas in plain land it was 2.6±0.51. There also found significance difference (p<0.05) in calving interval in hill area and in the plain land (12.85±0.27 in hill vs 14.95±0.60 in plain land. Another finding of this study was that the conception rate is higher in 3 to 6 years aged cow than the other. Our results also indicated a negative correlation between milk yield and service per conception. This scenario can be changed by applying artificial insemination in large scale in hill area.

**Key word:** Insemination, Hill area, Plain land and Reproductive performance