



Studies on the Effect of Different Doses of Nitrogen on Quality Parameters of Wheat under Eucalyptus Based Agri-Silvi-Horticultural System

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Abstract: The study was conducted to assess the quality traits of four different wheat varieties (WH-1105, HD-2967, WH-711 and DPW-621-50) under a five year old Kinnow and Eucalyptus based agri-silvi-horticultural system with different doses of fertilizers. The experiment was laid in a split plot design with four different doses of nitrogen viz. Recommended dose of fertilizer (RDF), RDF + 10% extra dose of N, RDF + 20% extra dose of N, RDF + 30% extra dose of N. The whole amount of P and K and half N was applied at the time of sowing. The remaining N through urea was top dressed at crown root initiation (CRI) stage. Similarly, all the four varieties viz., WH-1105, HD-2967, WH-711 and DPW-621-50 were also sown as sole crop (devoid of trees) with recommended dose of fertilizer only. The data pertaining to different quality parameters viz. protein content, gluten content, sedimentation value, grain hardness etc. in different wheat varieties revealed that the higher values were recorded under agri-horti and agri-silvi-horti system over sole cropping system. Further, it was observed that higher protein content, grain hardness and grain lustre were recorded in wheat variety HD- 2967 while, variety WH-711 exhibited higher gluten content and sedimentation values under both the agroforestry based systems in comparison to mono-cropping system. Similarly, it was also observed that different quality parameters increased with the increase in dose of fertilizer however, the difference between RDF+10%, RDF+20% and RDF+30% was found to be non-significant.

Keywords: Fertilizer, Quality parameters, Wheat, Eucalyptus, Agri-silvi-horticultural system
