**Adoption and Intensity of Modern Beehive in Wag Himra and north Wollo zones, Amhara Region, Ethiopia**

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***Abstract***

*The objectives of the study were (1) quantifying the determinant factors of probability of adoption, (2) evaluating the intensity of modern beehive use and (3) identifying the major constraints of honey production using modern beehives in wag Himra and north wollo zones, Amhara Region, Ethiopia. Multi stage sampling methods were employed. 268 rural bee keepers were interviewed* for *this study with proportional random sampling method from adopters and non adopters. Among the 268 beekeepers, 97 (36.19%) and 171 (63.81%) were adopters and non-adopters respectively. Descriptive analysis and econometric (double-hurdle model) were applied using SPSS-22 and STATA-12, respectively. The first hurdle result revealed that age, number of livestock owned, educational level, number of local hives beekeepers possessed, training provided, total annual income of beekeepers, credit service, distance to woreda agricultural office, extension service and participation on off-farm activities are the main factors that affect the probability of adoption decision. Moreover, the second hurdle revealed that age, number of local hives beekeepers possessed, training provide, credit service, and distance to woreda agricultural office are the main factors that affect the intensive use of modern beehives. Additionally, Pests and predators, drought and lack of bee equipments and accessories are ranked as the first, second and third major constraints of bee keeping respectively which lead the bee colony to abscond and reduction of honey yield. According to the finding the authors recommend that those significant factors in adoption decision and intensive use of modern beehive should be considered by policy makers and planner in setting their policies and strategies of honey production improvement interventions.*

***Keywords:*** *Apiculture, Adoption, Modern beehive, double-hurdle Model, Intensity*