

## **ABSTRACT**

### **Factors Influencing Adoption of Pigeon Pea and its Impact on Household Food Security in Machakos County, Kenya**

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A household survey was carried out in Kalama, Mwala and Yatta Sub-counties of Machakos County Kenya to obtain data on the current situation of pigeon pea value chain. A total of 414 households were interviewed in the month of October 2020. Data was analysed using descriptive statistics, Logit Model to determine factors that influence adoption of pigeon pea (*Cajanus cajan* L) using Statistical Package for Social Scientists (SPSS) version 20 Software. The HFIAS model was used to determine the impact of adoption of Pigeon Pea on household food security. The results of the descriptive statistics showed that there was low adoption of the Pigeon pea technologies and this implies that more needs to be done in creating awareness of the improved Pigeon pea varieties. The Logistic model results showed two factors that significantly influence adoption of Pigeon pea varieties by farmers. These were membership to a community group and access to credit. More needs to be done to increase adoption of the new/improved varieties in Machakos County, Kenya.

**Keywords:** Adoption, HFIAS model, pigeon pea, climate smart crops, impact, food security, Machakos county.