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Residual effect of organic manures and inorganic fertilizers on succeeding crop pea (*Pisum sativum* L.) cv. BONNEVILLA

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ABSTRACT

A field experiment was conducted in the experimental fields of Division of Olericulture, SKUAST-K, Shalimar to assess the residual effect of organic manures and inorganic fertilizers on succeeding crop pea in okra-pea rotation. The experiment comprised of 25 treatments including sole application of organics and inorganics, integration of organics and inorganic fertilizers. The present investigation revealed significant variations for various attributes under study in pea due to residual effect of various treatments. Maximum values of plant height (44.43 cm), pod number plant^{-1} (23.22), pod yield plant^{-1} (37.07 g), pod yield ha^{-1} (123.56 q) and nodule number plant^{-1} (46.39) were observed in treatment T_{24} (FYM 3t + SM 2t + PM 0.5t + VC 0.6t + BF 7 kg ha^{-1} + 60: 30: 30: N: P_2O_5: K_2O kg ha^{-1}). Among sole application of organics, T_4 (PM 6 t ha^{-1}) registered higher values of 40.57 cm, 16.89, 26.23 g, 87.43 q and 33.35 for plant height, pod number, pod yield plant^{-1}, pod yield ha^{-1} and nodule number plant^{-1}, respectively. Organic integration recorded higher values of plant height (43.38 cm), pod number plant^{-1} (21.75), pod yield plant^{-1} (34.74 g), pod yield ha^{-1} (115.80 q) and nodule number plant^{-1} (43.92) with treatment T_7 (FYM 6t + SM 4t + PM 1t + VC 1t + BF 7 kg ha^{-1}). Integration among organic with inorganic sources in equal proportion (50:50) registered higher values of 44.27 cm, 22.35, 35.65 g, 118.84 q and 45.55 for plant height, pod number plant^{-1}, pod yield plant^{-1}, pod yield ha^{-1} and nodule number plant^{-1} with treatment T_{21} (PM 3t + 60:30:30 N: P_2O_5: K_2O kg ha^{-1}). Maximum net income (Rs. 22,944.30) and returns Re^{-1} (1.59) invested was recorded with treatment T_{24}.

Key words : Residual effect, Organic manure, Inorganic fertilizers, Okra-pea rotation