International Journal of Applied Mathematics
& Statistical Sciences (IJAMSS)
ISSN(P):2319-3972; ISSN(E): 2319-3980
Vol. 5, Issue 2, Feb - Mar 2016; 77-86

International Academy of Science,
Engineering and Technology
Connecting Researchers; Nurturing Innovations

CORRELATION AND PATH STUDIES TO DEFINE TRAITS FOR IMPROVING MARKETABLE TUBER YIELD IN ADVANCED CLONAL PROGENIES OF POTATO (*SOLANUM TUBEROSUM* L)

NIRMODH PRABHA, H.C. NANDA, HARSHVARDHAN & K.K. PANDEY

Department of Plant Breeding and Genetics, Indira Gandhi Krishi vishwavidalaya, Raipur, (C.G), India

ABSTRACT

A field evaluation of clonal population was conducted under AICRP on potato, in Indira Gandhi Krishi vishwavidalaya, Raipur, (C.G.) to assess interrelationship among various yield and quality attributes in clonal progenies (bulk, F_1C_1, F_1C_2, & F_1C_3) of potato. Association analysis revealed that marketable tuber yield plant^{-1} exhibited highly significant and positive association with number of tubers plant^{-1}, tuber weight plant^{-1}, number of leaves plant^{-1} number of branches plant^{-1}, number of eyes tuber^{-1}, plant emergence percentage at 30 DAP, number of shoots, dry matter content of shoots and plant height. Path analysis revealed that, characters such as number of tubers plant^{-1}, tuber weight plant^{-1} and starch content revealed that the components showing high correlations with marketable tuber yield also had the high and positive direct effect on marketable tuber yield. This suggests that, the direct selection for number of tubers and tuber weight would likely to be effective in increasing marketable tuber yield.

KEYWORDS: Correlation, Path Coefficient Analysis, Clones, Potato