Screening of Different Exotic Varieties of potato through Adaptability Trial for local cultivation

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Potato (*Solanum tuberosum* L.) is the 4th most important food crop of the world after wheat, rice and maize. It is the staple food in many European countries. Being rich in starch (one of the main three food ingredients) and having the highest productivity per unit area, has great potential to address the challenge of the food security. Processed potato is also used as chips and crisps etc as 'fast food'. There are many biotic and a biotic factors which check the production of potato and become hurdle in achievement production potential of potato. **20** new varieties along with two checks were evaluated. Plant to plant and row to row distances were maintained as 20 cm and 75 cm, respectively. The trial was conducted according to the randomized complete block design with three replications. Normal agronomic and plant protection measures were carried out in the crop. It is revealed from experiment that exotic variety 171 gave the highest yield of **35.5** t/ha followed by Masai with **31.0** t/ha tuber yield. The check variety Simply Red **24.2** t/ha yield, while the lowest tuber yield (**1.5** t/ha) was produced by the exotic variety KWS-06-125. The maximum emergence was shown by the Variety Red Sun (**89.7 %**). The lowest emergence was shown by the variety Camel (**71.7**%). Regarding tuber grades, it was noted that the maximum Ration size tubers were produced by the exotic variety Compass (**3.7**%), whereas 11 varieties did not produce ration size tubers at all. The variety Red Sun produced lowest percentage of small size tubers (**12.7**%) whereas maximum small size tubers (**93.0**%) were produced by the variety Jitka. Regarding disease infestation, it was noted that the maximum scab incidence (**4.0**%) was recorded on the variety Masai, maximum rhizoctonia attack (**60.0**%) was recorded on the variety Camel and maximum tuber cracking (**0.7**%) was noted on the variety Vendulla.