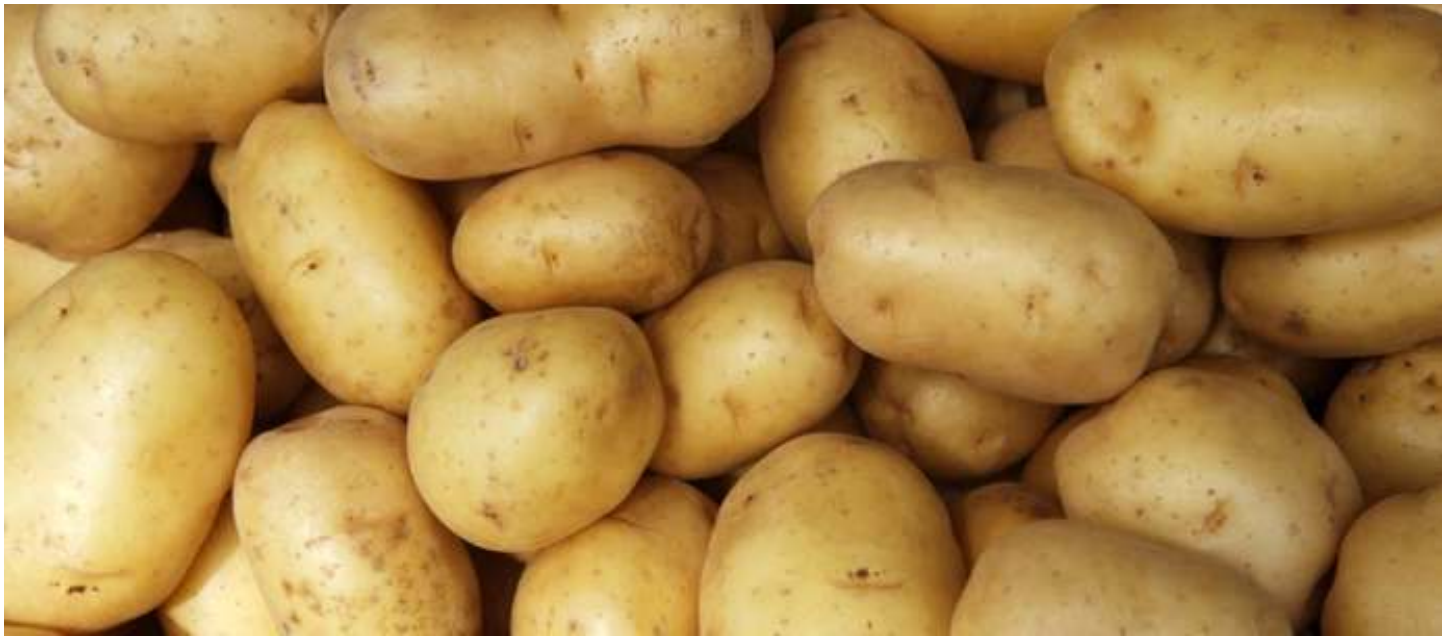
AJER ASIAN JOURNAL OF EMERGING RESEARCH
eISSN:2664-5211 | pISSN:2663-4988



Research Highlight

HOW DO VARIETAL DIFFERENCES INFLUENCE THE GROWTH POTENTIAL OF POTATO VARIETIES?

Fariha Sattar
Centre of Agricultural Biochemistry and Biotechnology, University of Agriculture, Faisalabad, Pakistan

Key words:
Potatoes | high-potential food crop | food security | farm yields | growth performance | morphological adaptability | cropping season

Potato *(Solanum tuberosum)* is an important vegetable crop, which is grown all over the world. Potato is an annual, herbaceous plant which belongs to the family Solanaceae. It is known as the "King of vegetables". It is the world's fourth largest food crop after wheat, rice and maize. Potato is the third largest food and vegetable crop in Bangladesh[1]. It is the fifth major vegetable crop in Pakistan.

The name potato is believed to be derived from the Inca name 'Papa'. The potato was first cultivated in Southern Peru and Northwestern Bolivia and then carried on to Spain, Italy and Germany about the middle of the 16th century. It was introduced to Ireland in the late 16th century, where it quickly became an important staple food. The Portuguese introduced potato in Indo Pak sub-continent and the British encouraged its cultivation in the 19th century. Potato is an important cash crop which plays a crucial role in uplifting the financial condition of many families in Sub Saharan Africa. Due to high prospects for growth of the market for fresh potatoes[2], it can prove a good foundation for rural development in Sub-Saharan Africa.

According to CSA[3], more than 1 Million farmers are involved growing potatoes in Ethopia. This crop possesses the ability to provide a high yield and highly nutritious product within a shorter period of time.

There is enormous market demand for potato due to its high nutritional value in Gamo-Gofa zone. In spite of its huge significance, farm yields of potato are regularly below 10 t ha^{-1} as compared to 30-50 t ha^{-1} that can be achieved in good growth conditions.

Considering these facts, a new research was carried out in order to identify the superior potato cultivar for morphological adaptability and to assess the growth performance as well as morphological adaptability of improved and local varieties of Irish potato. For this purpose, scientists selected five improved (Jalene, Gudenie, Belete, Degemegn and Tolcha) and two local varieties (Father and Susallu)[4].

During this experiment, it was found that plant height and number of shoots gets considerably affected during autumn season of growth whereas during the winter cropping season, plant height as well as number of leaves per plant was found to be influenced significantly by cultivars. In this study, Belete variety exhibited maximum plant height and shoot numbers as compared to other varieties. However, the maximum number of leaves was noted in Degemegn variety. Conversely, Tolcha variety showed the least number of leaves per plant in the autumn cropping season.

eISSN:2664-5211 | pISSN:2663-4988

Conclusively, this research clearly demonstrated the effect of varietal difference on the growth potential of potato varieties. This research will ultimately pave a way to improve production of potatoes in future.

REFERENCES

1. CSA., 2008. Agriculture: Statistical survey. Central Statistical Authority (CSA), Addis Ababa, Ethiopia.
2. Fetena, S. and B. Eshetu, 2017. Evaluation of released and local potato (Solanum tuberosum L.) varieties for growth performance. *J. Agron., 16: 40-44*
3. Hussain, M.M., 1995. Seed Production and Storage Technology. 1st Edn., North Perebag, Mirpur, Dhaka, *Pages: 520*
4. Scott, G.J., M.W. Rosegrant and C. Ringler, 2000. Global projections for root and tuber crops to the year 2020. *Food Policy, 25: 561-597*