SALIENT FINDINGS

The salient findings of the study entitled “EVALUATION OF DIFFERENT GENOTYPES OF POTATO (Solanum tuberosum L.) FOR THEIR SUITABILITY IN HASSAN REGION OF KARNATAKA” is, as mentioned below.

1) Selection of promising early maturing genotypes shall be based on the characters such as LAI (leaf area index), number of shoots and leaves, tuber dry mater (%), marketable tuber yield per plant and per plot, whereas, the medium maturing genotypes are to be chosen based on the characters, such as number of leaves, LAI, plant height, marketable tuber yield per plant and per plot and number of tubers. The processing genotypes are to be selected based on the parameters such as LAI, plant height, number of shoots, initial weight of haulm, reducing sugars and total solids and tuber dry mater (%).

2) Most promising genotype Kufri Surya can be adapted both as early maturing and processing genotype. This genotype has produced higher marketable/processing grade tuber yield and is storable up to 80 days. It has shown resistance to pests such as aphids, yellow mites, shoot borer, defoliators, potato tuber moth (PTM) and diseases such as late blight, potato leaf roll virus (PLRV) and moderately resistant to early blight, mild mosaic (MM) and severe mosaic (SM).

3) The genotype Kufri Pukhraj can be adapted both as early and medium maturing promising genotype as it has produced higher marketable tuber yield under both the maturity groups. It has shown resistance to pests such as aphids, yellow mites, shoot borer, defoliators, PTM and diseases such as late blight, early blight and moderately resistant to MM, SM and PLRV.

4) The advanced genotype J/97-243 can be adapted as promising early maturing genotype due to higher marketable tuber yield. The genotype has shown resistance to pests such as aphids, yellow mites, shoot borer, Helicoveropa, Spodoptera, PTM, late blight disease and moderately resistant to PLRV.

5) Other advanced genotype J/96-171 was found promising under early maturity group with higher marketable tuber yield. It has shown resistance to pests such as aphids, yellow mites, shoot borer, Spodoptera, Helicoverpa and PTM. The plants have shown
resistance to diseases such as late blight and moderately resistant to early blight and PLRV.

6) Advanced genotype DSP-7 has produced higher marketable tuber yield and can be adapted as promising medium maturing genotype. It has shown resistance to pests such as aphids, mites and diseases late blight, early blight and moderately resistant to SM and PLRV.

7) The medium maturing advanced genotype MS/0-3740 has found promising through higher marketable tuber yield. It has shown resistance to pests such as aphids, yellow mites and PTM and diseases such as, late blight, early blight, MM and moderately resistant to SM.

8) Other advanced medium maturing genotype MS/99-1871 has produced higher marketable tuber yield, shown resistance to pests such as aphids, yellow mites and diseases such as late blight, early blight and PLRV.

9) The released promising medium maturing genotype Kufri Pushkar also produced higher marketable tuber yield, shown resistance to pests such as aphids, yellow mites, and diseases such as late blight, early blight, PLRV and moderately resistant to SM.

10) The advanced processing genotype MP/98-171 has produced higher processing grade tubers, tubers can be used for making chips and finger chips, plants have shown resistance to pests such as, aphids, yellow mites, shoot borer, Spodoptera, Helicoverpa, PTM and diseases viz., late blight, early blight and MM.

11) The exotic processing genotype Atlantic has produced higher processing grade tuber yield, tubers can be used to produce high quality chips, plants have shown resistance to pests such as aphids, yellow mites, shoot borer, Spodoptera, Helicoverpa, PTM and moderately resistant to diseases such as early blight and MM.

12) Among the evaluated 14 advanced early maturing genotypes and four released genotypes, two advanced genotypes J/97-243 and J/96-171 and two released genotypes Kufri Surya and Kufri Pukhraj have shown good adaptability and they are suitable as early maturing genotypes for Southern transitional zone of Karnataka.
13) Among the five advanced medium maturing genotypes and three released genotypes evaluated, only three advanced genotypes DSP-7, MS/0-3740 and MS/99-1871 and two released genotypes Kufri Pukhraj and Kufri Pushkar were found promising to Southern transitional zone of Karnataka.

14) The processing genotypes Kufri Surya, MP/99-322 and Atlantic are most suitable to Southern transitional zone of Karnataka.

15) The application of bio fertilizer i.e., Phosphate Solubilising Bacteria (*Pseudomonas striata*) with 25 per cent reduced quantity of recommended phosphatic mineral fertiliser along with RD of N and K and FYM was found to reduce the cost of production and increase profitability of potato cultivation as evidenced by the analysis of incremental B: C ratio.

16) The foliar spray of PHYTON-T @ 0.4 per cent along with mancozeb (0.3%) at 25\(^{th}\), 35\(^{th}\) and 45\(^{th}\) days after planting resulted in better growth, biomass, tuber yield and reduced the late blight disease severity.