Effect of pre-germination and harvesting date on yield and some agronomical characteristics of three potato cultivars

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The present study was conducted with using split plot in a factorial design with three replications for two years from 1994 to 1996.

The main factor was harvesting date with five levels, started from 6th of Aug., continued 15 days interval and subplot were pre-germination at two levels (germinated or not germinated) and cultivars at three levels (Aula, Draga and Kaizer).

Pre-germination was achieved within one month, in a controlled environment conditions of required light intensity and temperature of 15-20·c.

The analysis of multiple variance was run and results showed that pre-germination positively influenced number of stem in plant date of germination, harvesting and tuberisation which was significant at 1% level. Date of harvest only affected the number of tuber per plant which was significant at 1% level.

There was significant difference amoung cultivars for recorded characteristics. Comparison between means indicated that the productivity of cv. Draga was significantly higher (32130 kg/ha)than two others (Kaizer with 1993 kh/ha and Aula 2958 kg/ha) which classified them into different clauses of A and B. There was significant two way interaction between cultivars and pre-germination, indicating that Kaizer and Aula responsed positively to pre-germination whereas it was found to be detrimental for Draga. Comparison of correlation coefficients showed that there were significated positive corrlation between yield and above mentioned characteristics. Therefore, their correlation was calculated by using step by step correlation method which resulted in following equation $y = 4.24 + 0.62\ x1 + 1.9\ x2 + 0.45\ x3 - 0.52\ x4 + 0.64\ x5$ in which y and x1 ... x6 stand for:

y= yield	x1=stem length	x2= stem number pre plant
x3= date of germination	x4= date of tuberisation	x5= number of tubers

Eventually, it can be concluded that the cv. Draga with highest productivity, less infection by pest in field as well as in store is recommended for Ardabil area.