

عنوان مقاله:

Effect of ۶-Benzylaminopurine and Absciscic Acid on Gas Exchange, Biochemical Traits, and Minituber Production of
(.Two Potato Cultivars (*Solanum tuberosum* L

محل انتشار:

مجله علوم و فناوری کشاورزی، دوره 20، شماره 1 (سال: 1396)

تعداد صفحات اصل مقاله: 11

نویسندگان:

M. J. Ahmadi Lahijani - *Department of Agronomy and Plant Breeding, Faculty of Agriculture, Ferdowsi University of Mashhad, Islamic Republic of Iran*

M. Kafi - *Department of Agronomy and Plant Breeding, Faculty of Agriculture, Ferdowsi University of Mashhad, Islamic Republic of Iran*

A. Nezami - *Department of Agronomy and Plant Breeding, Faculty of Agriculture, Ferdowsi University of Mashhad, Islamic Republic of Iran*

J. Nabati - *Research Centre of Plant Sciences, Ferdowsi University of Mashhad, Islamic Republic of Iran*

J. Erwin - *Department of Horticultural Science, University of Minnesota, ۳۰۵ Alderman Hall, St. Paul, MN ۵۵۱۰۸, USA*

خلاصه مقاله:

Possibility of improving physiological traits and minituber yield of potato cultivars (cvs. Agria and Fontane) was investigated by application of plant growth regulators (BAP, ABA and BAP+ABA) at tuber initiation stage. Regardless of the cultivars, Net photosynthesis rate (Np), actual quantum yield (Φ), stomatal conductance (gs) and Transpiration rate (Tr) of BAP-treated leaves were superior to those of the control. For Agria, the greatest Chlorophyll content (Chl) was observed in BAP-treated plants, while the highest Chl for Fontane was observed in ABA-treated plants. Increasing Np and Chl content were associated with higher Soluble Carbohydrate content (SC). BAP+ABA application increased SC of leaflets in both cultivars compared with the control. Tuber Yield per Plant (Y/P), Mean Tuber Weight (MTW), and Tuber Number (TN) were stimulated by foliar treatment of plants with PGRs compared with the untreated ones, but there were significant interactions between cultivar and hormone type. Positive correlation between SC and Y/P ($r=0.97^*$) and MTW ($r=0.97^*$) were observed in Agria. Leaf area as well as dry and fresh weight of aerial parts of the BAP+ABA-treated plants were more than the untreated plants and other PGR treatments. These results indicate that either of BAP, ABA, or their combination could be effectively used to improve physiological traits and tuber yield of these cultivars, although, Agria responded more prominently to PGRs than Fontane.

کلمات کلیدی:

Net photosynthesis rate, Photosynthetic pigments, Plant growth regulators, Soluble carbohydrate, Tuberization

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