PRELIMINARY RESULTS REGARDING THE EFFECTS OF EXTREME CLIMATIC CONDITIONS ON THE YIELD QUALITY OF DIFFERENT ROMANIAN POTATO VARIETIES

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Abstract

Experiments with varieties Christian, Cumidava, Roclas and Rustic took place in Brasov, in 2012 and 2013, years, very distinct from the point of view of climate during potato growing season. Extreme climate conditions during the growing season of potatoes can strongly disrupt the tubers growth processes, this being reflected on the yield structure. Very high temperatures and drought in 2012 have affected potato crops in the most important production phenological phase, the period of budding-flourishing, when susceptibility face to soil humidity is highest. During this period was the largest consumer of water. Because of these unfavorable circumstances, the new tubers suffered quantitative and qualitative depreciations by deformation, dehydration, second growth and sprouting. In the year 2013, characterized by alternate rainy periods with periods without rain and higher temperatures than normal, have determined foliage lush growth that could not self-holds and went into a very early decline. Thus, starting with first decade of August, the plants were dried on an accelerated basis, starch accumulation and tubers growth being halted. Following the comparison of the years was found differences of varieties yield between 19.7 and 26.8 t/ha. Towards 2012, on 2013, varieties yield was 3-4 times higher and the starch content of plant varieties averaging 1.28%, significant differences being on Roclas and Rustic. In 2012 the average percentage of tubers depreciation by deformation was 84.9%, dehydration -27.9%, second growth -2.6% and sprouting -24.4%. The research, in addition to the data provided from the reaction conditions of cultivated varieties, put the bases of future research on the yield quality in different agro-climatic contexts.

Key words: potato, climate, quality, starch content