

THE NPK FERTILIZATION EFFECTS ON CULINARY AND TECHNOLOGICAL POTATO QUALITY

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Abstract

In this research we propose different levels of fertilization and NPK ratios, for Roclas and Christian potato varieties. The experiment was done in Braşov in a non-irrigated crop, studied during 2013-2014. Research methods in laboratory included analysis, qualitative and quantitative determinations designed for tubers using purpose. This permits multicriterial qualitative characterization of production from the studied fertilization variants. We analyzed the culinary quality traits and the correlations with tubers starch content before storage. Also we studied the average suitability for processing into chips and correlations between dry matter, starch, reducing sugar, efficiency to processing into chips and chips color before storage. Comparing variants of fertilization, on Roclas variety, tubers from variant with N100 P100 K100 louder crashed on boiling, pulp consistency is more reduced, are more farinaceous and moisture toward the rest of variants for both years, tubers starch contents positively significantly correlate with appreciation notes for milling, moisture and starch structure. With the increase of the NPK ratio from 1:1:1 to 1:0.9:2 and with increasing nitrogen dose combinations from 100 to 200 kg N/ha the decline in yield is found in chips. Notes for the chips' color have a tendency to decrease, which indicates a darker color of chips with increasing doses of nitrogen on variants with ratio 1:0.9:2, on both varieties and both experimental years. No significant correlation was obtained between reducing sugar and color of chips tubers for data achieved in the years 2013-2014, before storage for the studied varieties. The correlation between the efficiency to processing into chips and the color of chips was significant only for Christian variety (0.444*).

Key words: potato, fertilization, culinary quality, technological quality
