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Quantity and Processing Characteristics of Potatoes for Chipping during Autumn Cultivation by Harvest Time

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As the demand for processing potatoes increases, imports of raw potatoes and potato products are increasing, so it is necessary to expand potato production as raw materials for processing in Korea. Potato varieties for processing that can be grown in fall have been developed, but research on cultivation technology and processing quality management technology to improve chip processing quality is very insufficient. Therefore, this study was conducted to investigate the optimal harvest time by investigating the quantity and chipping characteristics of potato chips during autumn cultivation. As the test varieties, the chip processing varieties “Saebong”, “Eunsun”, and “Geumnaru” were used, and the potato cultivation site was the Seocheon-gun Test field (214 Gaeya-ri) of the Chungcheongnam-do. The test treatment was at harvest time after spring cultivation, and the potatoes were harvested at 70, 80, 90, and 100 days after sowing based on the sowing time. The investigation items were potato productivity (total yield, yield of standard processing, and number of tubers) and chip-processing characteristics (chip color, dry matter content, glucose content, etc.). As a result of examining the yield characteristics according to the harvest time, statistical significance was not found according to the treatment. The total yield (ton/ha) was 27.5 to 30.5, and there was no significant difference depending on the time of 70 to 100 days after harvest. The standard quantity for processing (yield of 81-250g potatoes per unit) also showed a similar trend. In chipping characteristics according to harvest time, statistical significance was high in specific gravity and glucose content. The specific gravity was highest at 1.077 at 70 days after harvest, and the glucose (mg/dL) content was the lowest at 37.5 at 80 days after harvest. Statistical significance was not recognized, but chip color (L value) was the highest at 64.4 at 70 days after harvest. Therefore, it is judged that the optimal harvesting time for chip processing is 70 to 80 days after sowing.

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