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Optimum Sowing date of Waxy Corn-Radish Cropping System in the North Central Region of Korean Peninsula

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[Introduction]

The first and most important advantage of cropping system is to increase output potential per area with involving two or more crops cultivation in the same field during one or two seasons. Farmers determine various factors such as crops, varieties, and cultural methods to earn benefic gains under cropping system. Various types of crops can be cultivated in mixed cropping practice, such as food crops, vegetables, silage crops. This helps farmers become self-sufficient in food production while also providing them the option to sell additional products for making money. This experiment was conducted to find out optimum sowing date for economic crops relating cropping system in the central northern area of Korea.

[Materials and Methods]

The experiment was conducted at Yeoncheon area in 2020 to develop double-cropping system of waxy corn and radish. Each different sowing dates of 4.15, 4.25, 5.5 in the preceding sweet corn crop and 8.20, 8.30, 9.10 in succeeding radish crop were applied in view of cultivation stabilization, yield potentials etc. Waxy corn variety 'Mibaek2', radish variety 'Hankwoel' were used as experiment materials. The experiment plot was mulched for soil water and temperature preservation and weed control. Standard cultivation methods were applied and general agronomic characters and yield related characters were surveyed.

[Results and Discussion]

Vegetable crops related food crops double-cropping system development in the central northern region was studied. Yield potential according to the sowing dates was statistically different. As sowing date was late, fresh ear yield of waxy corn was increased. Sowing date, April 30, showed 1,595kg per 10a era yield of waxy corn which was relatively higher than other sowing date treatments. Otherwise, sowing date, August 20, showed 8,100kg per 10a root yield of radish which was relatively higher than other sowing date treatments. The conclusion of this study was that optimal sowing date of waxy corn and radish double-cropping system was late April, early August respectively. However, weather condition in 2020 was not good condition for waxy corn growth meaning that we have to conduct same experiment in 2021 to get more detailed data information. And also we have to evaluate growth characteristic and yield potential of succeeding crop, radish in year of 2021.

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