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Study on the Adaptability of Soybean in North Korea's Barren Field

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[Introduction]
The food lack phenomenon in North Korea is caused by the devastation of agricultural land, the deterioration of crop cultivation technology, and the lack of agricultural production materials and agriculture machinery such as fertilizer, pesticide. Soybeans are catch crops and play an important role in reaping by increasing the nitrogen content in the soil. In particular, soybeans are an important source of protein for North Koreans. Therefore, this study is based on the results of the study of the most promising domestic varieties

[Materials and Methods]
The experimental site of this study was selected and conducted by comparing the soil chemistry of the soybean cultivation site announced in 1994 by the National Institute of Crop Science. The test varieties used in the experiment are beans for paste and tofu, beans for herbs, beans short-term paste, and tofu, with a total of 19 varieties. All soybeans were sown to a breeding distance of 90cm x 15cm and repeatedly in the randomized block design. Four seeds were sown per one hole, and finally two plants per hole were made through removal or planting.

[Result]
Comparing the results of soil analysis at Chungbuk National University's affiliated farms with the chemical composition of the appropriate soil for soybean cultivation announced by National Institute of Crop Science in 1994, the chemical properties of the soil before experiment were high in soil acidity, and amount of organic substances and effective phosphoric acid content were insufficient, and Mg and K among exchanged cations were good, but Ca was high. Among the growth characteristics of soybeans grown in the barren land, the germination period was from 6.19 to 6.21, and the germination rate showed various patterns, ranging from 30.8% to 85%. In addition, the flowering period was from 7.24 to 8.6, and the number of flowering days was 37 to 52 days. The lodging did not occur in the rest of the varieties except for the sunpung. The maturity period was from 10.1 to 11.4 days, and the number of growth days varied from 108 to 142. It was found that if beans were grown in barren land, overall growth would decrease. Although the degree of disease occurring in the leaves differed by variety, it was confirmed that they were generally exposed to fire blight and bacterial leaf spotted diseases. As for the quantity between varieties, the sunpung showed the highest quantitative characteristics and the lowest sunyou.

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