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Established marginal seeding period for green cotyledon black soybean (Seoritae) cultivation in Chungbuk province of Korea

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Abstract

Seoritae with green cotyledons refers to Korean native black beans harvested when the frost falls because the maturity is late. It is one of the beans preferred by consumers because of its softness and high sugar content. Because of late maturity, if the agricultural work is delayed by weather or agricultural schedule in green cotyledon black soybean (Seoritae), it affects seriously harvest and yield of soybeans. The aim of this study was to investigate the marginal seeding period on June 30, July 10 and July 20 in Cheongju and Jecheon area in Korea to produce stable soybean yield. The yields of green cotyledon black soybean as seeding date in Cheongju area are as follows: Seolitae (Yeoncheon), Seoltae (Goesan) and Seoritae (Gogseong), which increased by 23%, 56%, 23% and 40%, respectively, compare to July 10th to June 30th. As soybean sowing is delayed, the quality of soybean seeds has decreased due to the increase of immature seeds and fungal damaged seeds. The contents of anthocyanin in Cheongju area a functional substance of soybeans, was high on July 20 for Heukcheong, on June 30 for Seolitae (Yeoncheon), on July 10 for Seoritae (Goesan). The yields of Heukcheong and Seolitae (Yeoncheon) in Jecheon area were increased by 5% and 17%, respectively, compare to July 10th to June 30th, while Seolite (Goesan) and Seolite (Gogseong) were high in yields on June 30th. Similarly in Cheongju area, as the sowing period is delayed, the number of immature and mold damaged seeds in Jecheon area increased. The contents of anthocyanin in Jecheon area was high on July 10 for Heukcheong, on June 30 for Seolitae (Yeoncheon) and Seolitae (Goesan). From the above results, Sowing marginal date of green cotyledon black soybeans (Seolitae) in Cheongju area increased 30% in sowing on July 10 and increased 2% in sowing on July 20 compared to June 30. And Sowing marginal date of green cotyledon black soybeans (Seolitae) in Jecheon area increased 2% in July 10 compared to June 30, and the yield decreased rapidly on July 20. We have identified the seeding time limit of green cotyledon black bean in Chungbuk province. It will be possible to provide a variety of crop selection after double cropping of farmers. And by knowing the yield and seed quality of soybean according to sowing date, farmers will observe appropriate sowing period of soybeans for high quality. From the viewpoint of consumers, functional substances of Seoritae will meet the desire for health.

Acknowledgement

This research was carried out with the support of “Project for utilization promotion and breeding of new cultivars in Legume (Project No. PJ006537062017) ” Rural Development Administration, Republic of Korea.

Keywords: Seoritae, green cotyledon black soybean, marginal seeding period, cultivation

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