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Possibility of Jack Bean (*Canavalia ensiformis*) Cropping System in Southern Regions of Korea

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[Abstract]

Various types of cropping systems have been developed, such as a highly profitable cropping system, and there is a need to develop for each region. Jack bean [*Canavalia ensiformis* (L.)] is widely consumed for tea in which young seedpods are dried, roasted, and boiled in water. Jack bean is rich in histidine and urease that improve allergic rhinitis and they are effective in alleviating inflammation. Thus, young dried and roasted seedpods are very profitable. However, only 'young pods (soft, pre-swelling)' should be used for tea processing according to the 'Food Code' (Ministry of Food and Drug Safety). Therefore, the pods to be harvested were set based on a length of more than 20 cm and a thickness of less than 2 cm. In the southern region of Korea, onion and garlic are grown as primary crops in winter. Therefore, the possibility of a cropping system linked with Jack bean in summer was studied. Onion and garlic were sown and transplanted on October 25, 2021. Garlic was harvested on May 23, 2022, followed by onion on May 31, 2022. After that, the jack bean was transplanted on May 31, June 7, June 17, and June 27 to determine the appropriate period for the transplanting. The young seedpods were harvested 100-110 days after the transplant. Compared to the yield of young seedpods, there was no significant difference according to the transplantation period. Given that young seedpods are harvested before planting onion and garlic, 'Onion - Jack bean' and 'Garlic - Jack bean' cropping systems will be advantageous for income improvement.

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