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한발 기간에 따른 콩 엽 모양 및 수량 분배 양상에 대한 영향

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Duration of Drought Effects on Soybean Leaf Morphology and Seed Yield Distribution Patterns

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A semi- greenhouse experiment with field grown soybean (*Glycine max* L. cv Deawon, Uram, Jinpong, and Pungsannamul) was performed the national institute of crop science of Korea in 2018. The experiment was aimed to investigate individual impacts of drought stress on soybean phenology, morphology, and seed yield. The three treatments were used in non-water stress (Control) during the soybean growth season, vegetative stage stress (VS), and flowering period stress (FS). Drought stress was observed to reduced growth and seed yield in VS and FS. Drought stress reduced due to leaf senescence. Our results revealed that drought stress was sensitive under FS compared to VS. FS induced significantly lower leaf number, leaf dry matter, leaf area index, and leaf nitrogen concentration. In particularly, Number of pod in mains stems and seed yield were significantly reduced under FS. In final harvest, pod of main stems and branches, and 100-seed weight reduced significantly under control compared to VS (28%) and FS (32%). As a result, seed yield was significantly reduced by drought stress. It is noticeable that pod number and 100- seed weight were positively associated with seed yield in main stems. Soybean seed yield formation was more sensitive the during the flowing and beginning pod stage. Thus, we conclude that adequate water supply for FS, guaranteeing a high soybean yield.

Keywords: Drought stress, Soybean, Flowing, Pod number, Seed yield

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