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## **Mix Cropping Trial of Determinate and Indeterminate Soybean Lines in Kawatabi Field Science Center**

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Mix cropping of different cultivars is recently attracted due to its higher productivity and stability. This study focuses on mix cropping of determinate and indeterminate soybean cultivars.

Determinate soybean cultivars are commonly planted in Japan while indeterminate ones are planted in Midwest USA and discussed to be introduced in Japan. However, several-year trials showed no yield advantage of indeterminate soybean in the experimental field in Amamiya campus of Tohoku University. The indeterminate soybean produced larger dry matter, but the increase was negated by decreased harvest index due to excess foliage and lodging. Mix cropping in this study may increase the productivity by incorporating the merit of indeterminate soybean into determinate soybean production.

This year, the authors conducted 2 experiments: one is the major experiment of mix cropping, and another is yield trials to select genotypes for cultivation environment in Kawatabi. The major experiment planted recombinant hetero lines of indeterminate and determinate soybean in mix cropping (replacement arrangement), and each line in solo cropping. The indeterminate line was also planted in solo cropping to prevent from lodging. The yield trials planted total 353 lines derived from crosses between indeterminate US cultivars and determinate Japanese cultivars. This presentation shows experimental details and some of tentative results in this year.