

## [P1] Field Crop Production

Thu. Sep 9, 2021 12:15 PM - 2:00 PM Room 1 (Poster) (Field Crop Production)

12:15 PM - 1:00 PM

### [P1-25] Fodder and Grain Production by Double-Cropping System of Rye

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To establish double-cropping system of rye in which productions of coarse feed in the first crop and grain in the second crop are performed, proper harvesting time for the first crop was studied. Rye variety 4R-507 was grown at Obihiro, Japan in 2018-2019 and 2019-2020. Plant bodies were harvested as the first crop at three different growth stages, boot stage (BT-plants), initial heading stage (IH-plants), and heading stage (HE-plants), then, the grains on the aftermath were harvested as the second crop. Dry-matter yield and nutritional value of the first crops and grain yield of the second crops were compared among three plants. In both experimental periods, dry-matter yield of the first crop was higher in order of HE-plants, IH-plants, and BT-plants. The nutritional values such as content rates of unstructured organic matters and digestible fibers tended to be higher in the first crop harvested at earlier growth stage, and the highest total digestible nutrients was observed in BT-plants. Vigorous regrowth was achieved after the harvest of the first crop in the plants mowed in earlier growth stage, and BT-plants developed large aftermath with many new tillers than other plants. BT-plants showed the highest grain yield about half of the value of conventionally grown plants (single-cropping rye). The aftermath regrew from the stubbles mowed after panicle heading could produce meager grains. In conclusion, proper harvesting time for the first crop should be boot stage for practicing double-cropping system of rye.