

[P2] Farming System

Thu. Sep 9, 2021 12:15 PM - 2:00 PM Room 2 (Poster) (Farming System)

1:15 PM - 2:00 PM

[P2-18] Soil Temperature, Growth and Yield of Rhizome by Different Mulching Treatments of Chinese Artichoke (*Stachys sieboldii* Miq.)

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The Chinese artichoke (*Stachys sieboldii* Miq.) is a perennial herbaceous plant of the Lamiaceae family and geophyte plant in the ground. In this study, we attempted to find the effect of mulching material in Chinese artichoke.

The study was located at the experimental site of College of Agriculture and Life Science, CNU in Korea (latitude: 36°36", Longitude: 127°35"). We selected four treatments (Non-mulched, Black-PE, Green-PE, and Clear-PE) to find most suitable mulching material. Plant space was performed by the randomized block design at 60cm x 30cm. The seeding date was April 9, 2019 and the rhizome were harvested in early December, 2019.

The highest plant height occurred at Black-PE 56cm and Non-mulched was 44.7 cm, which was significantly lower than the mulching treatments. In LAI, highest value was observed with Black-PE and lowest value was in Non-mulched. The SPAD index showed between 25 and 40 on average. For Photosynthesis, the highest was Clear-PE and the lowest was Black-PE. The highest dry weight was 822.1g of the Black-PE but Non-mulching was the lowest with 336.0g. Dry weight of rhizome, the Clear-PE was highest with 176.6g, followed by Non-mulched 148.7g, Green-PE with 134.3g, and Black-PE at 108.1g. The number of the rhizome was highest with Non-mulched (813), followed by (782) in the Clear-PE. Through this, it was confirmed that Non-mulched product had a high yield, but the product quality was poor. It is considered that Clear-PE was high quantity and weight of the rhizome is showing that, Clear-PE is most suitable for this plant.