

JES1: A new *Erianthus* cultivar for biomass production

Production

Implementation

Item: *Erianthus*

Biomass utilization

Procurement

Implementation

Outline

A new *Erianthus* cultivar (JES1) has been developed for biomass production in Japan. This cultivar can be cultivated perennially with ratoon cultivation. The harvested biomass of this cultivar can be used as a raw material for the production of biomass pellet fuel and other products.

Background/effect/note

Erianthus arundinaceus, a perennial grass that is widely distributed in Asian regions, can be used as a new biomass crop owing to its high biomass productivity. The novel *Erianthus* cultivar JES1 was registered in Japan in 2019 (Fig. 1). This cultivar can be grown in the Kanto region (37°N) and southward in Japan and produce an annual dry matter yield of more than 20 t/ha (Fig. 2). After planting, the cultivar can be grown continuously for ratoon cultivation for more than five years, allowing low-cost cultivation. Practical cultivation of JES1 has been implemented in Sakura City, Tochigi Pref. (Figs. 3 and 4). The biomass has been converted into pellets (Fig. 5) used for bioenergy production. The use of *Erianthus* as breeding or material resources can be applied to other Asian regions that are considering the use of biomass crops.



Fig. 1. Plant: Growth habitat of JES1 (Kumamoto Pref., Japan)

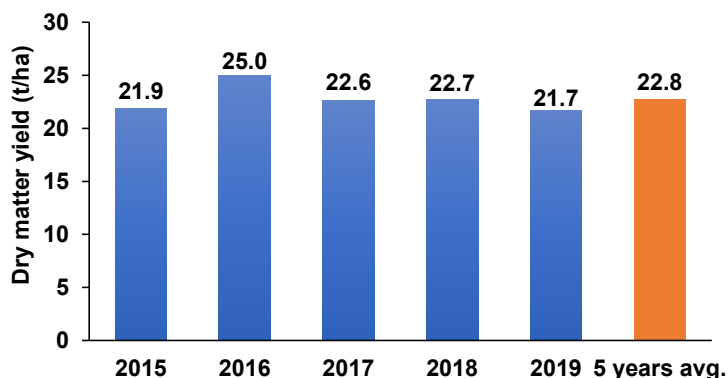


Fig. 2. Dry matter yield of JES1 in a practical field in Sakura City, Tochigi Pref., Japan



Fig. 3. Practical cultivation of JES1 in Sakura City, Tochigi Pref., Japan



Fig. 4. Harvesting via forage harvester



Fig. 5. Pellets produced from dry matter of JES1



Technical details:

https://www.jircas.go.jp/en/publication/research_results/2015_b07

<https://www.naro.go.jp/english/topics/laboratory/nilgs/077373.html>

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