

TIPP

# FORAGE RYE BONFIRE

## Exploit the benefits of crop rotation for biogas production

In many places, forage rye has already become established in the landscape. It is particularly ideal for regions with an ample water supply, as the soil can offer the follow-on crop sufficient moisture. The benefits of forage rye are primarily exploited by many biogas plant operators.

The varieties should have early and strong bulk growth and be ready for harvesting early to provide ideal conditions for the follow-on crop. BONFIRE meets these requirements. It develops quickly both in autumn and spring. It generally does not require herbicide use as the crop usually closes the rows very quickly. Nitrogen can be applied at the start of the vegetation period and when running to seed. However, fertilisation should be moderate, as excessive fertilisation increases the chance of lodging. This can contaminate the harvest and thus lead to problems in the biogas plant.

The forage rye is harvested from the end of April to the beginning of May, between milk and early yellow ripening. The biogas plant of Martin Wilmsen, Kalkar is a good example when describing the possible harvesting procedures: During the last harvest, he first mowed and then swathed two days later. This yielded the desirable 27 % dry matter content. On other plots he swathed the forage rye immediately and collected it right away. The dry matter content here was 17 %. The farm cultivated a total of 125 hectares of forage rye with an average yield of 5.8 t DM/ha. Martin Wilmsen prefers early forage rye varieties as these allow him to sow maize soon after. He particularly liked BONFIRE as this variety developed quickly in spring and could already be harvested at the end of April.

Farmer Wolters from Heek reports similar findings from his 30 ha of forage rye: The biogas plant operator noticed that the BONFIRE plants were taller than other varieties and ripened faster.

He sowed BONFIRE in mid-October 2010 and nitrate fertilised with calcium ammonium nitrate (CAN) and digestate. The forage rye was swathed on 3 May 2011 and collected a day later. This farm also sowed maize immediately afterwards and still had very good sowing conditions.

Liquid manure application is also another possible way to prevent lodging. It offers very good nutrient preservation while reducing the possibility of nitrate leaching. A further advantage of forage rye is the extension of the crop rotation, particularly when combined with a large proportion of maize. BONFIRE gives highest yields in a rye-maize crop rotation. Furthermore, the risk of weather-induced harvest reductions with the main crop can be reduced, and free silo space can be used.

Hands-on experts prefer early forage rye varieties such as BONFIRE.

