

# Tips and Tricks for forage and biogas silages



	Plant species	Yield [to/ha]	Time of harvest	Risks	Silage additives	
					Forage	Biogas
	Green rye	20 to 25	Coming into ear Chop length: 3 to 5 cm Wilting at least to 25% DM	<ul style="list-style-type: none"> <li>Moderate to ferment</li> <li>Mal fermentation/butyric acid</li> <li>Avoiding soil contamination during harvesting</li> <li>Keep effluent risk in mind</li> </ul>	Siloferm	Proferm
	Ryegrass (Field grass)	10 to 20	Swelling flag leaf Chop length: 3 to 5 cm Wilting to 30 - 40 % DM	<ul style="list-style-type: none"> <li>Moderate/easy to ferment</li> <li>Mal fermentation if &lt; 35 % DM</li> <li>Heating up, molding if &gt; 35 % DM</li> </ul>	Up to 35 % DM Siloferm, Beyond 35 % DM BioCool	Up to 35 % DM Proferm, Beyond 35 % DM Plantasil
	Grass	8 to 12	End of bolting Chop length: 3 to 5 cm Wilting to 30 to 40 % DM	<ul style="list-style-type: none"> <li>Moderate/easy to ferment</li> <li>Mal fermentation if &lt; 35 % DM</li> <li>Heating up, molding if &gt; 35 % DM</li> </ul>	Up to 35 % DM Siloferm, Beyond 35 % DM BioCool	Up to 35 % DM Proferm, Beyond 35 % DM Plantasil
	Clovergrass	8 to 15	Coming into ear/ bud Chop length: 3 to 5 cm Wilting to 30 to 40 % DM	<ul style="list-style-type: none"> <li>Moderate to ferment</li> <li>Mal fermentation if &lt; 35 % DM</li> <li>Heating up, molding if &gt; 35 % DM</li> <li>Avoid crumble losses (increasing if &gt; 40 % DM)</li> </ul>	Up to 35 % DM Siloferm, Beyond 35 % DM BioCool	Up to 35 % DM Proferm, Beyond 35 % DM Plantasil
	Lucerne	8 to 15	Bud/blossom Chop length: 3 to 5 cm Wilting to 35 to 40 % DM	<ul style="list-style-type: none"> <li>Difficult/moderate to ferment</li> <li>Mal fermentation if &lt; 40 % DM</li> <li>High crumble losses &gt; 45 % DM</li> </ul>	Siloferm	-
	Whole crop grain	30 to 35	Lactic/dough ripeness state Plant starts discoloring into yellow Chop length: 3 to 5 cm	<ul style="list-style-type: none"> <li>Easy to ferment</li> <li>Heating up and molding</li> </ul>	BioCool	Plantasil
	Maize	30 to 50	28 to 33 % DM regarding the whole plant Chop length: 5 to 7 mm	<ul style="list-style-type: none"> <li>Easy to ferment</li> <li>Heating up and molding</li> </ul>	BioCool	Plantasil
	Sorghum	20 to 50	20 to 28 % DM regarding the whole plant Chop length: 3 to 5 cm	<ul style="list-style-type: none"> <li>Easy to ferment</li> <li>Heating up and molding</li> <li>Keep effluent risk in mind</li> </ul>	-	Plantasil
	Sudan grass	20 to 35	Growth of panicles 18 to 26 % DM Chop length: 3 to 5 cm For multiple clippings keep 10 cm of stubble	<ul style="list-style-type: none"> <li>Moderate to ferment</li> <li>Mal fermentation/butyric acid</li> <li>Effluent risk if &lt; 28 % DM</li> </ul>	-	Proferm
	Sugar beet	60 to 90	Needs to be cleaned and chipped Cover with film if storage in lagoon	<ul style="list-style-type: none"> <li>Easy to ferment</li> <li>Alcoholic fermentation at storage</li> <li>Heating up and molding after outsourcing</li> <li>Remove water from film</li> </ul>	-	Plantasil

## Silage additives for forage plants

### Siloferm®

#### the safe way to high quality silages

**Siloferm®** is a biological additive, which contains specially selected, extra efficient working homofermentative lactic acid bacteria. The special combination of different lactic acid bacteria controls the run of fermentation effectively and accelerates it. This results in a higher quality of treated silage and a minimization of the fermentation losses. Silages are more palatable, which results in a better feed intake. Depending on demand different packages are possible.

#### Field of application:

- Moderate / easy to ferment plants

#### Dosage:

- 2,24g **Siloferm HC®** per ton silage
- 280g per sachet, enough to treat 125 t or 200 m<sup>3</sup> silage
- high concentrate for micro application (20 – 150 ml / t)
- dissolve 1 sachet in 2,5 litre water

### BioCool®

#### the solution for heating up problems

**BioCool®** is a biological additive, which contains the specially selected, extra efficient working heterofermentative lactic acid bacteria *Lactobacillus buchneri* plus enzymes. This combination supports the natural lactic acid fermentation and simultaneously improves the aerobic stability of silages during feeding out of the clamp. Spoilage of silage, caused by yeasts and moulds are effectively inhibited. Additional enzymes improving the nutrient supply of lactic acid bacteria. Depending on demand different packages are possible.

#### Field of application:

- Easy to ferment plants with heating up problems

#### Dosage:

- 2,4g **BioCool HC®** per ton silage
- 300g per sachet, enough to treat 125 t or 200 m<sup>3</sup> silage
- high concentrate for micro application (20 – 150 ml / t)
- dissolve 1 sachet in 2,5 litre water

## Silage additives for energy plants

### ProFerm®

#### the silage additive for less sugar containing energy plants

**ProFerm®** contains specially selected, extra efficient working homofermentative lactic acid bacteria for wet and less sugar containing energy plants. The special combination supports the nutrient preserving lactic acid fermentation and avoids undesirable nutrient losses. This results in a higher quality of treated silage and a minimization of the fermentation losses, which supports a maximum in gas production and high methane yields. Depending on demand different packages are possible.

#### Dosage:

- less sugar containing energy plants and if DM-content < 35 %

#### Dosage:

- 0,8g **ProFerm HC®** per ton silage
- 200g per sachet, enough to treat 250 t or 350 - 400 m<sup>3</sup> silage
- high concentrate for micro application (20 – 150 ml / t)
- dissolve 1 sachet in 2,5 litre water

### PlantaSil®

#### the silage additive for high sugar containing energy plants

**PlantaSil®** contains specially selected, extra efficient working heterofermentative lactic acid bacteria for high sugar containing energy plants. This combination controls the desirable fermentation and simultaneously improves the aerobic stability of silages. Spoilage of silage, caused by yeasts and moulds are effectively inhibited. Therefore the gas building potential of the treated silage will be additionally improved. Depending on demand different packages are possible.

#### Field of application:

- high sugar containing energy plants and if DM-content > 35 %

#### Dosage:

- 2,4g **PlantaSil HC®** per ton silage
- 600g per sachet, enough to treat 250 t or 350 - 400 m<sup>3</sup> silage
- high concentrate for micro application (20 – 150 ml / t)
- dissolve 1 sachet in 2,5 litre water

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