

## Practical study: Comparison of the advantages of different preservation methods

There are a number of different methods aimed at stabilising and preserving moist cereal or maize during storage:

<ul style="list-style-type: none"> <li>▪ <b>Drying</b> of cereal material to a moisture content of less than 14 %.</li> </ul>	<p>⇒ Most reliable protection against loss; high costs</p>
<ul style="list-style-type: none"> <li>▪ <b>Cooling</b> by means of cooling units or cold air blowers to a temperature below 10 °C.</li> </ul>	<p>⇒ High capital investment required; often too expensive for biogas cereal</p>
<ul style="list-style-type: none"> <li>▪ <b>Gastight storage</b> under CO<sub>2</sub> cover in vertical or horizontal silos.</li> </ul>	<p>⇒ High capital investment required; often too expensive for biogas cereal</p>
<ul style="list-style-type: none"> <li>▪ <b>Ensiling with addition of water</b> (requires careful adjustment of the optimum dry substance content, depending on the substrate properties)</li> </ul>	<p>⇒ High capital investment required; the liquid storage method is popular despite the high capital costs, as the cereal prepared in this way can be easily processed.</p>
<ul style="list-style-type: none"> <li>▪ <b>Ensiling under anaerobic conditions</b></li> </ul>	<p>⇒ Allows for cost-effective and safe preservation of moist forage cereals and maize, provided that the silo remains sealed. After the silo is opened, the desired conditions can only be maintained by using biological ensiling agents.</p>
<ul style="list-style-type: none"> <li>▪ <b>Chemical preservation</b> with organic acids, urea or caustic soda</li> </ul>	<p>⇒ <b>Allows for the safe and cost-effective storage and preservation of moist forage cereals and maize without the need for any further treatment.</b></p>