

PARAMETER CONSIDERATIONS TOTAL ALCOHOL IN CORN-SILAGE

As regards the total alcohol content of corn silage, the following values are proposed in the literature expressed in g/kg dry weight:

INRA

(for Dry Substance < 25%) 49 g/kg

(for Dry Substance > 30%) 13 g/kg

SUCCI et al.

20 g/kg

PIGEONS

12-15 g/kg

Laboratory notes

Other authors propose even higher values; however, from our experience, **the average of the values detected is often lower than 5 g/kg** probably as a consequence of the probable losses of alcohol in the sampling, delivery and sample preparation phases. The worse conditions are, the higher the loss of alcohols will be.

We therefore believe that, under ordinary conditions, values above 10-15 are already anomalous and mark the presence of alcoholic fermentations (usually confirming an "olfactory" indication), the exact quantification of which would require more stringent sample collection and conservation techniques than those ordinarily implemented. Simplifying, we can say that values lower than 5 g/kg indicate normal alcoholic fermentations, while values higher than 10 could signal even more intense fermentations.

Under conditions of rigorous sampling, the data proposed by INRA are certainly correct.

The meaning to be attributed to the presence of higher than normal alcohols concerns yeast activity, like fermentations, typical of poor compaction or exposure to air; in any case it is an indication of anomalous fermentation.

Alcohols are not simple indicators of yeast proliferation but constitute a toxic factor in itself with the action of peripheral vasodilators as well as potentially capable of altering the sensorium at high doses.

Gonzaga, 30/09/2015
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