Silo Safety – Silo Gas

Nitrogen dioxide is a lethal gas which is yellowish-brown in color and smells like some laundry bleaches. It is heavier than air and will remain at the bottom of the air mass over the silage. Silo gas is a mixture of oxides of nitrogen and carbon dioxide and is formed when plant material ferments.

***It should always be assumed to be present in a newly filled silo.***

It has been found that the best way to deal with silo gas is to ventilate with the forage blower. It’s recommended that the feed room is also ventilated. Best case scenario is to set up the unloader with the forage blower running right after the last load goes in. The unloader, when operating, can ventilate the silo quite effectively.

When climbing a newly filled silo, it is recommended to climb in the chute above the feed level to check for gas since silo gas is heavier than air.

Ventilation with the forage blower should last a minimum of 30 minutes. If the silo is not full, a flexible duct may have to be used to direct the air to the feed.

There is a lot to be said about silo gas, and the safety section in the International Silo Association’s “Silo Operators Manual” is your best resource.

In my opinion one of the best ways to deal with silo gas is to set your unloader up the same day as filling is completed while running the forage blower. Feed out of your silo about five weeks before closing it up then cover the feed with plastic. In this way you are disapating gas every day you feed, you are removing the less dense feed from the top where air penetration is most likely and when you open up the silo to empty it, you will find much less waste because of the packed, more dense feed on the top.

\*These articles are contributed by Bruce Johnson, President of the International Silo Association (ISA) and other members of the ISA. They are meant to call attention to silo safety. They are not all inclusive. Your best source of information is the International Silo Association’s “Silo Operator’s Manual” which is available on our website at http://silo.org/silo-operators-manual/ . You can also contact us at 1-833-472-7456, info@silo.org or on our Facebook page at https://www.facebook.com/InternationalSiloAssocialtion/