

MOLDY SILAGE CORN? IT MAY – OR MAY NOT – ALSO HAVE MYCOTOXINS

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“We do have molds in our corn crop this year, and there are mycotoxins in our corn silage and our corn byproducts. But remember that not all molds produce mycotoxins,” points out Tina Kohlman, University of Wisconsin Extension dairy and livestock agent for Fond du Lac County.

“We definitely don’t want to raise alarm too quickly, that if farmers see mold they will have mycotoxins. If they have mold, there might be a *risk* for mycotoxins, and they should work with their nutritionists to head them off,” she stresses.

Mycotoxins are “the invisible thief,” Kohlman says. “You may have pockets of mycotoxins in your feed, so trying to get a representation of that feed sample to show whether you do have a mycotoxin issue or not, is very difficult.”

She suggests farmers observe their herds for triggers that mycotoxins could be adversely affecting performance. If cows aren’t eating the way they normally would, or producing the level of milk anticipated, that could show one of the impacts of mycotoxins – a robbing of nutrients. Without needed nutrients, cow feed efficiency and heifer growth efficiency are reduced. Mycotoxins can also affect cow reproductive systems, causing abortions or lowering conception rates.

A third impact of mycotoxins: they suppress the immune system. “When we start seeing some symptoms or signs of decreased feed intake or decreased milk production, signs of reproductive parameters that are decreasing or cows tending to be sick more often, we may want to start asking whether we have a mycotoxin issue. Then we need to sample to the best of our ability to see if mycotoxins are there,” Kohlman says.

To lessen the effects of mycotoxins, she gives three suggestions. One is to dilute contaminated feed with “clean” feed. “Maybe working from two bunkers or two bags, where we know one is clean and one is contaminated with mycotoxins, we can try to dilute mycotoxins. That tends to be a challenge, though, if farms have one large pile or a large bunker system where they couldn’t segregate silage from fields. But if you can dilute it, that’s huge.”

Or add higher-energy, higher-protein, or higher-carbohydrate feedstuffs to your ration. “The cow is a wonderful machine and with her digestive system can combat a lot of the mycotoxins that monogastrics, like pigs, can’t.” Adding energy-dense nutrients to a cow’s diet can increase her rate of passage, thereby pushing the contaminated feed through her system faster than a lower-energy ration would, she says.

The third option: increase the amount of binders or buffers in the ration to help bind mycotoxins and keep them from being absorbed by the cow’s digestive system.

“If you know you have mycotoxins, you definitely don’t want to feed that feed to your youngstock, because of the potential impact on growth efficiency. And since mycotoxins can suppress intakes, try not to feed it to dry cows or fresh cows.”

“The feed that we have is the feed that we have. We’re just trying to manage through these bouts of contaminated feed. That would include working with a nutritionist very closely and monitoring how those cows are performing,” Kohlman says.

It’s no surprise as to why silage corn isn’t feeding out very well in many parts of the Upper Midwest. In eastern Wisconsin, for example, the silage corn growing season suffered from a host of challenges, says Kevin Jarek, UW-Extension crops and soils agent for Outagamie County.

Those included wet, delayed plantings, high temperatures, and little rain for six weeks later in the season that caused kernel tipback in areas. Farmers also had to contend with tar spot, a disease new to the state, as well as Northern corn leaf blight. Then Mother Nature poured on the rain, followed by more high temperatures and the fastest moisture drydown that Jarek’s ever seen.



“If you look at the weather for 2018, we finished ahead of normal for temperature and moisture. But we were cooking or droughting ourselves to death or we were flooding and gasping for air for those crops.”

It didn't help that many farmers switched from 105-, 108-, and 110-day silage hybrids, which they had been caught harvesting into late October and early November, to earlier-maturing hybrids this past spring. “And we had a year where we got more growing degree days that pushed those plants to reach full maturity and black layer quicker than was expected by most people. Disease and drought dried down the silage too quickly. Jarek saw a 2-4% moisture drop in a matter of days that caused many farmers to miss harvesting at that 67% moisture sweet spot, lowering feed quality and making packing a challenge.

As farmers were struggling to harvest silage corn as well as fourth-crop alfalfa, rain began to fall “like no tomorrow,” Jarek says. Hot weather and humid conditions trapped moisture in corn husks and ears where grain failed to fill, giving the perfect environment for mold growth.

“But just because corn has mold on it when you chopped it doesn't mean that it will develop severe levels of mycotoxins,” says Jarek, echoing Kohlman's comments. “However, you can have corn that showed no signs of mold, but as it was put in the silo, because it had tar spot or corn leaf blight, it can develop mycotoxins.”

“Seriously, you couldn't write a worse scenario of things that needed to happen to diminish the quality of this year's corn crop if you tried,” he says.

So many of the stressors of the 2018 silage corn crop were out of farmers' control, Jarek says, and he isn't recommending they switch back to later-maturing hybrids, or monitor crop moisture 24/7. “If you practice sound agronomics, keep the fertility in your field so the crop isn't starving, get your corn planted on time, control weeds, select a hybrid that has a resistance to weeds and good, high yield- and quality-potential for silage, then monitor it as it gets closer to harvest, that's all you can do. Control the controllables and do what you can to work around the bad things that happened during the growing season.”

For more information on tar spot's affect in corn hybrids in Wisconsin fields this year, visit the [Badger Crop Doc website](#).