MCCULLOCH COUNTY AG NEWSLETTER

NOVEMBER

HOW TO HANDLE HAY AFTER A FLOOD

Hay Stored Outside

• **Flooded Hay:**

o Mold growth is the biggest concern in hay that has been standing in water and/or heavily rained on. Mold growth throughout the bale is a concern because it consumes nutrients in the hay and reduces its feeding value. Additionally, some mold species can produce mycotoxins. Not all species of mold produce toxins, but it is hard to distinguish whether the mold in your hay will cause toxicity issues. Therefore, it is better to err on the side of caution. Additionally, large amounts of mold can cause respiratory problems.

o Although it is not recommended, if you do choose to try to feed this hay, roll out the entire bale to allow cattle to select what they consume. They may or may not eat any of the hay depending on damage and other forage options.

o In addition, in some areas contamination with petroleum products, pesticides or biological contaminates could be a concern with flooded hay.

o Do not feed hay that has mold production throughout the bale or that has been exposed to any contaminates that could be toxic to livestock. To dispose of this hay, it can be spread out in bare spots in pastures to allow for recycling of nutrients (e.g. N, P & K), used in a compost, or distributed in areas with erosion issues. Spreading hay in bare spots or less productive areas of the pastures will also add organic matter to these areas and generally increase future forage production.

o Do not dump this hay into creek beds, ponds, or other bodies of water. Large amounts of hay dumped in a pond may deplete oxygen levels, killing any aquatic life.

o Regardless of how hay is disposed of, make sure to remove string or net wrap and dispose of it properly. This waste could be detrimental if consumed by livestock or wildlife.

• **Rained on Hay:**

o If the bales are completely saturated and are not allowed to dry out before mold production, do not feed. However, if hay was unrolled and allowed to dry out quickly before any mold production it may be safe to feed.

o Wet hay can be fed for a couple of days before mold production.

o Limited rainfall will cause outside damage to the bale. Break open a few bales to see how saturated the bale is. If damage is limited to the outside layers, the remainder of the bale should be safe to feed.

Hay Stored in a Barn:

• If the hay was submerged, document or mark the height of the water.

• Separate out the hay that was submerged or got wet from any dry hay. The dry hay could absorb moisture from the wet hay leading to more loss of valuable forage.

• Evaluate the bales on the outside edge of your storage to check for any moisture that may have occurred with wind-blown rain.

• If you are concerned about spontaneous combustion of wet hay it is best to move the

damaged hay out and away from any structures.

Additional Notes:

• Document any damage with photographs, number of bales damaged and any other information. Regulations and programs vary, but this information may be useful for tax, insurance, or disaster assistance purposes. Visit with a CPA to determine if losses can be documented on your taxes.

• Please contact an Extension beef cattle specialist or a ruminant nutritionist if you have any questions about feeding hay that was damaged.

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GENERAL INFORMATION ABOUT GLYPHOSATE

What is glyphosate Glyphosate is an herbicide used to control a wide range of undesirable plants in lawns and gardens, row crops, pastures, aquatics, road sides, rights-of-way, and other managed areas. First introduced for use in 1974, glyphosate is now one of the most widely used herbicides in the United States. Today, there are over 750 products that contain this active ingredient for agronomic, commercial, and home use.

How does it work Glyphosate kills a wide range of annual and perennial plants (grasses, broadleaves, and sedges) by preventing them from making 3 essential aromatic amino acids. It does this by inhibiting a specific enzyme, EPSP synthase, only found in plants and many bacteria.

Is it likely that glyphosate can cause cancer Regulatory agencies charged with the risk assessment of substances and their impact to the public including Health Canada, European Food Safety Authority (EFSA), Food and Agriculture Organization (FAO) of the United Nations, World Health Organization (WHO), and the United States Environmental Protection Agency (US-EPA), all released findings of their assessments later in 2015, 2016 and 2018. Based on the most currently available research, these agencies have all concluded that glyphosate was unlikely to pose a carcinogenic risk to humans. The International Agency for Research on Cancer (IARC) is a non-regulatory working group that considers current published research to determine if substances are potential carcinogens. In March 2015, IARC classified glyphosate as Group 2a "probably causes cancer". IARC only assesses the potential carcinogenicity of a substance and does not consider exposure or conduct risk assessment.

Concerns about glyphosate in food Pesticides undergo rigorous testing and risk assessment by regulatory agencies to evaluate the potential for harm to humans, wildlife, fish, and other non-target organisms. Human health risks are evaluated rigorously, including considerations for sensitive groups such as children and immune-suppressed individuals. Regulatory agencies such as the U.S. EPA have carefully reviewed existing data on risks caused by exposure through residues in food, water, residential uses, and occupational risks to those applying the product. A baseline exposure dose is identified using experimentally determined metrics defined as the lowest dose at which adverse effects are seen (LOAEL) or the dose at which no adverse effects are seen (NOAEL). The U.S. EPA then sets daily exposure limits at least 100 times below the NOAEL established in these safety studies. An important part of the regulatory process involves setting tolerances, which are the maximum amount of pesticides that may legally remain on or in food and animal feed. The Food and Drug Administration (FDA) is responsible for ensuring that chemical residues on or in domestic and imported foods do not exceed the limits established by the U.S. EPA. In 2016, the FDA began testing for

glyphosate residues and preliminary results showed no pesticide residue violations in all four commodities tested (soybean, corn, milk, and eggs).

How to make an informed decision Consider the source of information and what their credibility is for providing accurate and un-biased information. Remember that risk is a function of both the toxicity and exposure to a substance. A substance can be extremely toxic and yet presents low risk if you have little to no exposure to it. In the same way, a substance that you are exposed to every day may pose little to no risk, if it has low toxicity. Glyphosate containing products as well as other herbicides are low risk to use when you follow the directions provided in the federal pesticide labels, which include using appropriate rates and wearing proper PPE (Personal Protective Equipment). Based on current research, glyphosate has been shown to pose no appreciable health risk when consuming a normal diet.

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