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News Release

Using Organic Materials in Your Garden

Question: Is it safe to use manure from a horse or cattle farm on my vegetable garden?

Answer: This question brings up an important issue that relates not only to livestock and horse manure but potentially to the use of hay or grass clippings in the garden. Over the years I have diagnosed a number of problems that turned out to be inadvertent herbicide damage from the use of certain organic materials.

The symptoms exhibited on the crops are usually twisted, cupped, and elongated leaves; misshapen fruit; reduced yield; death of young plants; and possibly poor seed germination.

Some herbicides that are used to control broadleaf weeds can be persistent and may remain active in the hay, grass clippings, and manure even after they are composted. Some of these herbicides have a half life of 300 days or more and at least one product is known to remain active in compost for several years.

A problem sometimes arises when these materials, particularly manure and compost, are applied to fields and gardens to raise vegetables and flowers. The herbicides of greatest concern are picloram, clopyralid, and aminopyralid but the list of products that cause at least some concern is too long to list in this article. The garden plants that are most sensitive to these types of herbicides are tomatoes, potatoes, lettuce, spinach, carrots, peas, beans, dahlias, and some roses but many other plants can be impacted to some degree.

Most of these herbicides have a rotational crop restriction of at least 18 months for vegetable crops. This means if these herbicides are used you would need to wait this length of time to safely plant certain vegetables on that soil again. This can vary from product to product and vegetable to vegetable based on their sensitivity to that product.

The real problems arise when the hay, manure, grass clippings, etc. leave the hands of the individual who applied the herbicides. If you choose to use any of these sources of organic material, you should find out what herbicides have been used on the grass the animals have eaten and how old the manure or compost is. A farmer you are considering getting the manure from could probably tell you this, but someone with a few horses might not know where the hay they bought for their animals originated from nor with what chemicals was it treated. Likewise, if you plan to use grass clippings you should find out what herbicides have been used on that turf to control weeds. If you don't know what, if any, herbicides were used, do not use the hay, straw, grass clippings, manure, or compost to grow sensitive crops.

The only other concern with using fresh animal manures relates to potential pathogenic bacteria such as E. coli, Listeria, and Salmonella. Although the chance of contamination is slim, severe sickness and even death may occur if contaminated produce is eaten. To be safe, either compost your manure or apply it in the fall after harvest. Wash your hands after handling manure and try to leave at least 120 days between application of fresh manure and harvest of a crop. Lastly, you should always wash vegetables thoroughly before eating whether they come from the store or your garden.

For more information about this topic please contact Tony Glover, Regional Extension Agent, by phone at (205) 338-9416 or by email at gloveta@aces.edu.

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