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Livestock and Natural Resources

Schmutzdecke

Even though I'm ¾ German heritage, married to a 100% German heritage, I don't know any of the language. I have become familiar with one German word. Seems I will be getting to use the word, schmutzdecke this summer. As we continue our pond mitigation project with barley straw, we are going to be working with slow sand filters to filter out Blue/green algae and other toxins from pond water. So what does schmutzdecke have to do with this?

Schmutzdecke is a German word for dirt cover or dirt skin. This is the film that forms on the top of the sand when pond water is sieved through. In the schmutzdecke lots of things start to grow, amoebae, protozoa, bacteria, crustaceans, algae and other microorganisms. It is not visible, but this dirt skin, eats up all the toxins and algae from the water.

So slow sand filters are being built to use with pond water to filter out the harmful algae blooms. This technology has been tested by Harvard University for Third world countries, human drinking water. A quick internet search will demonstrate the concept. We are building our sand filters, on a larger scale than the buckets or barrels you will see on the internet. We will be building filters out of the food grade chemical totes you see at so many farms and ranches these days.

There is some plumbing made out of PVC pipe inside, relatively easy to do. Then a layer of gravel is applied and then a lot of sand. As the water filters through the tote, the schmutzdecke forms on top of the sand. This is a living biomass. To make sure that this is working 100%, we are enlisting the help of the Biological Survey folks at KU. They are going to "grow" Blue/green algae for us and test the water as it comes out of the filter to make sure it's working.

When the filters are applied at the stock pond, the water can be brought out of the pond through the tube in the dam, or pumped out using solar pumps. The livestock will be fenced out of the pond, to avoid accidental death by harmful algae blooms and they will drink the filtered water in a stock tank as it comes out of the filter.

We hope to have the filters tested and out in the counties by mid-summer, just in time for Blue/green algae season. Our stock ponds are very low at this point, so fencing them off this summer may save cattle from getting stuck. I'm hoping for some big rains before that might happen. It looks like we've got some pretty good chances for rain in the next two weeks. Hopefully, we can get some much needed moisture and get the ponds back up!

David G. Hallauer
District Extension Agent
Crops & Soils/Horticulture

Pesticide Safety

Our Northeast Kansas climate is well suited for a diversity of plants. Corn, fruit trees, forages, soybeans, grapes, and *lots* of gardens. We're fortunate to receive decent rainfall and experience temperatures that can allow us a lot of growing success as well.

That same diversity of crops can also be a challenge. All of the aforementioned crops require different pest control programs, and seldom do labels 'cross' between horticulture and production agriculture. That means there's always a risk of offsite damage when a product labeled for one crop is not labeled for another. To reduce the potential for offsite injury, consider taking a few precautionary steps before you decided to use a product.

First, ask yourself if it's really necessary. Some weeds have to be controlled, whether it be because they result in crop injury or they're considered noxious (if a noxious weed is present, the landowner is under a legal obligation according to the Kansas Noxious Weed Law to implement control efforts). There are other weeds that might be a nuisance or aren't even noticed until it's too late to achieve adequate control measures. As you make application decisions, it's always a good idea to weigh control versus potential crop injury on your own farm and surrounding areas.

Second, read and follow product labels. The label is the law and is there for a reason. The idea that 'if a little is good, a lot is better' isn't necessarily the best option when it comes to application of a pesticide. Properly calibrated equipment and an understanding of product labels does take time, but it also helps avoid offsite injury as well as resistance to valuable products. If a product label is missing or no longer legible, there are ways to find one. Feel free to drop me a line if you need product label information.

Last but not least – communicate. If you are growing a crop unique to your surroundings or trying out something new, it's good to communicate with neighboring landowners so everyone understands how products can most safely be used. For specific circumstances, Kansas does have a Sensitive Crops Registry (<https://agriculture.ks.gov/divisions-programs/pesticide-fertilizer/sensitive-crops-driftwatch>), but it won't be applicable for every situation. Communication about planting intentions or established crops is the better safe than sorry option.

Offsite movement of pesticides is never intended, but it is possible. Understanding pesticide characteristics and your surroundings can do a lot to reduce damage and keep products available in to the future.

Cindy Williams
Meadowlark Extension District
Food, Nutrition, Health, and Safety

March is National Nutrition Month

March is National Nutrition Month, from the Academy of Nutrition and Dietetics, and this year's theme is "Personalize Your Plate."

"There is no one-size-fits-all approach to what we eat," said Kansas State University food scientist Karen Blakeslee. "Every person has their own personal nutrition needs because of health goals, family backgrounds, bodies, and taste."

"Consider foods that are nutrient-rich to get the most nutrition in every bite," Blakeslee said. "Any kind of lifestyle change to incorporate healthy food choices will be beneficial in the long run. It doesn't have to be bland, boring, or even complicated. Make the changes to fit your personal plate." Remember to talk with your doctor if you have health conditions with specific nutritional needs.

"For some, the help of a registered dietitian can guide them in the right direction," she said. "But the messages of eating more fruits and vegetables, switching to whole grains, and choosing lean proteins still apply. Make one change at a time for best success, and you may find some new foods that you enjoy."

One excellent resource to help personalize your plate is www.myplate.gov. There, you can take a quiz, find recipes, and learn more about the food groups and why they are important for your nutrition. MyPlate is a template that you can fill in with your own choices to make your plate personal. They also have an app to download into your smartphone. It will help you set goals for each food group.

In the past year, consumers stayed home more and had more control over their food and portion sizes. As restaurants begin to open up, it is important to remain focused on your nutrition goals.

Choose a restaurant that has many options and look for healthier options. If possible, order the lunch size or child-size portions. Many restaurant's portions are large, so split it with a friend or take half home for lunch the next day. At work, packing your own meals and snacks can help get you through the day on your own terms.

No matter how you personalize your plate, try to ensure you get a serving of fruit, vegetable, grains, protein, and dairy (or dairy alternative) with each meal. Use healthful snacks to ensure you have all the food groups covered, and most importantly, personalize your plate!

Nancy Nelson
Meadowlark District
Family Life

Cleaning Reusables

Using reusable products can be a great way to reduce the need for single-use plastic. Properly cleaning your reusables goes a long way toward helping them last. Here are tips from the American Cleaning Institute® for taking care of water bottles, straws, food containers, and bags.

Bacteria thrives in damp, dark environments like the inside of a water bottle. Our recommendation is to wash your water bottle either after every use or daily if you refill throughout the day. Fill the water bottle with water and dish soap. Soak the other pieces in a bowl of soapy water. A bottle brush can be helpful for scrubbing the inside of the bottle, as well as the nooks and crannies of the other pieces. Rinse all the pieces and dry. Make sure the bottle is completely dry before reassembling to prevent it from becoming musty.

Metal straws are like any other utensils and should be washed after each use, even if you're just drinking water. Hand wash with water and dish soap, using a thin brush to scrub the inside. Let dry completely before storing.

Start by removing any leftover food from the plastic food container. Wipe extra grease off with a cloth or paper towel. If using a dishwasher, place on the top rack to keep the plastic from warping. If washing by hand, use dish soap and water. To get rid of a lingering odor, try a baking soda and water scrub (one teaspoon of baking soda with one cup of water). For stubborn stains, soak the container in a solution of 2 teaspoons of liquid chlorine bleach mixed with one gallon of cold or tepid water. Wash the container in soapy water when done soaking.

Wash reusable bags after each use, following the instructions on the fabric care label. If the bags are insulated, you can use a disinfecting wipe. Let the bags dry completely before storing. To prevent bacteria growth, store the bags in a cool, dry environment.

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