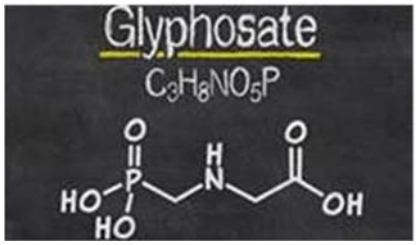
2018-08-31
Dawn H. Gouge



Associated product brands include Roundup®

There has been a lot of news lately about the herbicide glyphosate. Irrespective of your own particular stance on this controversial topic, practicing Integrated Weed Management (IWM) is considered to be the best approach.

Glyphosate is a broad-spectrum systemic herbicide applied to the leaves of plants to kill broadleaf plants and grasses. It is used in landscape, agriculture, and forestry systems, and is one of the most widely used herbicides in the United States.

So when health concerns arise we understand the need for product users and facility managers to reassess their own practices to ensure the safety of themselves, their workers, and landscape users. In our schools, that's our faculty, staff, and students. I reached out to a number of prominent university and agency educators around the country for guidance. Below you will find a distilled account of their response, along with a reminder to constantly read pesticide labels, **they change over time** and always use the recommended Personal Protective Equipment, **or more**.

At this time there has been no change in regulations regarding the use of glyphosate in Arizona schools. Glyphosate products are allowed to be used on school sites according to the **product label,** the **State of Arizona notification and posting requirements**, your **local city or county ordinance laws**, and applicable **school district IPM policies**.

Weed scientists continuously search for economically viable effective alternatives for vegetation control for schools , landscapes, and crops. For many years glyphosate has been an active ingredient widely used. There may be no single management technique that can be used to replace glyphosate products. However, a combination of cultural, preventive, mechanical, and physical controls can be tailored to the local environment if staff time and budgets allow.

IWM – it is often possible to attain acceptable results without using glyphosate or minimizing the use of glyphosate.

1. Commit to reducing risk and improving landscape management techniques: assign an IPM coordinator who will research techniques, advocate for change, and educate the school community. Regularly educate yourself and your team on the newest, most progressive practices https://turf.arizona.edu/.

2. Determine which areas of the school site require vegetation management and to what degree.
3. Determine which areas should be a priority for mechanical controls (where students and staff are more likely to be exposed to pesticide products applied).

For hardscape/landscape:

4. Weed whackers/ weed eaters can be used on hardscapes, but come with an increased risk of damage to cars/windows (from thrown pebbles) and student and staff injury.
5. Sealing cracks in pavement with ready to use products, machines, or by hiring contractors will prevent weeds from germinating/growing.
6. Utilize steam weeders, and foam steam weeders when possible and affordable.
7. Towing a baseball drag or hiring a street sweeper can remove vegetation in bulk.
8. When putting in new or revitalizing old landscape beds, install weed barriers to prevent weeds from emerging.
9. There are a number of soil sterilization treatments that utilize plastic tarp and landscape staples + sunlight and time.
10. Hand pulling weeds and other landscape cleanup by interested parent volunteers can reduce the workload on maintenance and facilities teams.
11. Use and maintain mulch, 3-5 inches thick, in any areas where water conservation and weed management is needed (for example around the base of trees, or in garden beds).

For turf:

12. Proper care and regular mowing will reduce competition from weeds: never cutting off more than 1/3 of the grass, mowing as high as possible to outcompete weeds, especially in non-sports areas.
13. Up-to-date irrigation training and equipment allows groundskeepers to put the right amount of water in the right places, reducing excess weed growth. During monsoons, make sure not to over-irrigate as this causes numerous other problems for management teams (tree lodging in storms, mosquitos, weeds, etc.).
14. On turf, the best herbicide is a <u>healthy</u> lawn. Extensively researched and executed management regimes including soil testing/fertilizer/water/de-thatching/aeration reduce the need for chemical inputs. This is a scientifically proven practice, and we have dedicated university turf specialists who can assist.

There are also many herbicides which rely on different active ingredients or different application techniques. These include alternative conventional herbicides, pre-emergent herbicides, selective herbicides, and organic certified products (which may come at a higher cost and require more frequent applications). Good IPM policies often include the regular rotation of active ingredients to prevent pesticide resistance.

If you are associated with a school or district having success with low risk vegetation management, please let us know! We are looking for success stories to share.

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Reducing exposure - read the label, and use the appropriate Personal Protective Equipment (PPE)

You can be exposed to glyphosate if you get it on your skin, in your eyes or inhale it during application. You might ingest glyphosate if you eat or smoke after handling products if you do not wash your hands first. You may also be exposed if you touch your external clothing if it gets wet during application. Glyphosate is not likely to vaporize after it is sprayed.

When applying glyphosate wear a long-sleeved shirt and long pants, protective footwear plus socks, and protective eyewear. Discard clothing and other materials that have been heavily contaminated with the product concentrate. Follow manufacturer's instructions for cleaning and maintaining your PPE. If no instructions for washables exist on the product label, wash with detergent and hot water. **Store and wash PPE separately from other household laundry**.

Rubber gloves help avoid dermal contact when hands are used to open containers, manipulate spray equipment, load and mix, and during the adjustment of sprayer triggers and nozzles. Keep your gloves on during cleanup also.

Goggles prevent eye injury.

Rubber boots eliminate contact when walking through sprayed areas.

In general terms, using the appropriate Personal Protective Equipment (PPE) can greatly reduce the potential for dermal, inhalation, eye, and pesticide exposure via ingestion, and significantly reduces the chances of pesticide exposure and potential health impacts. **But PPE does not completely eliminate risk.**

Where a mixture is used, wear all the PPE specified on the higher-level safety directions. At a minimum, always wear long sleeves, long pants, shoes, and chemical resistant gloves. Do not ever be tempted to roll up coverall or shirtsleeves.

Everyone says it, but how often do you do it? Read and make sure you are confident that you understand the pesticide label. Even if you are familiar with a product, label instructions change over time. Make sure you have the current label, and carve out time to completely digest all of it. The National Pesticide Information Center, can help, hotline 1-800-858-7378 (8am to Noon Pacific Time, Mon-Fri), email npic@ace.orst.edu, website http://npic.orst.edu/. Read more about glyphosate at http://npic.orst.edu/factsheets/glyphogen.html.

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