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Iowa Farmer Today

Safety Watch: Noxious plants get under your skin

By Stephanie Leonard Jul 7, 2022

Poison ivy can sneak into flower beds.

Photo courtesy Stephanie Leonard

A stand of flowering wild parsnip in an Iowa ditch.

Photo courtesy Stephanie Leonard

This time of year, you may recognize some noxious neighbors and give them a wide berth. Or maybe you won't realize you've bumped into them until it's too late.

You may notice the uninvited neighbors are showing up closer than in years past: along the roads, in your ditch, yard, landscaped beds, timber, pasture or CRP ground.

And researchers are warning that the most notorious of these bad actors is amped up because of climate change.

Poison ivy

Most everyone's heard the "leaflets three, let it be" adage, warning against contact with poison ivy. But identifying and avoiding this hiding-in-plain-sight plant isn't so straightforward, considering that Toxicodendron (the plant genus that includes poison ivy, poison oak and poison sumac) dermatitis affects 10 million to 50 million Americans annually.

In their June 2019 Dermatology article, "Poison Ivy, Oak and Sumac Dermatitis: What is Known and What is New?," Dr. Yesul Kim and colleagues note that Toxicodendron dermatitis is a major contributor to over 10 million office and outpatient visits for contact dermatitis each year in the U.S. The U.S. Centers for Disease Control and Prevention reported that from 2002 to 2012, emergency department visits for poison ivy and skin rash nearly doubled — to more than 929,000 annually.

As far as the plant itself? Duke University plant physiologists and ecologists studying the effect of climate change on poison ivy report that increased ambient carbon dioxide levels and temperatures have a supercharging effect: biomass and leaf size has increased, photosynthesis rate has increased, water use is more efficient, and rate of spread has increased. Not only has poison ivy grown stronger, faster

and become more competitive with other species, urushiol (you-ROO-shee-ol) — the allergenic compound in oily sap on all parts of poison ivy, which is responsible for the itchy reaction we experience hours to a few days after contact — is becoming more potent.

“The poisoned weed is much in shape like our English Ivy, but being but touched, causeth rednesse, itching, and lastly blisters,” a new world explorer named John Smith wrote in 1624. The blisters “after a while passe away of themselves without further harme, yet because for the time they are somewhat painfull …”

That phenomenon Smith aptly described 400 years ago occurs when urushiol released from any bruised part of the plant is absorbed into the skin and binds with proteins in skin cells, triggering an immune response of redness, swelling, blisters and itching, usually beginning within 24 to 48 hours after contact, although symptom onset can range from 4 hours to four days after contact.

This delay, and the fact that contact dermatitis doesn’t require direct exposure to the plant, can make it tricky to recognize a poison ivy exposure for what it is. Urushiol can be transferred from the plant to gloves, shoes, clothing, tools and pets or nearly any other surface to skin, inducing the allergic response. Urushiol can cling on unwashed surfaces and remain active for months or longer.

Exposure to aerosolized particles of poison ivy can also occur when mowing, shredding or burning vegetation if plants are present. Inhaling poison-ivy spiked smoke can cause severe injury requiring emergency treatment.

Poison ivy rash doesn’t “spread” when touched, once the rash has appeared, nor does it “spread” through the weepy yellow fluid released from blisters. Urushiol produces redness, rash and blisters only at the point of contact, and it’s not present in the weepy fluid.

The reasons for misconceptions about poison ivy "spreading" on the body is because the rash can present over a period of time and rash development is a factor of the amount of urushiol deposited and skin thickness at area of deposit. The streaky patterns of rash that correspond to contact areas are sometimes misconstrued as spread after contact when, in fact, they are presentation of rash development at the site of urushiol contact.

Secondly, if repeated contact with a contaminated surface or piece of clothing continues to occur — i.e., if contaminated gloves are worn for several days, or if oil remains under the fingernails without being scrubbed — new urushiol contact and rash may occur, giving the misperception or appearance of the original rash "spreading."

Wild parsnip

Wild parsnip is easy to recognize because of its size, shape, and leaf formation. These neighbors are common in road ditches, field borders, prairies and are easily spread into lawns. In July, it's easy to spot flowering wild parsnip along roadsides because of its erect stand and yellow flowering heads.

While contact with poison ivy's urushiol produces an allergic response in more than 80% of the population, contact with sap of wild parsnip can injure anyone.

Sap from the stems, leaves or flowers of wild parsnip can cause phytophotodermatitis, if the sap-exposed skin is exposed to UV light. Chemicals in the sap make the skin especially sensitive to sunlight, and when sap-exposed skin is exposed to sun shortly afterwards, a painful burn response, often with blistering, follows. After the burn heals, darkened pigmentation can remain for months.

Sap from wild parsnip can cause a burn at any plant growth stage, but the sap is most potent now, while plants are flowering.

Prevention

What's the best way to deal with these noxious neighbors? Recognize and steer clear of them.

But if you do work in or enjoy outdoor areas where they're present:

- Cover your skin with long pants and sleeves.
- Wear vinyl gloves when working around poison ivy. (Urushiol can penetrate rubber gloves.)
- Wash your skin with water and soap as soon as possible after exposure to remove plant oil or sap. For poison ivy, this should be done within 10 minutes to prevent or minimize the allergic reaction. For brushes with wild parsnip, cover the skin immediately to prevent sun exposure that triggers the burn reaction.
- Wash contaminated hands before touching your eyes, face or going to the bathroom to avoid transferring plant oils to thin or sensitive skin.

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