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The View from Laughing Springs: Hans Reimann's ecological notes

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Wild Parsnip

Originally from Eurasia, where it was domesticated as a useful root vegetable, wild parsnip (*Pastinaca sativa*) is a plant that escaped from cultivation. The reason for its introduction into Eastern North America was as a food source, but, not only did this plant begin to displace native plants when growing outside gardens, it also began to accumulate higher than normal concentrations of chemicals called furanocoumarins. These furanocoumarins seem to protect the plant from fungus infections and some insect pests. These defensive chemicals are common in the *Umbelliferae* family of plants, which include parsnips, wild carrot (Queen Anne's Lace), fennel, dill, parsley and celery. One cousin, giant hogweed is on the federal/state invasive plant lists.

The threat to humans is dermatitis, triggered by exposure to wild parsnip leaves. A combination of ultra-violet light, high humidity, heat and sweating skin creates blisters an hour or two after exposure. This reaction is not an allergic response such as with poison ivy contact. The medical term for the human reaction to a brush with wild parsnip is phyto (plant) photo (light) dermatitis (skin inflammation).

While not yet reported to me as present in our watershed, our state bureau of forestry lists wild parsnip as a problem plant in Southeastern Pennsylvania. It thrives in limey soils, and is usually a biennial. In its first year, two foot long stalked basal leaves are possible with each leaf containing five to fifteen stemless, toothed leaflets. During its second spring, the single, whitish, fleshy taproot can support a hollow, grooved, branched flower stalk capable of five-foot heights. These stalks produce umbrella-like clusters of yellow flowers during the summer. After pollination, mature fruits are flat ovals up to a half inch long. Poor soils inhibit flower and fruit production.

To avoid the toxic effects of this invasive, learn to recognize it, wear protective clothing when trying to remove it, and consider post sunset times for these tasks. Herbicide application or repeatedly cutting flower stems to prevent seed production can eradicate this plant. If you disturb the soil while removing roots, this plant could have an extensive seed bank, which you will stimulate accidentally. On a final note, cultivated parsnip seed packages warn you not to save seeds for a future planting season. Most seeds will not be viable but those that accidentally sprout outside your garden can revert to the toxic wild variety. Please use caution when planting this root vegetable. Thank You.

Grass Farming for Local Energy

The preservation of farmland in our watershed region has become a successful reality in the two major political subdivisions of Durham and Springfield Twps. Over a thousand acres of good farmland have been protected from development by utilizing state and county funds, and some local funding. Now, Lower Saucon Twp, the third major political subdivision of our watershed area, has a farm property listed for preservation consideration, their first.

One of the important criteria for evaluating a farm property's preservation worthiness is its viability as an economic enterprise. Actually, the most desirable factor in ranking a farm for a farm easement agreement is the fertility of the soils. And, of course, when good soils produce large yields of crops per acre, a farm family can better manage their property in our capitalist system of market driven prices for those crops. Grass farming for local energy products shows promise as a way to utilize our good soils to grow native grasses as a cash crop for our farmers.

Opportunities and strategies exist now for farmers to participate in delivering clean energy products for today's energy markets. These products are called biomass derived fuels. Our awareness of fossil fuel's rising costs, both economically and ecologically, i.e. global climate change, is increasing. Bio-fuels produced from perennial native grasses, hold great promise for our farmers as economical and sustainable crops. Many applications are available for bio-fuels to replace fossil fuels. Profitable production on about one hundred acres or more can be achieved when local strategies promote cost-competitive, reliable products for appropriate applications. Locally grown native grasses compacted into pellets, cubes or briquettes are referred to as biomass. For biomass to be an effective energy market product, proper growth, harvest, processing, and storage techniques are required.

Our local farmers can adapt to take advantage of this new farm market opportunity being developed. In Columbia County, PA, the local conservation district office has local farmers participating in biomass production development. As more information becomes available on this exciting new farming prospect, this info will be shared with local officials and farmers. Our watershed area can become more financially and energy independent by supporting our local farmers in these kinds of initiatives. Website for more information:

<http://www.grassbioenergy.org/resources/bioinfo.asp>.

The “new” concept of grass heating is really any old one used by the pioneers settling the Prairies. After having used up the supply of “Prairie coal” (buffalo chips), they switched to burning grass, twisted up into packets. These packets were known as “cats.”