

## **All for the sake of long, skinny, white fries**

by Ralph C. Martin

It has been reported that a substantial sub-sample of the species, Homo sapiens, is frequently observed grazing on long, skinny, white, French fries. Apparently these upright potato parallelepipeds are plucked, dripping with a sugar and tomato substance, from colourful boxes, without the customary humanoid utensils. A dietary advantage is not detectable and thus is unlikely to be the driving factor for this fickle, feeding frenzy.

The ecological implications of the phenomenon are increasingly of concern. In order to make long, skinny, white French fries, processors are paying a premium to farmers for large Russet Burbank potatoes. Farmers grow what is profitable. The white colour of Russet Burbanks and the efficiency of excising optimal numbers of lengthy fries from these bulked up tubers, of high specific gravity, are just the ticket for processors seeking to meet this peculiar market.

Large tubers are not natural. To grow bulked up tubers, farmers are encouraged to apply excessive applications of nitrogen fertilizer, a product requiring unusually high energy inputs to manufacture. The recommendations have been designed to provide easy nitrogen access to the tubers. However, the extra nitrogen fertilizer, not taken up by plants in wet, late season soils, can transform to nitrous oxide, a greenhouse gas 300 times more potent than carbon dioxide. Nitrogen fertilizer remaining in soil, also transforms to nitrate, leaches into ground water and becomes toxic at concentrations above 10 parts per million, leading to blue baby syndrome.

In order to optimize the potential of Russet Burbank potatoes (140 days from seeding to harvest) to attain maximum size, they are harvested as late as possible. In PEI potato country, a late harvest is in October. By then the window shuts for establishing a cover crop to draw up the remaining nitrogen fertilizer, not used by potatoes. The lack of a cover crop also leaves the disturbed soil exposed to erosive wind gusts (up to 90 km/hour) in the fall and winter and to erosive running water after snow melt, the next spring.

As the potato season lengthens, there is also a higher risk of potatoes being infected with blight, the same disease associated with the Irish potato famine. Fungicides are

increasingly applied to prevent or contain blight as harvest is delayed, with concomitant stresses on ground water quality.



*Rye growth, after a potato harvest, on October 5, still earlier than many harvests.*

*Photo of Kensington North Watershed Association*

Some farmers including, Matt Ramsay, a member of the Kensington North Watershed Association on PEI are experimenting with establishing cereal rye as a cover crop. They broadcast the rye seed at high rates of 175 – 200 lbs per acre about 5 to 7 days before potatoes are dug. The potato digging equipment buries some of the rye seed too deeply for germination after potato harvest. Nevertheless, a good portion does germinate and provides some cover to protect the soil from late season winds and spring water run-off. Matt explains that success of the cover crop is improved if the potato harvest is earlier.

An earlier harvest, of smaller potatoes, would reduce the problems of applying excess fertilizer and fungicides and leaving the potato field bare after harvest. In fact, organic potato production, without synthetic fertilizer and pesticides, and with cover crops, is becoming more common with smaller potatoes, harvested earlier.

The Little Potato Company ([www.littlepotatoes.com](http://www.littlepotatoes.com)) is specializing in growing and processing small creamer potatoes. The ecological footprint of this product is much smaller than hefty potatoes for fries.

Roger Henry, an agronomist at the PEI Harrington research station of Agriculture and Agri-food Canada notes that, “the ideal potato variety for fries would grow in the shape of a brick, in less than 100 days.” Until such a variety is available, we might rethink our long, skinny, white fry habit. It’s common knowledge that baked, roasted and boiled potatoes are a healthier choice than fried potatoes. The risk of catching a cold or flu is also higher when eating with our fingers.

The long, skinny, white fry trend may have been acceptable when we didn’t know any better. Now we do, so it’s time to drop this bad habit.

*Ralph C. Martin, Ph.D., P.Ag., Professor, University of Guelph. Comments welcome at [rcmartin@uoguelph.ca](mailto:rcmartin@uoguelph.ca)*