by Catherine Morrison

Cattle waste and training detector dogs

IT SEEMS THAT ALBERTA is a real hotbed for scientific projects involving cattle waste products. In the last issue of *Summit,* readers may recall that I discussed Environment Canada using a methodology, developed in Alberta, to study ways of measuring and reducing methane gas emissions from cows. Enteric fermentation, the cow's digestive process that results in methane gas, is a real problem, known to contribute to "about one third of total agricultural greenhouse gas emissions."

Recently, the Alberta Research Council (ARC) has contracted with an Alberta farm family to implement a $6 million commercial manure power project, the first of its kind in North America.

The project technology, known as the Integrated Manure Utilization System, or IMUS, was developed by the ARC and will produce methane fuel from cattle manure by means of an anaerobic digester. The methane will power an electric generator.

Xiaomei Li, lead scientist on the project at the ARC, has calculated that the electricity needs of one million households could be fueled by the manure output of Alberta's six million beef cattle, according to the *Edmonton Journal*. "Of course it will never replace natural gas," the *Journal* quotes Mr. Li as saying. And very politic of him, too, given how big the gas industry is in Alberta.

But with the recent resurgence of Mad Cow concerns, it's not a huge stretch to imagine that other uses will have to be found for all those cattle that may not be going anywhere for a while. The potential for this technology may well be explosive. Mike Kotelko, the Vegreville, Alberta farmer who created Highmark Renewables to demonstrate the IMUS technology at his own feedlot, plans to build a chain of manure-fired power stations across the continent.

It gets better. As a by-product, IMUS produces a bio-based fertilizer with all of the germs removed – something not to be sneezed at when you have to think about what to do with cattle under suspicion of carrying disease.

Another upside of all this, according to the ARC calculations, is that IMUS will eventually cut Alberta's carbon-dioxide emissions by 740,000 tonnes, by replacing coal-fired power and conventional fertilizer manufacturing. So now that the solid methane source can be utilized for fuel, if a way could be found to convert the naturally occurring gas from these emissions at their source, Environment Canada might soon have reason to feel better about Canada's agricultural greenhouse gas contribution.

Another update: last month this column discussed the controversy surrounding educational institutions that contracted with soft-drink companies to supply their products to children and young people. A thorny issue indeed, with parents, the medical community and even kids themselves challenging school boards over the health implications, and the secrecy surrounding supplier deals and what school boards were getting in return for access to a captive and arguably under-informed market.

In a brilliant stroke of strategic PR, the Canadian soft-drink industry recently announced that its members will cease offering carbonated beverages in elementary and middle schools across Canada in September 2004. Instead, according to the *Calgary Herald,* vending machines will sell water and fruit drinks. The *Herald* quotes Carla Farn, spokesperson for Refreshment Canada (the industry lobby group), as saying that physical fitness and overall diet are what's important and "no single food or food ingredient is responsible for health problems."

She is undoubtedly right about physical fitness. But remember, one of the reasons kids' health and fitness levels have declined is that school gym programs have been drastically cut in the last decade or so, thanks to shrinking school budgets – one of the chief reasons that school boards made deals with the soft drink industry. It's a conundrum not likely to be solved by substituting soft drinks with fruit drinks, most of which are loaded with sugar, widely thought to be a major dietary culprit in diabetes and heart disease.

CCRA detector dog sniffs car engine for contraband.

Now, moving into uncharted territory, did you hear about the West Vancouver Police Force seeking the services of people willing to be chased down and, well, attacked by dogs? This is no joke. According to the *Vancouver Province*, the WVPD advertised for "experienced dog quarries … to assist in the continued development and training" of their police dogs. And there are actually people who will do this, commanding the princely sum of $8.50 an hour. But if you think this might be dangerous work, relax. You get to wear a leather and metal arm protector.

The use of dogs in policing and detection work is nothing new. The Canada Customs and Revenue Agency has been using detector dogs since 1978 and currently has 46 detector dog teams across Canada. CCRA's dogs are used chiefly to detect contraband drugs and firearms, according to a CCRA factsheet. In 1993, the agency introduced "passive" detector dogs, which are trained merely to seat themselves decorously beside the source of an odour from a banned substance or weapon. The tendency to latch themselves viciously to a bad guy is apparently considered unhelpful in crowded airport situations, where many of these dogs are deployed.

Catherine Morrison, a writer based in Chelsea, Quebec, has been published in the Ottawa Citizen *and the* Globe and Mail*'s print and online editions, as well as in* Canadian Consumer, Asia Pacific Magazine, *the* Edmonton Journal *and* C.A.R.P. Magazine. *She was a full-time writer/broadcaster for CBC Network Television and CBC TV and Radio, Winnipeg and a contributing editor and columnist for* Winnipeg Magazine.