CANADA'S ONLY ORGANIC FARMHOUSE BREWERY

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The unique Crannóg Ales brewery – Canada's only certified organic farmhouse brewery and one of only a handful of such breweries in the world – was founded by Brian MacIsaac and Rebecca Kneen in the spring of 1999 on a ten-acre farm west of Sorrento, BC. They started brewing their first batch of certified organic ale in January of 2000. Since then they have gone on to brew several award winning ales while maintaining a fierce commitment to organic and sustainable practices in every aspect of their on-farm brewery. www.crannogales.com

Brewing Up A Business

The fully organic Ales produced by the Crannóg Ales brewery have established a loyal following in Vancouver bars and restaurants alongside the taps of other small BC brewers like Storm and Backwoods. What sets them apart from these other microbreweries is that their ales are certified organic, unfiltered and unpasteurized. Rather than filtering the beer, they use gelatin and Irish moss from approved natural sources as clarifying agents.

There are also no synthetic additives added for head retention, clarity or preservatives. Overall, MacIsaac says this ensures cleaner production standards and an environmentally friendly process. They use all natural ingredients, avoiding the use of rice, corn or sugars. The basis for all of their ales is organic malt, hops and spring water, with special ingredients like fruit or potatoes being added to create unique specialty ales.

Not only are the ingredients and inputs certified organic but also everything used in the brewery, including building materials, floor cleaners, and even the building design is approved by the Certified Organic Association of BC (COABC). Even the poles used to support the hop vines in their 3/4-acre hopyard are made of untreated fir logs, in accordance with Crannog's certification from the North Okanagan Organic Association.

Setting the Stage

The groundwork for the eventual on-farm organic brewery concept was laid while the pair was still living in Vancouver. MacIsaac, who also worked as a social worker for a time, had been brewing since the mid 80's, both at home and with a few local British Columbia microbreweries. He even spent time in Ireland learning to brew ales in the Irish tradition.

neen meanwhile was working in the food trade, on the promotion of organic foods. If her family name sounds familiar, you may recognize her as the daughter of Brewster Kneen, the highly regarded author of *Farmageddon* and other topical writings on organics and biotechnology. He is known internationally as one of Canada's foremost expert on the global food system.

Brewster and his wife Cathleen instilled Rebecca early on with the sense that farming brought with it a responsibility as a steward of the land. Rebecca and Brian shared this sense of stewardship as well as a strong desire to "get back to the land". Soon the pair became very interested in starting their own organic farm. However, they figured that in order to make it financially sustainable they would need a home industry to bring in cash so MacIsaac and Kneen decided to combine their dream of farming organically with Brian's passion for brewing beer -- and thus was born the Crannóg Ales Brewery.

Carving out a Niche

Overall in the last four years the market response has been positive, but the duo recognized early on that they needed to make great beer because organic certification alone would not make the brewery successful. Despite having no real experience marketing or running a business their initial marketing strategy was quite savvy. They chose to target two separate niche markets at the same time -- the Irish community and the organics community. This ensured that if one or the other niches wasn't strong enough on its own to support their business then they could rely on the other to help buoy their initial sales. Carving out a niche (or two) is important to surviving in the highly competitive beer industry where nearly 60% of the money from sales ends up in the government's pocket via GST, PST, liquor board fees, and excise taxes.[1]

The initial plan was to first develop the local market and only move into Vancouver after about year three, but they found that local demand did not develop right away. Sales progressed slowly in their home region, which isn't exactly known for its consumption of micro-brewed beers. However, in Vancouver, a select group of restaurants had strong demand from their customers for premium organic beers which made Vancouver their initial customer base well ahead of schedule. Word of their unique ales spread and several other restaurants began to stock Crannóg ales for the quality of the beer, with the organic certification being an added bonus. All of this despite the fact that they sell their ales at the top end of the price bracket for the craft brewing industry.

Waste = Food, Closing the Loops

While taking the plunge and brewing organic beers was already a big step towards operating a more sustainable business, MacIsaac and Kneen have gone even further, developing a near zero-waste system. Doing so has fully integrated the farm and the brewery to the benefit of both much like a mini eco-industrial park. Currently, the brewery produces four kinds of what they call "non-waste" materials: spent grain, spent yeast and hops, clean water, and grey water. Spent grain is either fed directly to the livestock, or it is composted to provide nutrients for the garden and the hopyard. Spent yeast is first heated (to render it inactive), after which it is also is fed to the livestock, or alternately added to the compost along with spent hops. Brewers yeast is well known for its nutritional properties, and Rebecca says, "The animals love it".

Clean water is re-used both within the brewery directly, and for watering livestock and the gardens. Grey water is more of a

challenge, as it can contain everything from traces of cleaners and sanitizers to floor sweepings and old beer. They have tackled the problem with a series of intelligent materials choices. Firstly they use a cleaner that actually helps in the breakdown of other solids, so its presence in the grey water is not a concern. Secondly the sanitizer used breaks down to water and acetic acid, and needs only to be pH balanced before being added to a treatment system. By happy coincidence the acidity of the sanitizer is neutralized by the alkalinity of the cleaner. How do they ultimately deal with the grey water?

Sourcing Organics

A major hurdle Crannóg Ales has had to overcome is the premium price that they have to pay for their organic ingredients. With no local suppliers initially growing organic ingredients they had to pay anywhere from 1.5 to 4 times as much for their ingredients as conventional brewers[2]. The most expensive of these organic ingredients were the hops, which were being shipped in all the way from New Zealand. This made planting their own hops one of their first priorities. By the fall of 2002 their hopyard was in full production and it now accounts for 1/4 of all the hops used in the brewery while rest still comes from abroad.

In the case of their organic malt, which costs on average 50% more, it was initially all sourced from an organic malt producer based out of Wisconsin but they have since developed deals with local maltsters in BC and Alberta to produce organic malts. As a result they are starting to reap significant savings on shipping costs. Their hope is that as more local farmers start growing organically, all of their ingredients will come from local suppliers, improving their bottom line as well as supporting the local economy.

Always Room for Improvement

Even as Brian and Rebecca are proving that it is possible to successfully brew world-class organic beers and still maintain a strong commitment to the environment they are looking to the future, continually trying to improve on every aspect of the Brewery and the farm.

While more long-term goals include becoming energy self-sufficient and further improving their wastewater treatment process, the most pressing issue right now is the efficiency of their beer distribution. They already share some of the distribution burden with a local distribution company, but MacIsaac often still makes many of the deliveries himself. Not only does this take up a lot of time, but also driving around with a half-empty vehicle ends up being very expensive and wasteful. To save time and money, as well as limit the environmental impact of their deliveries, they are looking to hook up with a larger distribution network.

Small is Beautiful

One of the great things about Crannóg Ales is that it is a very hands-on operation. As MacIsaac puts it "We feel that the greater contact with our processes results in a more original product with a more personal style. We plan to stay small intentionally," he declares. "Right now our whole system is designed for maximum benefit to the environment. If we grow too big we'll lose the symbiotic relationship with our farm, with too much spent grain to handle."

While they plan to eventually double their production, for MacIsaac and Kneen sustainability is about recognizing the importance of limits to growth. As Rebecca puts it "the point of working isn't to make money – the point of working is to have fun, to refine your technique, to gain satisfaction from what you do, to become personally sustainable". She thinks small businesses should "find the break-even level of income and figure out how much more than that they need to be satisfied with their personal and business income". When MacIsaac and Kneen reach that point they will not continue to expand unfettered, but will instead strive to be ever more environmentally and socially responsible – only becoming *better*, not bigger.

What's in a Name

So what exactly is a crannog anyways? According to the brewery's website, a crannóg is an ancient Celtic lake house built either on stilts or on a man-made island. Crannógs are found all over Scotland and Ireland. There were several reasons why people chose to build this way, safety being one, and as MacIsaac and Kneen emphasize; the wise use of arable land being another.

SIDEBAR

Changing the way we feed ourselves

Industrialized agriculture is increasingly presenting threats to public health and to the environment by polluting groundwater, increasing soil erosion, decreasing biodiversity and destroying soil productivity. That's why it's no surprise that the authors of Natural Capitalism warn that "for economic, health, and environmental reasons, a major overhaul of current agricultural production methods is needed to achieve adequate, acceptable, and sustainable food and fiber supplies."[3]

"Degradation of the natural capital that is the foundation for farming has been found to be decreasing overall farm productivity in almost all farm systems studied worldwide. This loss continues regardless of the technological inputs that have been applied to alleviate it."[4] In fact, today, "almost 50 billion pounds a year of insecticides are used and crop losses are still 20 percent higher than they were before we got on the pesticide treadmill."[5]

"Organic farming is the only system of food production in which consumers have a clear sense of what practices are allowed and forbidden, and farmers not only must demonstrate that they are not spraying known pollutants on the land but also must follow any number of practices that actually restore the landscape, from crop rotation to cover-cropping to composting. Organic farming goes a long way toward providing better food from far smaller and more sustainable inputs."[6]

"Some of the biggest obstacles to the continued spread of organic farming tend to be conceptual. Many farmers, agriculture researchers, and people who make farm policy simply believe that farming with fewer or no synthetic chemicals is not feasible on a large scale."[7] While it is true that often yields decrease in the first few years as the soil recovers from years of assault with chemicals, after the soil recovers, yield comparisons show virtually no difference. This is largely because "healthy soil biota can provide about tenfold better uptake of nutrients, permitting the same or better crop yields with a tenth the application of soluble nutrients."[8]

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[1] Rebecca Kneen interview June 26, 2004.
[2] Rebecca Kneen interview June 26, 2004.
[3] Hawken, Paul, Lovins, Amory and L. Hunter Lovins. Natural Capitalism: Creating the next cultural revolution. Little, Brown and Company, New York. 1999.
[4] Ibid.
[5] Ibid.
[6] Halweil, Brian and Danielle Nierenberg. "Watching What we Eat" *in* State of the World 2004. Worldwatch Institute, Washington, DC, 2004.
[7] Ibid.
[8] Hawken, Paul, Lovins, Amory and L. Hunter Lovins. Natural Capitalism: Creating the next cultural revolution. Little, Brown and Company, New York. 1999.