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Change of Pace

Former tobacco farmers have a bumper new crop to exploit: ginseng

BY ROBERT HOUGH



Photos: Evan Lee

For the benefit of those who have never taken ginseng to treat fatigue, stress, diabetes, headaches, dizziness, colds, influenza, high blood pressure, low blood pressure, thinning hair, failing memory, tumours, diminished libido, allergies, inflammation, poor appetite, a logy immune system, various circulatory issues, and/or generalized feelings of dispiritedness, I will start by saying this: nothing smells quite like ginseng. I have heard the aroma described as a tannic potpourri of licorice root, cloves, sarsaparilla, and the budding seed of the anise flower. This may be true, though any aromatic composition would also have to include the sickly sweet putrescence that descends on a forest in the fall, after all the leaves have fallen, and it has rained for a week, and everything has turned mushy and black. I would also add that ginseng pretty much tastes like it smells.

For ginseng farmer Doug Bradley, however, describing the aroma of Ontario ginseng is easy: “The only thing that smells like ginseng is ginseng.” We are standing in his cavernous, aluminum-sided barn in Norfolk County, about an hour and a half southwest of Toronto. His hands are submerged in a barrel of dried ginseng. He pulls out a mound of the sand-coloured root and holds it to my nose; the smell is so concentrated and dry that it tickles the insides of my nasal passages. “You see?” he says. “You see how strong that scent is? Ontario is the only place where you find ginseng that potent.”

Bradley is a tall, avuncular man of fifty-six who laughs a lot, has three grown (or nearly grown) children, and wears a pair of hearing aids. Due to his hearing problem, he says, he has a tendency to mumble; I don’t notice this, though I do notice that he pronounces ginseng as “ginsen,” with the accent on the first syllable. After talking in his barn, we jump in his truck and drive well away from his farm to see some of the ginseng he is growing, a contradiction that bears explanation.

The first thing to know about ginseng, Bradley tells me, is that it does not grow in the same place twice. You plant it, it takes four years to come to maturity, and then you have to plant something else, or rent the land to another farmer who will do so. As ginseng farmers invest heavily in the equipment necessary to grow their crop, most opt for the latter. Bradley, for one, owns about eighty hectares of land, most of which he doesn’t farm. Meanwhile, the thirty-five or so hectares on which he farms ginseng all belong to others, who previously used that land to grow something else entirely.

Though it has been raining fiercely all morning, the sun has come out, blanketing the fields in a humid, bug-flecked haze. As we drive, I notice that the fields we pass are filled with the little wooden houses once used to dry tobacco leaf. Today the kilns are unused and falling prey to wood rot and infestation; many are leaning precariously. I can also see the emblems of Norfolk’s current bounty: the polypropylene shades that provide the mix of sunlight and darkness ginseng requires. At one patch — it looks to be about an acre or so — Bradley pulls over. This plot, he says, hosts a mixture of one-, two-, and three-year-old roots, which he will likely cultivate to maturity, unless of course the ginseng begins to show signs of die-off, meaning he will harvest it early and begrudgingly accept a lower yield.

“The other thing you should know about ginseng,” he tells me with a chuckle, “is that the moment you put it in the ground, it begins to look for ways to kill itself.” The root, he explains, needs a climate with sufficient rain, and soil that drains quickly and easily; as growers like to say, “ginseng doesn’t like wet feet.” (The loamy soil of southwestern Ontario is perfect, just as it was for the cultivation of tobacco.) The plant also falls prey to numerous diseases and grub worms, and the rows in which it is planted need to be kept warm in winter with a padding of threshed straw. Finally, the instant ginseng is planted, it begins to generate a pathogen called cylindrocarpon; this slowly builds up in the soil, and by the fifth year will likely kill the plant. (Its presence in the earth, essentially harmless to other crops, is also the reason ginseng will almost never grow in the same place twice.) Among farmers, ginseng is a heartache crop, the rhizomal equivalent of Pinot Noir.

Ontario hosts about 2,400 hectares of cultivated *Panax quinquefolius*, or American ginseng, and that figure is rising every year. The current area yields about four million pounds of the fibrous root annually, making Ontario by far the biggest producer in the world of this strain of ginseng. The vast majority is shipped to China and Hong Kong, where it is either sold in whole roots, or ground up and manufactured into tea, candy, balms, creams, medicinal lozenges, capsules, unguents, herbal infusions, flavour additives, and bulk powders. (There is some ginseng grown in British Columbia, though it is regarded as poor in quality; and ginseng farmers in Wisconsin, once leaders in American ginseng production, are slowly being put out of business, partially due to Ontario's high yields.)

The biggest problem associated with growing ginseng in Ontario today is the price paid by buyers, which has fallen precipitously in recent years — from a high of about \$82 per pound in the mid-1980s to somewhere between \$12 and \$14 per pound today. The reason, Bradley told me, is that disreputable growers in China are passing off their much less valuable Chinese-grown *Panax quinquefolius* as the illustrious Ontario-grown. (Due to different climate conditions, the former doesn't have the same taste or smell, and generally sells for 10 percent less.) This practice simultaneously increases supply and diminishes demand: Chinese producers sample imitation Ontario ginseng and conclude that they might as well use the less aromatic, and cheaper, homegrown variety.

This drop in price has prompted many Ontario ginseng farmers to get out of the business altogether; five years ago, about 300 were farming in Ontario's former tobacco belt, whereas today there are about 200. Those that remain are planting more and more ginseng, given that a certain economy of scale is now necessary to make a real income. All of this has resulted in an irony not lost on people like Doug Bradley: fewer Ontario farmers are now growing far more ginseng in order to earn much less money.

Wild ginseng was first picked in the mountainous regions of northeastern China about 5,000 years ago. A Taoist principle says the appearance of things in nature suggest what purpose they serve. By this way of thinking, walnuts (wrinkly, hemispherical) are good for the brain, and feral boar tusks (rigid, phallus like) are an aphrodisiac. The ginseng root, meanwhile, was said to look like a little person — “ginseng” means, more or less, “image of man” in Cantonese — and was therefore viewed as a general tonic, said to cure whatever ails you. (To me, ginseng root looks more like a scrawnier, bark-ridden version of ginger, albeit with these little limb-like



protuberances known as prongs.) Slowly, the ingestion of ginseng grew popular; the very first official Chinese pharmacopoeia, a sparse volume published over 2,000 years ago on paper made of mashed plant fibres, had this to say: “Ginseng soothes base emotions, safeguards the soul, drives out fear, expels evil influences, brightens the eye, opens up the heart, increases the spirit and, if taken over a long period of time, prolongs life.”

With such a lofty endorsement, ginseng’s use became sufficiently widespread that by the 1700s most of the wild ginseng in China had been consumed, and what little was left had become so expensive it was used mostly by members of the royal court. Enter a Jesuit priest named Joseph-François Lafitau, who had recently taken a posting in a settlement near present-day Montreal. In the fall of 1715, he happened to read in a Jesuit newsletter an article by another Father stationed in China, who described a vermilion-berried plant that produced a root highly valued for its medicinal qualities. Lafitau, who was nothing if not determined, decided to find out whether the plant existed in New France; for the rest of that autumn, and all through the ensuing winter and spring, he was fixated on finding the root. For three months, he organized search parties deep into the inhospitable bush, only to find the herb growing next to the house he was having built on the south bank of the St. Lawrence.

Soon the New World was crawling with French merchants, all eager to buy ginseng to sell to the Chinese, who quickly fell in love with the higher potency and flavour of American ginseng. Foraging for wild ginseng thus became popular in forests all through Quebec, Ontario, New England, and the Appalachian Mountains; it was particularly popular with fur trappers, who needed something to do in their off-season, and who knew how to wander into the bush without getting lost or starving to death. For this reason, ginseng became inextricably linked with the fur trade — Daniel Boone was an early and prodigious seller of ginseng root — and for more than two centuries, the buyers of ginseng were also fur buyers.

In 1897, an Ontario farmer named Clarence Hellyer was visiting his wife’s family in Michigan.

During his stay, he picked up a magazine for hunters and trappers, and saw an ad placed by a fur broker in New York City — the broker was appealing to readers for ginseng. Hellyer, meanwhile, had seen the plant growing in the forests back home in Norfolk County. On his return, he tromped into the local woods, uprooted some ginseng, dried it, mailed it to New York, and received a cheque in return. This gave him an idea: if ginseng grew wild in Norfolk County, couldn't it also be farmed?

Early attempts at cultivating ginseng in Ontario were characterized by an admixture of caution and determination. Hellyer quickly discovered how finicky the plant was, and devoted only a small plot to it, to supplement his income. Seeding was done by hand, and the shades were made of used railway fences. When a crop did survive, the fur houses in New York were only too willing to buy the root at a price significantly higher than that paid for apples or soybeans. Other local farmers followed Hellyer's example, only to see the First World War and the ensuing depression wipe out all non-essential farming in the county. In the 1940s, Clarence Hellyer's nephews, brothers Audrey and Russell Hellyer, again planted some seeds culled from wild ginseng, and for the next forty years were the leading growers of ginseng in the area. Doug Bradley, for instance, remembers cutting through Hellyer land on the way to school, and tromping around plots of this strange, red-berried plant that was said to rid Chinese people of illness.

That all changed in the 1980s, when the price of tobacco began to drop and Norfolk farmers began looking for other ways to make a living. By the late 1980s, the Ontario government embarked on its first tobacco reduction programs, whereby it offered to buy back tobacco quotas, leaving tobacco farmers with large infusions of cash and nothing to do. Many turned to ginseng, which then was trading at upwards of \$80 a pound. Bradley, meanwhile, had just lost his foreman's position at the Massey Ferguson plant in Brantford, Ontario, which, after years of declining revenue, had finally closed. In 1986, he planted a small plot of ginseng on land owned by his wife's family. He also took a job with a factory in Hamilton, though he told his employer that with any luck he would be quitting sometime in the next three or four years.

The wait, he told me, was interminable; he had grown tired of working in factories and yearned for the outdoor life of a farmer. His ginseng plot, whether by skill or providence, did not succumb to grub worms, cylindrocarpon, rust, rudimentary shading, damp feet, or even the plant's mercurial tendency to go dormant for no reason other than a certain inbred orneriness. In the fall of 1990, he began harvesting his crop; at that point, he was still plucking out the root by hand. As he was working, a car pulled over, and a Chinese fellow stepped out. He introduced himself, and offered to buy Bradley's ginseng, right then and there, for \$52 a pound. Bradley later did a quick calculation, and realized that his lone acre had just garnered him a net profit of about \$60,000, a figure so high he felt staggered.

Sun Ming Hong Ltd., one of the world's oldest and most venerable ginseng buyers, operates an affiliated distribution company from a building in Scarborough,

Ontario, which is grey and squat, and marked only with a street address. After being buzzed inside, I am led into a waiting room panelled with a traditional Chinese mahogany screen inlaid with jade, mother of pearl, and, if I'm not mistaken, a smattering of ivory. Everything about the place suggests a degree of furtiveness and prosperity.

After waiting about ten minutes, I meet Marcus Cheng, a principal buyer who currently purchases much of the ginseng grown in Ontario. He is younger than I'd expected — he's wearing jeans, sneakers, and a fashionable T-shirt — and is prone to sudden eruptions of high-pitched laughter, not unlike Dave Thomas's helium-pitched character from the old SCTV series. He also speaks perfect English; during the anxiety surrounding Hong Kong's return to the Chinese, he immigrated to Toronto with his family, where he studied first at Jarvis Collegiate and then at the University of Toronto. During his summers, he worked for the family business, slowly learning the vagaries of ginseng buying and selling.



The first thing he says is that he cannot show me the ginseng stored inside the warehouse, tell me how much ginseng he has in stock, or divulge how much he buys and sells each year. Nor could he tell me what other traditional Chinese herbs and powders he keeps on the premises. "It's an insurance thing," he says. "It's a security thing. Before, when ginseng was very expensive, people were constantly breaking in and stealing it. Today we really try to keep things low key."

This degree of secretiveness seems to be the rule in the world of ginseng; Clarence Hellyer was famously tight lipped a century ago about his new, odd-looking crop, and for the longest time rumour had it that the Hellyer family had an exclusive licence to grow ginseng, when in fact such a licence never existed. Many decades later, when Doug Bradley started farming ginseng, none of the other farmers would offer him advice or growing tips, no matter how badly he needed them. "Everybody wanted to keep this good thing to themselves," he told me. "It was understandable, in a way." The industry is still sufficiently unknown that a year ago, the Ontario government introduced a law making it illegal to pick ginseng, and other endangered native species, in the province. Though the law was clearly intended for poachers of wild ginseng, representatives of the Ontario Ginseng Growers Association nonetheless had to travel to Toronto and inform surprised bureaucrats that they actually farmed the stuff, and, as a result, they had to pick it. An exemption for field-cultivated ginseng was in place last June

when the law came into force.

In all other respects, however, Cheng is completely forthcoming. Over a barrel of dried ginseng in the reception room, he explains that the best ginseng tends to be short and stocky, or larger than average. So a buyer will estimate what percentage of a farmer's lot is composed of plants with either of these characteristics. Since each part of the root has a different value, the buyer will also estimate the percentages in a lot of prong, fibre, and body — the latter being the most valuable — and pay accordingly.

As Cheng explains this system, he runs his hands through the barrel of dried ginseng. Soon he begins to wax beatifically about its pungent aroma, much as Bradley had done. “You can take this ginseng to a lab and prove that it has the highest concentration of the active ingredient, which, believe me, people have done. But when people in Asia say they prefer this ginseng, it's not because of its medical properties. They love the taste. It's like fine wine and terroir. Connoisseurs can taste when it's grown in perfect conditions, and those conditions exist in Ontario.”

We sit, and begin to talk about the current free fall in prices for Ontario ginseng. While Cheng agrees that Bradley's complaint about counterfeit Ontario ginseng is legitimate — “Even I, a seasoned buyer, couldn't tell by sight if a barrel had some Chinese-grown *quinquefolius* mixed in” — he says there are other factors. First, the Ontario in-dustry grew too fast too soon. “In the mid-'80s, there were only a few farmers growing ginseng in small plots. Suddenly, with the tobacco-reduction programs, everyone was getting into it. It's no wonder the price fell.” He also points to the degree of corruption and red tape in China. “It is physically very difficult to get Ontario ginseng into China, and when a non-essential product is difficult to obtain, people turn to different products, and the price falls.” Finally, he says that the problems facing Ontario ginseng farmers are the same as those facing ginseng farmers in China and Korea. In Asia, ginseng remains very popular among the elderly, and moderately popular among the middle-aged. Young Asians, how-ever, are naturally turning to more global products, and are more apt to sip a Red Bull or a Starbucks for a quick pick-me-up.

“Basically,” he told me, “the same thing that's happening to Canadian-grown ginseng is happening to Chinese-grown ginseng. It's sad, really.”

In a Goliath example of the right hand not knowing what the left is doing, the Ontario government, around the time it was making it illegal to pick ginseng, gave \$6.9 million to a pharmacologist at the University of Western Ontario to conduct ginseng research. Edmund Lui, a Hong Kong native, also received funds in kind from both the university and the private sector (mostly health product manufacturers and the Ontario

Ginseng Growers Association), meaning that he now has a whopping \$20 million for a study that just might save the province's ginseng industry.

Ginseng, as Lui explained to me, works because of its phytochemicals, namely sugarlike substances called polysaccharides, and a series of organic molecules found only in ginseng that are called, appropriately enough, ginsenosides. There are about thirty different ginsenosides (with names like Ra, Rb, Rf, Rh1, etc.), and it is the ginsenosidal makeup of each strain that accounts for its actions. For example: the fact that Asian ginseng is considered a stimulant and American ginseng a calmative is due to the mix of ginsenosides and polysaccharides found in each. Marcus Cheng told me that one strain of ginseng, found growing wild near Changbai Mountain in Jilin province, is especially believed to prolong life; if this is true, again it is because of the specific mix of ginsenosides and polysaccharides it contains.

Lui, meanwhile, is trying to identify and produce extracts of ginseng that fight specific ailments. There is already some evidence that ginsenoside Rg3 is primarily responsible for the root's anti-cancerous effect. Ginseng's polysaccharides, meanwhile, account for its ability to stimulate the immune system to ward off colds — the popular anti-cold remedy Cold-FX, which sells for a small fortune in drugstores, is nothing more than a polysaccharide-enriched extract of ginseng. Yet if Lui could also determine which strain or extract fights Alzheimer's, which combats diabetes, and which affects blood pressure (the list could go on and on, ginseng having as many uses as there are ailments), then the marketing of ginseng would change considerably.

"The idea is to develop strains of ginseng that fight specific illnesses," Lui told me. "When we can start making specific claims about different types of ginseng, then ginseng goes from being a traditional Chinese medicine to a non-traditional Western pharmaceutical. It stops being a herbal tonic and starts being a drug. And when this happens, it will be worth ten times as much." The problem, of course, is that by the time Lui finishes his study (assuming he does succeed), the dropping price of ginseng might have irrevocably altered the industry in Ontario.

Toward the end of my day with Doug Bradley, he gets a call advising him that the Mexican



labourers he uses to pick seeds and flowers from his three-year-old plants have accidentally poured diesel fuel into the hydraulic fluid reservoir of a ride-on work vehicle called a Skid Steer. ("It's an easy thing to do," he says.) We drive to the plot where the mistake was made, and as he irons out the problem I wait near a row of dilapidated tobacco kilns. Through a border of maple trees, I can see a mist of pollen rising from a field of rye planted by Bradley.

He comes back over, and we start talking about the future of ginseng farming in Ontario. I ask him, "How low will the price have to drop before you stop farming ginseng?"

"See, that's just it," he answers. "Every-one thinks farmers can just switch crops. But I have a lot of money invested in my ginseng shades, my ginseng dryers, my seeders and harvesters. This is what people don't realize: I can't just decide to start growing, say, po-tatoes tomorrow. A potato harvester won't work with ginseng."

He starts talking about his recent business trips to China. As head of the Ontario Ginseng Growers Association, he goes about twice a year, mostly to help resolve issues with the marketing and labelling of Ontario ginseng in Asia. These visits, he says, are critical. Until recently, Ontario ginseng was labelled in China with a seal saying it had been grown in Wisconsin, an inaccuracy the Hong Kong brokers perpetuated so as not to confuse buyers. Next on Bradley's list is to encourage the Chinese to crack down on counterfeit Ontario ginseng, a task he avows will not be easy.

When Bradley pauses next, I realize that, apart from mentioning his heavy investment in equipment, he has not answered my question. I decide to try a different tack: "If the price of ginseng keeps dropping, will it still be grown here in fifty years? Or will it go the way of tobacco?"

This time, his definitiveness surprises me. He looks uncommonly serious, and he actually points to the ground as he speaks.

"Oh, no," he says. "We'll still be here."

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Robert Hough has written for *Toronto Life* and *Saturday Night*. His most recent novel, *The Culprits*, was a finalist for the Trillium book award.

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