



NATGA™

North American Truffle Growers' Association

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NEWSLETTER

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Did you try the black truffle & chocolate éclairs at the last truffle festival. Wow!

TRUFFLE RESOURCES

www.trufflegrowers.com

www.garlandtruffles.com

www.nationaltrufflefest.com

www.piedmontvalleytruffles.com

www.keepyourforkfarm.com

www.gleneagletruffledogs.blogspot.com

www.ashelterfriend.org

GENERAL ANNOUNCEMENTS

MEMBERSHIP INFORMATION

Please visit our website to download an application. Currently we are restricting our membership to truffle growers and suppliers only.

Any questions, please do not hesitate to contact us.

(Our website is: www.trufflegrowers.com.)

CALENDAR OF EVENTS

UPCOMING EVENT

4th Annual NATGA Meeting

Winston-Salem, NC

January 16, 2010

RESERVATIONS FOR MEETING ATTENDANCE AND DINNER MUST BE RECEIVED BY DECEMBER 31, 2009. PLEASE SEE THE NATGA WEBSITE FOR THE REGISTRATION FORM.

UPCOMING EVENT

Second Annual National Truffle Festival

Asheville, NC

February 25th-28th, 2010

PLEASE JOIN US FOR THE SECOND ANNUAL NATIONAL TRUFFLE FESTIVAL TO BE HELD AT THE GROVE PARK INN. VISIT THE WEBSITE FOR MORE INFORMATION:

(WWW.NATIONALTRUFFLEFEST.COM).

NEWSLETTER UPDATE

Our newsletter will soon be available online on the NATGA website. This way, articles can be posted directly by members. We welcome all contributions to our newsletter, so if you have something to say, please let us know! Share your stories, discoveries, problems, and pictures, as we want the newsletter to be a source of interest as well as a technical discussion environment.

THE BEGINNING OF THE TRUFFLE INDUSTRY IN THE US, PART 1

By Franklin Garland

Garland Truffles

A Wall Street Journal article in the late 1970's sparked my interest in truffles. My Dad, at the time 78 years old was an avid reader of the Journal. He knew that I had a green thumb, and thought I should look into the possibility of growing them in the USA. At the time I was 27 years old, and did not have the vaguest idea as to what truffles were. I didn't even know that there were chocolate candies called truffles that had been named after the mushrooms originally for the resemblance in shape.

A French company, Agri-Truffe, was the only company originally licensed by INRA, the equivalent of the USDA in France, to inoculate and sell trees using a newly developed method. I inquired about becoming their representative in the USA, to which I received a rather curt reply that they were setting up a Frenchman up in California, to sell the trees. I was, however, invited to attend a presentation intended for potential growers at an extremely fancy restaurant in Santa Rosa, California, near Napa and Sonoma. My Dad and I decided to attend. Along with approximately 30 other people, we were wined and dined in a lavish way. We intently listened to a presentation on the immense profits to be made by growing truffles. I asked if the food we had eaten had truffles in them, and was told that no, they were too expensive to be served at an event like this. I was rather perplexed, because after they were trying to sell a product yet did not have a sample. I thought that it was all a hoax because I had yet to see and taste a truffle.



Harvesting truffles in the 1800's in Europe

At my father's insistence, I planned a trip to France for both of us to see for ourselves if there was such a thing as a truffle. (I believe it was an excuse for him to get away for a few days from my mother, whom he loved dearly but talks incessantly.) Agri-Truffe's main office is located in Langon, France, about 45 minutes away from Bordeaux. We arrived in France and I found out that my many years of French in high school and college had actually taught me to be able to communicate in French. This was definitely an advantage, as the French people, who have in general had eight years of English in school all pretend not to understand.

At the nursery, we were shown the trees they claimed were inoculated with the truffle fungus, but had yet to see the actual mushroom. They assigned one of their technicians, Patrick Chaminade, to serve as our guide to visit truffle orchards, wine and dine us to convince us of the legitimacy of this gem, up to that moment a fable. The first orchard was in a town called Perigueaux, after which the Perigord truffle is named. It was only seven years old at the time. "Coincidentally" the day we visited the farmer was the same day he had found the first truffle ever on his 15 acre orchard. We finally saw a real truffle! In reality, this former Parisian Chef years later produced a record number of truffles per acre for one season, 200 lbs., on this orchard.

Our next stop was lunch. The three of us were served a truffle filled omelet, and for me it was love at first taste. That moment, on the first bite, I knew I had to grow this delicacy for my own pleasure, if for no other reason. The rest of the week we spent in France was a true gastronomic experience. Not only did I discover the appeal of truffles, but the magnificence of French Cuisine, culminating by staying and eating at a 2 Michelin star *relais de campagene* but that is a story for another time.

JACK'S CORNER: SCENT HOUNDS MAKE CENTS

By Jack Hauser
Tuber Nut Orchards, LLC

My name is Jack Hauser and I am 14 years old; my parents and I are partners in our new venture of truffle farming. Our farm is located in Fries, Virginia, and we will be planting our first orchard this April. Being new to truffle farming and thinking a truffle was only a chocolate just a year ago, I am bound to have a book of unanswered questions, and I'm sure that many new NATGA members have some questions too. Here is the answer to one of mine, which I think will be valuable to even our veteran members. After attending the NATGA meeting this January at the Brookstone Inn, and hearing first hand from the professional dog trainer, Lisa Kennell, the key tips on training and disciplining dogs, I was curious whether or not there was a specific dog that would be better for finding hidden items like a truffle.

After I spent some time researching this I found my answer. One of the best dogs for finding truffles is the scent hound. This intriguing hound, particularly known for its exceptional sense of smell, has a past of being rather fierce and capable of standing up to wild boar, cats and wolves. But don't worry, in modern times breeding has resulted in some of the gentlest personalities of the canine world. These hounds are also hunting dogs but are capable of doing much more than the ordinary sporting dog. All scent hounds are overly dedicated to the tasks for which they are bred, in our case hunting truffles, which this eclectic dog is perfect for. These dogs' lips, which are moister than most help trap scent spores along with its wet nose, which plays a key role in truffle hunting as confirmed by the dog specialist. These dogs also have terrible eyesight so they rely mostly on the smell they are following. From what I have learned it's apparent that this is the perfect dog for truffling.



Did someone mention truffle dogs?

TRUFFLE DOG TRAINING, NORTH AMERICAN STYLE

By Krista Hansen

Noble Truffle

Former shelter dogs Connor and Cole are proud graduates of the first Truffle Detection Dog Seminar held at Gleneagle Farm in Luray, Virginia this past summer. Retired government dog trainer Lisa Kennell promised hands-on training for truffle growers and our dogs. She designed the program to give us confidence in our ability to work and read our dogs as we searched for the secretive truffle. Lisa delivered on her promise.

Day One: Lisa made our dogs comfortable in her kennels and offered coffee to the human team members inside her beautifully remodeled log home. Here she taught us the terminology we would use while training our dogs to earn a living with their noses. Our class was comprised of nine humans and seven dogs. Most of us had already familiarized our dogs with the scent of the truffle (scent association.) Some growers with newly-producing truffières had real-life truffle hunting experience. All of us felt the need to learn more about training our dogs, and worried about the valuable crop rotting underground if we and our dogs were not up to the job at hand. The fact that Lisa's biggest challenge would be training the humans was evident by our many questions.

Lisa is full of fascinating dog stories based on her career in high-level government dog work. She has even taught dogs to identify money smugglers based on what \$10,000-worth of ink smells like! She used many creative analogies to help us understand the "why" before we trooped outside to learn the "how" of truffle detection dog training.

Training courses had been laid out in advance for us on the beautiful grounds of Gleneagle Farm. Anyone thinking the Shenandoah Valley would be cool in mid-July was in for a surprise as the temperatures were well into the 80's, but Lisa was prepared with swimming pools and water for the dogs and cool bandanas plus drinks for their owners. Each dog and handler team took its turn on the different courses while the rest of the attendees observed. This was a nice-sized group, and we were able to learn as much from watching the other teams as we did when it was our turn. As beginners, we frequently failed to observe the change in behavior signaling an "alert" in our own dog. The onlookers would helpfully point out the alert so we could reward our dog.



Dogs and handlers learn how to find truffles

Lisa explained that her intent was to give us the best training tool possible...our imagination. To do this, she used items we could easily find to replicate the training course in our own backyards...and in one person's case...her apartment! An extension ladder has convenient holes for hiding cotton laced with truffle oil and teaches searching down a straight row. Cement blocks are easily obtained and also have openings for hiding truffles. Screening attached allows the scent to waft out while obscuring the sight of the truffle. A scent box can be built with 6-8 holes in the top to hold ½ pint canning jars. These will have holes punched in the lids and some will contain a generous amount of truffle oil. Switching the truffle oil jars with empty jars and then cueing the dogs to find the right ones trains them to trace the scent to its source. Alternatively, truffle-containing training aids can be placed in a trench and a piece of board can simply be placed on top. Training tools such as these can be used throughout

a dog's career to keep him or her sharp and focused in the off-season.

Lisa likes to explore the plumbing department of Home Depot for ideas, and in one field she has buried a series of short sections of PVC pipe with caps on the bottom end and the open end barely above the ground. Whole truffles were placed in some of these pipes for our dog's searching pleasure on Day Two. We learned to read the wind to determine where in the field we should start our dogs to use the breeze to our advantage and how to develop a search pattern.

All of the dogs understood what they were after, and handlers were soon able to recognize each dog's individual response to the truffle scent. Some were subtle – a passive response - and some not so subtle. Lisa advised me to encourage my dog Cole to dig at the source of the truffle odor once he showed her that he likes to dig - a positive response. You could see he wasn't sure about this as he gets yelled at for digging in the yard at home!

Perhaps the stars of the weekend were Poodle puppy Colby with his young master Mark Wasilewski. Neither had experienced a truffle hunt before, and Colby caught on immediately, to everyone's delight. Proving that almost any dog can learn this work, there was a wide-ranging assortment of breed types. In addition to Poodle Colby were: a Yellow Lab Beau, a pair of Dachshunds, the Flat-coated Retriever Halle with her son Sammy - a Doodle, and Connor and Cole, both rescued German Shepherds.

Lisa gave pointers on the selection of a truffle dog, in particular how to choose one from a shelter where the dog's history may not be known. This was of special interest to Craig and me. We have formed a non-profit organization working to end the killing at area animal shelters, and are always thrilled when a life is saved. We intend to train shelter dogs exclusively for work in our truffière and hope other growers will consider shelter dogs as well.



Mark and Colby steal the show

In socializing with the other participants throughout the weekend, it was evident that we are all dog lovers excited about the aspect of training and utilizing dogs as working partners. The First Truffle Detection Dog Seminar held at Gleneagle Farm in the Shenandoah Valley offered timely knowledge which will serve us well on our paths as Truffle Growers.



Cole working at home identifies a truffle-containing training aid

TRUFFLE STORY

By Tom Leonard
Leonard's Truffière

Growing up on a small farm in East Tennessee, tilling the soil was just a part of life for many of my generation. Although there is nothing that can be mistaken for fun in burley tobacco, the growing becomes a part of you. But in the late 80s it became obvious our areas base cash crop would soon be a thing of the past. I wanted to find a use for the land to once again make it profitable. I have never been considered normal so I looked to unusual possibilities, things not everyone else would be doing. Something that once I was established I would not have to wonder how much the market would drop if everyone else also had a good crop this year. After thinking long on this I came up with a good answer, ginseng. I had the woodland, the right weather, the right soil, and wild ginseng already growing on the property.

Soon I found places to buy bags of seed and planted beds. I bought fresh roots and planted them so I would have my own source of seed. It will take 3-4 years for the new plants to be old enough to produce seed and 4-6 years before the roots will grow enough to harvest. Then, in the third year, as they were just starting to seed, almost everything I had planted was stolen.

Discouraged, but stubborn and convinced I was on the right course; I started over on a different piece of property. I put out a small patch that grew well for a few years. Then I made a big step and tilled up a quarter acre in the woods. That winter I planted a few thousand dollars of seed and made arrangements to be able to spray the area through the summer to keep the fungus out (all farmers know fungus is bad).

This time nature turned against me. That January had an unusually warm period. We had three weeks with a warm south wind, highs 50s and 60s, and not a drop of rain. I had tilled and planted just a few days before and the top 4 inches of soil became powder dry. Less than 10 percent of the seed came up that spring. At least I still had the original patch I planted on that property. The next year I was quitting my construction career to go to paramedic school and I was estimating the harvest of these nice 4 prong plants would bring almost \$15K to help cover me until I was back to work. It was a nice idea, good plan, until about 6 weeks before harvest all of them were stolen, again.

I do not think it would be a surprise to learn this put an end to my hopes for a ginseng farm. But now, what should I do with the land? I started looking into new ideas and became interested in Shitake mushrooms. I had plenty of red oak to use and it looked like a fairly simple process. But while researching this I came across an article about Franklin Garland. It was odd because it struck a memory of a newspaper story I read about the time I was starting my second ginseng patch. I began reading all I could find about truffles and liked what I saw. The terrain and geography of their native area sounded similar to my area of TN, what little I could find about rainfall sounded similar, but I believe my winter temperatures may be a little colder. And best of all, they grow out of sight, a dog is needed to sniff them out, very few people in my area have ever heard of such a thing, and if anyone were to steal them there would not be an open market to sell them as easy as ginseng.

Time to begin another long term adventure. In the spring of 2000 I started with 50 trees, a Troy-Bilt tiller, and a few 5 gallon buckets. I tilled the rows, added lime just where I tilled, and carried water a couple hundred yards up the hill from the spring on the property. Initially I planned on waiting until I had a harvest from these before I would expand the orchard. I could push mow the area, set up a catch for rain water, and hand irrigate as needed. However, as I looked at the years that had passed by trying to succeed in ginseng, it thought about how old I would be before the trees matured enough to expect a harvest. So a couple years later I expanded to about 300 trees. For the first group I had good weather to start the trees growing, but had to fight drought when starting the second group. Carrying water changed to a 2 inch water pump. 5 gallon buckets changed to soaker hoses. 50 gallon drums changed to a 1000 gallon tank in the field and a 500 gallon on a trailer to haul water from a creek about a mile away. The Troy-Bilt changed to a compact tractor with a 4ft tiller. And the push mower changed to a 48in John Deere rider. The thing that did not change was the work and the time. I spent the summer putting down water almost every day, sometimes over 5000 gallons a day. But all the work was necessary and paid off to keep the trees and fungus alive through a tough starting year.

Wait a minute, fungus? I thought fungus was bad? That is part of the learning process. Much of growing truffles goes against everything typical on a farm in my area. Wanting fungus to thrive, hoping for cool and damp weather, adding ton upon ton of lime, and waiting patiently for a few years for a harvest a just a few examples. I have had some of the old farmers laugh at me when I told them my plan. I have had county agents look at me like I was stupid when I told them I need a pH of 8.0. And some friends who did not say anything, but I am sure they wonder why I put so much work into something which I am not seeing a return. Was it worth it? Yes.

I have had an extended fight with my soil to get a sustained pH of 8. I added several times more burnt lime than what the labs said I would need. It didn't want to go above 7.7. I had read one article that truffles would produce with a pH of 7.5 to 8.3, even though the optimum is more like 7.9 to 8.1. After the pH had passed 7.6 the brule' began forming and Franklin brought his dog to my place, but we did not find anything that fall. He did take a few root samples and checked them under the microscope. The fungus looked good so I had proof all the work I had put in so far had accomplished it's purpose.

A couple more years of adding lime, and this past spring I had a pH of 8.1. I am currently working out of town so we had made plans for Franklin and his dog to meet me while I was in town in January. However, unexpected circumstances made it impossible for him to be able to come to my place. I would only be home for a week and I was anxious to find my first truffles. I recalled Franklin once telling me he found his first truffle while giving a tour. I think it was a college class, if I remember correctly. They wanted to see a truffle, so he offered 100 bucks to the first one to find a truffle. He told them to reach down and brush the leaves back and while giving them an example of what to do, he exposed the first one and found it himself. With that in mind, I got a rake and headed for the orchard. I thought I would rake all the leaves out from between the trees then go back and loosen the top inch or two of soil. My hope was to see if I could stir up a truffle near the surface. As I started raking around the first tree I flipped up a mud clod that rolled and bounced off the toe of my boot. The mud underneath where it was laying was almost slimy looking. I thought it was odd but I continued raking the leaves and moved on to the next tree. While raking between the second and third tree I kept thinking how it looked odd. I went back and picked up the clod and it felt soft but more solid than mud. I thought, "Oh my goodness, could this be?" I carried it down to the small pool of the spring at the bottom of the hill. I began washing away the mud, and I saw black. I washed away more mud and began to see the texture. Fortunately no one called 911 when they heard me yelling.

I ran back to the hilltop and jumped in the truck ready to leave. I stopped and thought, got out and felt the ground around where this one popped up from and found 2 more growing in a clump with the first one. I got the rake and went around 33 of the first 50 trees. The majority of what I found that morning had been in the ground too long and was beginning to rot but all together I found over 4lbs of truffles that morning. I have the other 250 trees maturing in a few years behind the first group. And I plan to have a total of at least 1000 trees in a few years. Was it worth all that work? What do you think?



Tom displays some of his black gold

PERIGORD PRIDE

By Gavan Garland
Garland Truffles

If you've ever been to a typical farm in North Carolina, it probably conjures memories of endless rows of tobacco, cotton, or soybeans, growing away on a humid summer's day. Perhaps it's the unmistakable odors of hogs, chickens, or dairy cows that you recall, but would like to forget. As a boy, I remember going to my friend's farms to play. It was quite an experience, watching cows being milked, fields being ploughed and sown, and riding four-wheelers for countless hours up and down the fields. A typical North Carolina farm is a great place to grow up, as was mine, although mine was anything but typical.

It all started back in 1979. I was two years old, and my dad, Franklin Garland, along with his father, Raymond, traveled to France to learn more about a strange edible delicacy called a truffle. Now, many of you might think of a delicious confection when I mention a truffle, but that's something quite different from what had piqued my family's interest. The French Black Winter Perigord truffle (*Tuber melanosporum*) is what they were going to investigate. These truffles were actually the fruiting bodies of an underground fungus that grew in a symbiotic relationship with the roots of certain trees.

To simplify, they were going to look at underground mushrooms – very expensive underground mushrooms. Neither of them knew much about truffles, except for the high dollar price tag attached to them. Truffles have been regarded as somewhat of a treasure throughout history, noted for their pungent smell, dense and complex flavor, and their supposed aphrodisiac-like properties. They wondered if it could be feasible to cultivate these “black diamonds” across the ocean on their farmland in Hillsborough, North Carolina. Nobody had ever grown them in North America before.

After spending a week in France, Franklin made arrangements to have several hundred filbert (hazelnut) trees, inoculated with the truffle fungus, shipped overseas to our farm.

When the trees arrived, instructions on care and maintenance for cultivation in France were included, but what about in North Carolina? Since nobody had ever done this before, Dad was on his own. Typically it takes about between seven to ten years to produce truffles from the trees, so there was no hurry. An irrigation system was installed, the trees were regularly mulched and trimmed, and the ground was mowed regularly. Time passed, Dad experimented with his orchard over the years, testing soils, reading books, and conversing with French colleagues. Still, there were no truffles. My friends would come over and ask about the strange orchard. I'd tell them the deal, but most of them didn't get it. “Mushrooms don't grow on trees,” they'd say. Since we didn't have any evidence to the contrary, I couldn't really argue.



Part of Garland Truffles' first orchard during harvest season

As the years rolled by, we grew other crops on the farm, everything from wheat, to a fruit orchard, pecan trees, and corn; not to mention what had to be the largest family vegetable garden ever. I remember one summer we had so many tomatoes, we were jarring sauce and giving it away, and we still had too much. Needless to say, my Dad had a green thumb, so what was going on with the truffles?

Finally deciding that we probably weren't going to get any "black diamonds", Dad turned his mycological attention elsewhere. After researching various edible mushrooms in 1991, Garland Gourmet Mushrooms and Truffles was founded, specializing primarily in Japanese shiitake mushrooms, which were becoming increasingly popular in the United States. I was just starting high school, and began helping out for my after-school job. I even got school credit and an "apprentice mushroom grower" degree from the state of North Carolina.

We experimented with many other edible mushrooms, including lion's mane, chicken of the woods, and morels, to name a few. A large Quonset hut was erected, along with a clean lab (which was built right into our house). Dad purchased a giant autoclave (a pressure cooker big enough to cook a small elephant), a 10,000 gallon boiler, and even an old concrete truck to mix the huge amounts of growing medium needed. All in all, it looked like something out of a science fiction movie. We had to hire several of my friends and my mom to keep up with all the labor. A large-scale shiitake farm is a lot of work.

Within a year, we had a nice operation running, and Dad was making a name for himself in the mushroom world. One day several Duke University mycology graduate students came by to check out our operation. Dad was happy to show them around, and they were excited to see a functioning mushroom farm. At the end of the tour, one of the students asked about the truffle orchard. Dad explained that while we do have one, it's never produced. The students were intrigued anyway, and asked if they could see it.

Dad took them over and talked a little about truffles while they strolled through the trees. He then squatted down and began showing the students how one would examine the ground for signs of truffles. He cut into the ground at the base of a tree with his trowel and dug up a little earth. He was explaining how some truffles could appear near the surface, while others could be buried deeper, when to his amazement, he discovered a black, round, faceted object. He held it up and exclaimed, "...and that's how you find a truffle!"

After that, the shiitake business seemed a little less important than before. It appeared Dad had discovered a secret to truffle production by "accidental" soil correction the previous summer.

My friends and I had been hired to spread lime throughout the orchard, but we we're lazy teenagers. We had cut corners and failed to follow instructions, which actually seemed to achieve positive results. From that point, we were able to produce more and more truffles each successive year.

Dad started getting attention locally in the papers and on the news, as the first person to successfully cultivate *Tuber melanosporum* in North America. Attention reached a national level in 2000, when Dad and his truffle hunting dog, Chewy, appeared on The Tonight Show with David Letterman. Since then, he and my stepmother, Betty, have appeared in numerous print, video, and even radio interviews. In 2007, Franklin, Betty, and Jane (President of NATGA) and Rick Smith were featured on Martha Stewart Living.

After his own success with truffles, Dad decided to share his knowledge with the public. Garland Truffles now sells several species of truffle inoculated trees for cultivation to the perspective farmer as a lucrative alternative crop. To this date, Garland Truffles has supplied truffle inoculated trees to almost 100 orchards within the United States. We also give private tours, which can be arranged by appointment.

All in all, it's been anything but typical growing up and working with truffles. When people ask what I do, they still usually think I'm a chocolatier, but slowly our kind of truffles are becoming common knowledge. It's amazing to think that there's actually a budding truffle growing industry in the United States now, when twenty years ago there was nothing. With prices for *Tuber melanosporum* reaching nearly \$1000 per pound, truffles have more profit potential than ever.



NATGA members enjoy the Summer meeting at George and Veronica Walker's home and truffle orchard