



Truffle Cultivation Overview and Summary

What are Truffles?

Truffles are underground mushrooms that live in mutually beneficial symbiosis with host trees, and include many different species.



The top two species (black Périgord truffle and summer Burgundy truffle) are highly sought after by chefs and gourmets around the world.

With demand continuing to significantly outpace supply, truffle prices are in excess of \$800/lb and have grown steadily year over year for decades.

The Business Opportunity

Growing truffles is an extraordinarily profitable business. As a comparison, truffle cultivation can be 8 – 12 times more profitable than vineyards, one of the most profitable farming businesses. Truffles have been routinely and successfully cultivated in many parts of the world for over 50 years, but yields have been wildly inconsistent. ATC specifically addresses the yield inconsistency, as the world's only source of **rigorous scientific methodology to consistently** maximize truffle yields, based on years of research, hard science and large-scale scientific data. This unique advantage, and our methodology available exclusively to our client-partners, take the gamble out of truffle cultivation. Some of the reasons truffle cultivation makes exceptional business sense include:

- **Extraordinary economics** – significant **annual** cash revenue stream for decades.
- **Low operating effort and cost** – high margin, low management effort/cost. Compared to other crops, truffle orchards require much less maintenance, resulting in significantly lower labor costs. No fertilizer is used. Furthermore, equipment can be shared with existing farm operations.
- **Fresh, sustainable and organic** – orchard-to-table in literally hours, compared to many days for current imports. This is significant because truffle quality starts to decline upon harvest and shelf life only lasts 7-10 days.

Harvest Time Frame

Truffle production time frame depends on the type of host trees. Oaks take a little longer to produce the first truffles, but continue to produce for 60-90 years. Filberts (hazelnut trees) yield truffles sooner, but produce for 25-30 years. On average, an orchard with both oaks and filberts usually sees first truffle production in 4-6 years, which is typical of other fruit-producing orchards. However, **ATC's advanced technology trees have shown strong evidence they could yield truffles even sooner.**

Investment and Return

The initial investment is roughly \$17,000 - \$25,000 total per acre. This includes seedling purchase, soil improvement, irrigation, electronic monitoring system and fencing/infrastructure. The exact amount per acre depends on the truffle species planted as well as local labor and materials costs.

Returns are extremely high for truffles. The initial investment is completely recovered within the first two production years. As truffle yield continues to grow, it plateaus in the fourth or fifth production year (\$30,000 - \$40,000/acre per year, in 2010 dollars with no adjustment for inflation or truffle price appreciation) and continues year after year for 30-60 years, depending on the host tree species.

With low operating costs, a truffle orchard regularly exceeds 95% operating margin, without vineyards' typical peak demand for seasonal labor.

ATC Helps You Get Started

Successful truffle cultivation requires at least three important elements:

- Favorable soil and climate
- Ultra-high quality inoculated seedlings
- Ongoing maintenance methodology based on **continued** research, science and large scale data

ATC helps you get started by determining your soil and climate suitability and providing ultra-high quality seedlings, as well as providing a specific, scientific orchard management methodology.

ATC Provides Active Ongoing Assistance

ATC's success is based entirely on your success in producing truffles. Even beyond the initial assistance to get you started, ATC uniquely provides proactive ongoing methodology assistance and monitoring – the third important element required to maximize commercial truffle yields. While the orchard owner is responsible for the operation of the orchard, ATC provides methodology and know-how starting at the very beginning and continues throughout the life of the orchard, including:

- Site selection, preparation and set up
- Active and regular monitoring of truffle and tree health
- Ongoing maintenance know-how and yield maximizing measures

ATC's know-how and methodology are unique in the industry. Unlike well-established methodology for other crops, truffle cultivation methodology available in the public domain is largely built on word-of-mouth and small-scale/spotty academic research. We believe the only way to reliably maximize truffle yield is through hard science, with which we have a long history and are uniquely equipped to continue to lead:

- World's **largest** and most **geographically diverse** set of scientifically monitored truffle orchards as active samples – this is the most powerful and unique aspect of ATC. The largest samples allow us to continuously refine our methodologies based on large-scale, scientifically meaningful data. Such geographically diverse samples result in our rich experience with many soil and climate types. The benefit for you is that we have the expertise to **customize** the ongoing maintenance methodology for you, no matter what your local climate and soil conditions are.
- World-leading academic truffle research – ATC continues to carry out leading academic research and therefore has direct access to world-class talents, laboratories, instruments and research results that are not published in the public domain. The benefit for you is the continuing availability

of cutting-edge research results to maximize your commercial truffle yield.

ATC's Successes in the U.S. and Beyond

Many truffle orchards in the U.S. and across 4 continents in 15 countries have become ATC's client-partners, strongly endorsing our scientific methodology and client-first business principles. Together, our ever-expanding client-partner orchards strengthen our unique scientific lead for yield optimization. Select sites include:

- Multiple sites throughout the United States and Canada
- South Africa, New Zealand & Australia
- Multiple sites on continental Europe, United Kingdom, Finland, Estonia & Ireland

Marketing & Distribution

Once your orchard starts producing truffles, you can choose either to distribute the truffles yourself (i.e. local restaurants and chefs with whom you have relationships), or through ATC. ATC is building a unique brand representing the high quality, fresh and organic truffles from our entire client-partner orchard community, thereby commanding a brand premium on behalf of all our growers. Because ATC has a strong interest in securing the highest price for the truffles you produce, your interests as a producer and our interests as a marketer/distributor are exactly aligned.

Summary

As worldwide truffle demand continues to outpace supply, truffle cultivation is an extraordinarily profitable business. ATC is uniquely equipped to get you started with ultra-high quality seedlings, provide know-how and scientific maintenance methodology from the beginning and throughout the lifetime of the orchard, and help distribute your truffles for you at the highest price possible. After all, with the significant investment in your truffle orchard, you cannot afford NOT to have access to the best truffle science in the world from ATC. With ATC as your truffle partner, you gain access to methodology based on world-class science, ensuring you are successful in producing the highest yield of quality truffles possible in 4-5 years, sold at the highest price.

For more information, visit www.americantruffle.com.