



Agritourism Diversification: Lavender Production

This article discusses several agritourism opportunities that lavender production offers farms and provides an overview of production and harvest. Budgets for establishment, planting, and mature production of two varieties are also provided.



Lavender (*Lavandula*) is a perennial herb belonging to the mint family (Lamiaceae), and is native to the Mediterranean region, Middle East, and India (Reed et al., 2021), but has also gained in popularity in the United States. Based on the 2019 Census of Horticultural Specialties ([USDA NASS, 2019](#)), there were a total of 1,317 lavender operations reported in the U.S., which is 154 more than the previous census ([USDA NASS, 2014](#)). Renowned for its purple blooms and unique fragrance, lavender has been cultivated for centuries due to its ornamental, medicinal, and culinary attributes. Lavender encompasses almost 40 species, along with approximately 400 cultivars and numerous hybrids (Reed et al., 2021). Lavender production can be incorporated into small-scale farms and agritourism venues if your farm is in an appropriate plant hardiness zone or in containers.

If you would like to learn more about agritourism and direct sales options for lavender, please review the webinar [Adding Lavender to Your Farm](#), where Wendy Jochems of [Hope Hill Lavender Farm](#) in Pottsville, Pennsylvania and Michele Capron of [Lavender Essentials of Vermont](#) share their experiences with growing lavender and approaches to agritourism. Learning from other lavender farmers is a great

way to learn about not only production, but also the range of lavender-based products and agritourism experiences that you may want to consider. Keep in mind that you can start small, as even small plantings of lavender provide opportunities for additional offerings to your agritourism venue. When grown in the field, lavender is a perennial that produces marketable flowers for around 10 years, although some plants have been known to live for 20 years. This article will list potential agritourism activities and provide information on lavender production.

Agritourism Options for Lavender

Agritourism operators can leverage the potential of lavender in numerous ways to diversify their income and enhance visitor experiences. The success of these ventures depends on factors like customer demand, market environment (competition), quality of products/experiences offered, and marketing (more information: [Marketing your Agritourism Business](#)). As always, keep in mind that you must comply with legal and regulatory issues outlined here for Pennsylvania: [Agritourism in Pennsylvania - Legal and Regulatory Issues](#) and the [Pennsylvania Agritourism Activity Protection Act](#). When considering the activities listed below, it's important to remember their seasonality. During the season, farm tours, walking trails, and photo opportunities will be highly sought after, while off-season presents an opportunity to hold classes and produce/sell products. Remember to optimize your offerings based on demand and capitalize on the unique characteristics of each season. Scale the activities and events offered based on the season to ensure you always have something for your customers. Finally, keep in mind that customer service is key. Invest in proper customer engagement strategies to ensure a good experience for everyone who visits your farm.

Value-Added Products

- **Skincare Products:** Lavender is a popular ingredient in skincare products. You can produce and sell items like soaps, lotions, creams, balms, and bath salts.
- **Culinary Goods:** Lavender's unique flavor profile can be used in baking and cooking. Opportunities include selling lavender-infused honey, teas, jams, baking mixes, spices,

and chocolates.

- **Essential Oils and Fragrances:** Distilling lavender oil for use in aromatherapy products, perfumes, candles, room fresheners, and diffusers. This is probably the most resource and labor-intensive option. Producing essential oil from lavender requires a significant amount of plant material. The amount can vary depending on the specific variety of lavender and the extraction method used. For example, an acre of English lavender produces between 300 and 1,800 pounds of dried flowers or about 2 gallons of essential oil.
- **Crafts and Decor:** Dried lavender can be used for wreaths, bouquets, sachets, heating pillows, and home decor items.

Experiential Tourism

- **Pick-Your-Own Lavender:** Visitors enjoy the hands-on experience of harvesting their own lavender bundles. To make pricing easier, you can sell small plastic vials that have the capacity of 5-8 lavender stalks. However, you must include a certain amount of 'collateral damage' in your profit calculation when you allow visitors to pick their own lavender. Another option is to block a row in the fields for visitor access.
- **Workshops and Classes:** Offer classes on making lavender crafts (for example, lavender paintings on Pinterest are a great inspiration for a sip and paint event), skin care products, or cooking with lavender.
- **Wellness Retreats:** Utilize lavender's calming properties to host wellness retreats, yoga classes, or meditation sessions in the lavender field.
- **Events and Festivals:** Host lavender-themed events, such as festivals, poetry readings, or concerts in the lavender fields.
- **Farm Tours:** Educate visitors about the history, botanical properties, and process of growing, harvesting, and (if applicable) distilling lavender.
- **Photography opportunities:** Many visitors love to take pictures of the lavender field and other aspects of farm life. Offer photo tours for visitors or set up a designated area with props that they can use as backdrops in their photos. Consider partnering with local photographers and charging them by the hour or per photo opportunity.
- **Walking Trails:** Mark out a trail so that visitors can take in the beauty of the lavender fields while they walk. This is an especially popular activity during the blooming season. You can set up a donation box along the trail to ask for funds with trail keep-up.

Accommodation and Dining

- **Lavender-Themed Stays:** Incorporate lavender in accommodation offerings. A lavender theme can be incorporated if you have farmhouse rooms to rent. Another opportunity is offering camping spots and glamping. For more information on offering low infrastructure farm stays, check out our webinar: [Offering Niche Farm Stays](#) and the article: [Low-cost and Low-maintenance Overnight Farm Stays](#).
- **Farm-to-Table Dining:** Use lavender from the farm in meals served at the farm's restaurant or cafe. Or advertise lavender fields as a backdrop to your outside dinners.

Retail Opportunities

- **Farm Shops:** Sell lavender stalks and a range of lavender products directly to visitors through your farm shop. Custom farm shirts are an excellent means to advertise your operations and enhance the visibility of your lavender business.
- **Online Sales:** Expand reach by selling lavender products online. Check out: [Enhance Online Sales and Customer Retention](#).

Production

To test if you would like to add lavender to your offerings, you can simply add a single row of lavender to your existing small flower field. We have observed that operators often purchase lavender in containers and plant them directly in the ground. This "low infrastructure" approach allows for easy testing of customer demand. For the following field production information, we consulted existing lavender publications, listed in the references, and consulted with two Northeast lavender farms. In general, lavender grows well in sandy loam soils with a pH from 6 to 8. Depending on the variety, lavender will tolerate most soils as long as they are well drained, however sandy-loam or calcareous soils are best, as they retain moisture without becoming waterlogged. It does not tolerate heavy clay soils, so you may need to incorporate sand and compost into the soil prior to planting. In addition, lavender grows best in full sun with at least 6-8 hours of direct sunlight per day. Fertilizer application should be based on soil test results, although fertilizer is not usually applied to well-prepared soils after establishment. Row spacing should be based on the space needed by mature plants and your equipment, but most are planted 3 to 4 feet between plants and 6 to 10 feet between rows. This equates to between 1,090 and 2,420 plants per acre.

Lavender benefits from being planted in six-inch-high raised beds. This allows better drainage and helps control weeds. Make sure the beds are wide enough so that it is easy to walk between them when you harvest. Lavender is planted by hand in the raised beds in spring after all danger of frost is over.

Irrigation is used during the first year to help establish the young plants. Lavender is drought tolerant, so irrigation is not usually needed after the first year except in years of extreme

drought. Lavender does not tolerate wet soils and should be irrigated deeply but infrequently to establish good root systems. If irrigated during production years, it is mostly until bloom begins.

Purchasing lavender directly from lavender farmers, rather than from wholesale nurseries helps to ensure the quality and authenticity of the lavender, allowing growers to meet their consumers' specific needs and expectations. English lavender is started using plugs while French cultivars can be started using cuttings sold in small pots from reputable suppliers.

Weeds are a source of competition for moisture and nutrients. Weed control should be done primarily through physical removal and cultivation. Shade cloth or landscape fabric is used to deter weed growth under the plants. Depending on your marketing mix, considerable time may be spent to have your fields be as weed-free as possible. If you are offering pick-your-own, you should have as few weeds as economically sustainable.

Make sure the chosen spot is not in a frost pocket or windy area that can damage the plants during winter months. Lavender will survive temperatures down to -20°F (-28°C) so long as it is not exposed to perpetual cold and wet. Row covers are used in plant zones where very cold temperatures are experienced during winter months. In extremely windy sites, this row cover will need to be secured using a method that will not allow the cover to blow off during extreme weather events.

Additionally, lavender is susceptible to some insects and certain diseases such as root rot and foliar problems such as powdery mildew or rust. However, there are no commercial pesticides labeled for use on lavender. The result is that insects are to be removed using water sprays, and diseases are controlled by removing the plants from the field. Monitor your plants for signs of these conditions and consult with horticultural Extension Specialists or Master Gardeners if needed.

Harvest

Harvest is accomplished by hand and can occur throughout the summer months. If you have established pick-your-own sales, you will still need to monitor the public's activities. Full blooms may be harvested for sale in bunches of your determination while less-than-optimum production may be harvested and frozen for distilling later.

An acre of English lavender produces between 300 and 1,800 pounds of dried flowers or about 2 gallons of essential oil. An acre of French lavender may produce 3,500 to 4,500 pounds of dried flowers or between 4.2 and 5.4 gallons of essential oil.

There are four methods of distillation used to extract the oil from lavender blooms. Because lavender oil is lighter than water, it will float to the top where it is then removed.

- **Hydro distillation** consists of boiling plant material in water producing "hydrosol." This is then used as the base of retail products.

- **Steam distillation** vaporizes and extracts the oil upon cooling.
- **Solvent extraction** uses solvents to extract both the essential oils and oleoresins which are then separated and used for specific products.
- **Supercritical extraction** uses carbon dioxide under high pressures to extract the essential oils and oleoresins. This method is used in much larger operations.

For more information about the extraction process, please see the ATTRA publication [Lavender Production, Markets, and Agritourism](#).

Budget Information

This article contains links to five interactive budgets. One budget is for land preparation and covers the establishment of the field(s). There are two budgets for each Plant Hardiness Zone 4 and Plant Hardiness Zone 7. There are both planting and mature production budgets with the Zone 4 budgets focusing on English cultivars while the Zone 7 budgets focus on the French cultivars. For the mature budgets, you will need to determine your income sources and enter your anticipated production levels and income derived for each source. There is also space to determine your costs for marketing and value-added offerings.

- [Land preparation budget](#)
- [Planting budget - Zone 4](#)
- [Planting budget - Zone 7](#)
- [Mature production budget - Zone 4](#)
- [Mature production budget - Zone 7](#)

References and More Information

Adam, Katherine, A., Rittenhouse, T., *Lavender Production, Markets, and Agritourism*. Butte, Montana, National Center for Appropriate Technology. 2018.

Reed, D., Montague, T., & Simpson, C. (2021). Adventitious Rooting of *Lavandula x intermedia* Cuttings. *Journal of Environmental Horticulture*, 39 (4), 150-159.

[Almanac - Lavender](#)

Iowa State University - [Learn the Basics of Lavender Production and Marketing](#)

North Carolina State University - [Lavender History, Taxonomy, and Production](#)

[University of Kentucky - Lavender](#)

University of Massachusetts - [Lavender Production in Massachusetts](#)

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