



Lavender Production, Products, Markets, and Entertainment Farms

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This publication is intended for a beginning lavender grower with some horticultural experience. The publication discusses geographic and climatic considerations for lavender, soil preparation and cultivation techniques, lavender propagation materials, and field production. The publication also addresses lavender essential oils, evaluation of the bulk distillation industry, direct marketing of a variety of lavender products, and the potential for lavender agri-tourism. This publication also surveys clusters of lavender farms in Texas, California, and Washington, the lavender entertainment industry, and on-farm lavender product sales. Newly expanded lists of U.S. lavender farms and Web sites are also offered, as well as a list of other resources.

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Introduction

Lavender is a small, aromatic shrub used in the fragrance, specialty food, and alternative medicine industries. Although family farmers may find large-scale extraction of lavender's valuable oil too expensive and laborious, small-scale lavender production is feasible for some farmers using alternative marketing strategies. Entertainment farming has been a very successful form of alternative marketing for lavender, especially as a focus for annual festivals and product sales.

Like most herbs, lavender has few if any insect pests. Few fungal diseases attack lavender, but since there are no known remedies for them, chemical applications are not an issue. Lavender ranks high as a sustainable crop because it does not rely on pesticides and fertilizers. It does not require fertilizing, although in rare circumstances irrigation may be called for. The biggest issue is finding a viable marketing method.

Suitable Locations for Lavender Production

Lavenders originated around the Mediterranean in poor, rocky soils and mild coastal climates. *Lavandula angustifolia* (English lavender) is the most hardy, but high-camphor lavandin (*Lavandula x intermedia*) cultivars like Grosso may be successfully grown all over the U.S. without winterkill, under certain circumstances. Bodies of water can greatly moderate otherwise inhospitable climates. For example, *L. angustifolia* can be successfully grown in the British Isles, due to the influence of the Gulf Stream; Ukraine can produce lavender around the Black Sea; Japan produces several metric tons a year; and Argentina, Brazil, and East Africa have some production. Each location has a climate moderated by a large body of water, which can create microclimates several zones different from those nearby. Some types of lavender have been grown successfully near



Soil Preparation

Patty Crawford likens growing lavender in Memphis, Tennessee, to “digging a \$200 hole for a \$2 plant.” She says, “It’s not the cold here that gets lavender; it’s our humid summers and our wet, wet winters. This is the reason for the hole. While digging it won’t really cost you \$200, you might begin to feel like it.”

Lavender cannot survive simply being stuck into clay soil. Beds must be worked down 18 to 24 inches. It is best to raise the bed about 6 inches above ground level and mix in 1/3 sand, 1/3 loam, and 1/3 clay soil. Too much sand is better than too much clay. Plain builder’s sand from the local hardware store is fine for improving soil friability.

A good soil mix like ground cotton seed, mulched leaves, old potting soil, and compost—sweetened with a bit of lime or egg shell—would work for loam. The ATTRA publication, *Potting Mixes for Certified Organic Production* offers more recipes for organic soil mixes. If old potting soil is used, be sure it is disease free.

Purchase healthy propagation materials (plants or plugs) from a reputable dealer. Make sure the lavender variety is appropriate for your climate zone.

Placing white marble (not slate or rock) chips around the base of a lavender plant reflects the sun into the interior of the clump and helps dry condensation. Growers like Crawford (and Delaware State University’s Art Tucker) believe that weakly acidic rainfall erodes marble chips (or limestone) and, over time, makes the soil more alkaline.

Raised, sandy beds allow the drainage necessary to avoid root rot. Remember that lavender tolerates too little watering more than too much.

(Adapted from a 1999 Web article by Patty Crawford, Lavender, Earth Inc., Memphis, Tennessee. The Web site has been discontinued.)

Related ATTRA Publications

Herb Production for Organic Systems

Direct Marketing

Edible Flowers

Entertainment Farming and Agri-Tourism

Keys to Success in Value-Added Agriculture

NCAT’s Organic Crops Workbook

Plug and Transplant Production for Organic Systems

Potting Mixes for Certified Organic Production

Sustainable Small-Scale Nursery Production

Lake Champlain in upstate New York and in the “Banana Belt” south of Lake Ontario. Illinois, northern Nevada, Idaho, and even Minnesota produce lavender.

Elevation, topography, and the severity of winters are other climatic factors that influence lavender farming. Elevation can significantly influence plant survival, with valleys being less desirable. Heavy mulching of plants is necessary to protect them through severe winters. Continuous snow cover could have much the same effect. Excellent drainage is crucial to the survival of lavender plantings.

Cultivation

Lavender (*Lavandula*) can be a long-lived perennial, with a typical productive life of about 10 years, although plants have been known to live for 20 years. English lavenders (*L. angustifolia*) have the finest fragrance. However, their oil production (see box) is much lower than the high-camphor lavandin. Oils from lavandin are commonly blended,

either with *L. angustifolia* oil or with commercially available essential oils, to create a pleasing fragrance. Whole plants in flower can be used for essential oil production. Buds, flower spikes, and flowering tips—both fresh and dried—have a variety of culinary, fragrance, and decorative uses.

Virginia McNaughton (see book listing under **Further Reading**) notes that “the East Coast states are affected by either cold winter temperatures or high summer humidity, which causes fungal infection.” This is true also of the Gulf region. Growers trying to establish a cluster of lavender farms in 2000 in the Hill Country of Texas (Gillespie and Blanco counties) lost 90 percent of Grosso and Provence plantings to rhizoctonia (a root disease). These were the initial plantings intended for essential oil production.

Cultivars and Propagation

Lavender—a small, non-hardy perennial evergreen shrub—is best propagated from softwood cuttings of standard types. Seed

may not come true to type, and lavandin seed is sterile. The purpose for which the lavender is being raised heavily influences cultivar choice. Most growers favor deep blue flowers, lush growth, and hardiness. See Table 1 to compare differences in chemical constituents of *angustifolia* and lavandin. Other types of lavender—such as Spike—are not commonly grown in the U.S. except as specimen plants. White and pink forms of *angustifolia* are curiosities sometimes seen in home gardens. Although some California growers favor ‘Irene Doyle’ for its fragrance, ability to flower bi-annually in Zone 7, and its “slightly darker lavender blue” flowers, the most commonly grown cultivars in all parts of the U.S. are the lavandins Provence and Grosso. Grosso attracts attention in tourist areas, creating a striking effect of large fields of “purple haze.” It is very hardy and grows to three feet in height. Products of acceptable quality can be made by judicious blending of Grosso distillate with imported sweet oils.

Table 1. Properties of Lavender Oil		
	Angustifolia	Lavandin
Specific Gravity		
	0.876-0.892	0.885-0.897
Chemical Profile		
Camphor	0.5-1%	4-11%
Caryophyllene	3-12%	
Cineole	1-2%	5-10%
Linalool	30-49%	30-40%
Linalyl acetate	30-45%	20-30%
Ocimene	2.5-6%	
Based on Australian production. <i>Lavender Growing for Oil Production</i> . p. 4. (www.dpi.vic.gov.au)		

Additional research on the chemistry of essential oils for the industrial distillation processes can be found by searching AGRICOLA on-line or by consulting other agricultural databases. The moderated lavender discussion group at lavandula@yahoogroups.com is a good source of information. Lavender researchers and growers from around the world discuss contemporary issues. Membership is by application.

The English lavender (*L. angustifolia*) cultivar Munstead is commonly grown in New England, as is the lavandin (*L. x intermedia*) cultivar Grosso. Munstead is reportedly the only English lavender that does well at high altitudes and was recently reported doing well in Nevada. Nurseries may market cultivars of *L. angustifolia* and *L. x intermedia* (lavandin) under deceptively similar names. For example, ‘Hidcote’ is *L. angustifolia*, while ‘Giant Hidcote’ is *L. x intermedia*.

For more complete information on the cultivars of lavender and lavandin, see Arthur Tucker’s article in the scientific journal *Baileya*, Curtis Beus’s booklist, and Virginia McNaughton’s *Lavender: The Grower’s Guide* (see **Additional Links and Further Reading** below).

Field Production of Lavender

The best U.S. resource for details on large-scale lavender production is Washington State University (WSU). Curtis Beus, PhD, WSU Extension, Port Angeles, Washington, has published extensively on field production of lavender. He helped organize the first lavender conference in Sequim in 2000. For detailed information on such topics as soils, establishment, irrigation, fertilization, pests/diseases for large-scale production, see Washington State University Small Farm Connection. If you do not have Web access, contact ATTRA at 800-346-9140 to order a print-out of the agronomic information. Beus can be consulted by e-mail or by phone at 360-417-2279. His specific recommendations for cultivars and local suppliers are for the Pacific Northwest. See the **Cultivars** section for considerations in choosing cultivars for other parts of the U.S.

Essential Oils

From about 1985 to 2000 prospects seemed favorable for developing an essential oils industry in the U.S. Essential oils are used as flavors and fragrances in manufacturing, as well as in aromatherapy, an alternative health discipline.

A 1997 study found that visits to alternative medicine practitioners exceeded the

number of visits to all U.S. primary care physicians by \$243 million, and the total out-of-pocket expenditures for these services was about \$27 billion, comparable to the out-of-pocket payments for all U.S. physician services that year. (1) Since alternative therapies now receive such broad public support, and the food and fragrance industries are growing, the main question is, “Can the limited-resource farmer in the U.S. find a profitable niche with lavender?”

A related question is, “Can the independent American farmer find a place in the customary procurement chain supplying raw materials to the flavor and fragrance industries?”

The Essential Oils Industry

Capital investment, transportation, and labor considerations (cost and availability) dictate that most essential oils production take place outside the U.S. The U.S. mint industry is centered in the Pacific Northwest and about 9 million pounds of oil was extracted in 1995. However, most of the essential oil produced in the U.S. is orange oil, which can be cheaply produced as a by-product of the citrus juice industry. The next largest volume is of cedar oil, a by-product of the forestry industry. Worldwide, most essential oils (including most aromatherapy oils) are distilled from tropical plants not widely grown in the U.S.

Australia and New Zealand have developed a lavender oil industry. Some of the smaller operations there received initial government support. However, similar support for essential oils distillation does not exist in the U.S. for small farmers. The Avoca Division of R.J. Reynolds Tobacco Co. does produce some high quality aromatherapy oils.

However, Reynolds and other integrators do not buy raw materials from independent farmers, nor do they offer grower contracts. Rather, they produce the crops on their own land to their own specifications, under the supervision of their own farm manager. (2)

Oil Extraction Options

There are four methods to derive essential oils from plants. The Department of

Lavender Production

- An acre of true lavender (*L. angustifolia*) produces from 300 to 1,800 pounds of dried flowers (12 to 15 pounds of essential oil—about 2 gallons).
- An acre of one of the lavandin cultivars (*L. x intermedia*) yields from 3,500 to 4,500 pounds of dried flowers per acre (53 to 67 pounds of essential oil). In the Pacific Northwest, Beus estimates only 1,000 to 1,500 pounds of dried buds per acre for Grosso—equalling 35 to 180 lbs. of essential oil.
- More than 30 different types of lavender oils and blends are traded on world markets. (3)

Agriculture, Food, and Rural Development, Alberta, Canada, has published an extensive overview of the essential oils process. (4) The following is the methodology:

- **Hydro distillation** (also known as water distillation) is a process in which water and plant material are boiled together in a tub. The result is a “hydrosol,” rather than a pure essential oil. Hydrosols are the basis for a variety of retail products.
- **Steam distillation** uses dry steam to vaporize and extract the oil. Steam distillation is used in large-scale production of essential oils for commercial purposes. It is the method of choice for leafy crops like lavender that have specific gravity of less than 1.0 (lighter than water). Small-scale steam distillation can be accomplished with a pressure cooker on top of a kitchen stove, but only a few drops of oil are produced per batch. The process is described in some detail in Marcel Lavabre’s *Aromatherapy Workbook*. (5) Turn-key operations have only recently become available.

A *lmost without exception, lavender farmers in the U.S. are all in the entertainment farming business.*

- **Solvent extraction** uses organic solvents to extract both essential oils and oleoresins, which are then separated. (Oleoresins complete the flavor profile of food-grade essential oils.) Use of many of the organic solvents would not be compatible with “certified organic” labeling.
- **Supercritical extraction** uses carbon dioxide under extremely high pressure to extract both essential oils and oleoresins. Essential oil produced as a by-product of the citrus industry requires a four-story fractionating tower. Oleoresins separated out at the beginning of the process are added back at the end. Citrus oils claim by far the biggest share of the essential oils market.

To produce essential oils or hydrosols, plants typically are steamed. As the steam passes up through the plant material—bark, stems, roots, or fresh or dried flowers (as in the case of lavender)—it carries both the oil and other plant essences into a receiving container. As the distillate cools, essential oil floats to the top and is siphoned away. The liquid left behind is hydrosol.

As noted above, commercial-scale production of lavender essential oils relies on steam distillation. (A modest steam distillation unit that would fit inside a barn costs \$8,000 to \$11,000.) Table-top units that sell for \$2,000 to \$2,500 over the Internet will usually produce only hydrosols; they cannot achieve and maintain the temperatures necessary to extract a high percentage of essential oils. Some small-scale herbalists use hydrosols, however, in making soaps, body lotions, and salves.

Production of essential oils in the U.S.—except for orange and cedar oils derived from industry by-products—has tended to be more of a hobby or farm income supplement than a full-time business. However, since 2002 a new source of distillation equipment has become available. Floragenics Distillation Systems,

Pescadero, California (www.floragenics.com), offers several sizes, including the large 50-gallon still. This is a turn-key system with all necessary parts, hoses, and fittings. A description of a commercial distillation process carried out at The Essential Oil Company facility at Warm Springs, Oregon (illustrated with 41 photographs showing procedures and equipment), has been published by Robert Seidel. (6) The Warm Springs facility is a Native American tribal enterprise.

While conditions in lavender marketing in the U.S. have changed somewhat in the past five years, Ben Alkire’s assessment (7) should still be heeded. As with other niche markets, there is always the danger of a sudden decline due to too many new producers. For a 64-page risk/benefit assessment of growing herb crops for essential oils in Montana, see *Market Opportunities and Strategic Directions for Specialty Herbs and Essential Oil Crops in Montana* (www.ams.usda.gov/TMD/FSMIP/FY2000/MT0294.pdf).

Table-top units cannot achieve and maintain the temperatures necessary to extract a high percentage of essential oils.



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An Essential Oils Consultant's Thoughts on Growing Plants for Oils

After working at Purdue University with James E. Simon, PhD, for ten years on essential oils projects, Ben Alkire (7) launched his consulting firm, Benzalco, in 1999. In 2000 Alkire re-assessed the decades-long effort to develop a broad-based domestic essential oils industry. Alkire specializes in design and sale of products for distillation/handling of aromatic herbs and spices in the bulk oils market. Like most of his colleagues, he now consults with firms in Asia and Africa. He directs his comments to small landowners and farmers attracted to the "lifestyle" of distilling essential oils. Alkire writes:

- Chances are pretty slim for profits and a living wage generated through a small-farm essential oil operation.
- So many diverse tasks and skills are needed for herb cultivation, distilling, marketing, and business management that it is not suited to be a one-person operation. Large families, granges, Amish communities, and other such networks, however, have considerable advantages.
- Why buy a cow when milk is so cheap? Why not just purchase inexpensive commercial oils and use those for value-added products?
- Sales of value-added products—hand-made soaps, lotions, perfumes, incense, massage oils, potpourri, candies, beverages, and other items—"stretch" the value of essential oils.
- Existing direct marketing channels, especially in "tourist" areas, can facilitate development of farm-formulated fragrance and flavoring products into a seasonal supplementary farm income.
- Vineyards and commercial mushroom growers can utilize existing equipment (such as boilers) and technical expertise to combine their operations with an essential oils distillery.
- Sell tickets to watch the process; sell the product at a loss. Make your profit on the tickets, pop machine, gifts, and food service. (8)

The different cultivars of lavender differ slightly in specific gravity (s.g.) and have distinct chemical profiles. Since lavender oils are lighter than water (s.g. of less than 1.0), they rise to the top. The lower the s.g., the more easily the oil is volatilized. More information on distillation parameters may be found in E. Guenther, 1948-52, *The Essential Oils*, 4 vols.; Brian Lawrence, 1976-78, *The Essential Oils*, 3 vols.; the *Journal of Essential Oils*; and the *Journal of Agricultural Food Chemistry*; also see Seidel. (6) Chemical profile affects the olefactory properties of an essential oil—hence the quality. A lavender oil high in camphor is much less desirable as a fragrance than one low in the camphor constituent. See Table 1 for the s.g. and chemical profile of *L. angustifolia* compared with *L. x intermedia* (lavandin).

Lavender and Agri-Tourism

A cluster of farms in Gillespie and Blanco counties north of San Antonio has raised lavender since the late 1990s. An annual festival features the Lavender Tour and a lavender lunch among the attractions that stimulate regional tourism. A variety of products and services are offered, including a bed-and-breakfast. Although no distillery has yet been built, the group hosted a well-attended Lavender Conference in March 2005. (9)



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Lavender Creek Farm

Mackinaw, Illinois

<http://lavendercreek.store.yahoo.com/>

Lavender Creek, one of the only commercial lavender farms in the Midwest, was begun in 1999 by Ruth and Tom Hertzfeldt on eight acres, surrounded on three sides by corn and soybean fields. The farm is located near Mackinaw, Illinois, on Route 9. The Hertzfeldts have expanded their plantings from 1,500 in 2001 to “thousands” in 2003—mostly new French hybrids. A third field was planted in April 2003, and was eight inches tall by July.

The Hertzfeldts completed their retail sales facility, the New Country Barn, in July 2003 to accommodate an expanded lavender product line. At the Third Lavender Harvest Festival in June, Miss Illinois 2003 was on hand to crown the first “Miss Mac-ka-fest.” Miss America has also visited the farm, and more celebrities are expected.

Visitors enjoy gathering bouquets of “wands” (spikes of blooming lavender gathered for drying) from the fields. The farm entrance and the grounds are landscaped with mounds of Grosso lavender. (See farm logo photo at <http://lavendercreek.store.yahoo.com>) The Hertzfeldts grow test plots of various kinds of English lavender and “herb-de-provence” (lavandin).

In 2000 the Hertzfeldts attended the first North American Lavender Conference in Sequim, Washington, where they met Mike Reichner of Purple Haze Lavender Farm and many other U.S. growers. Since then Ruth has been learning as much as possible from Reichner and others about lavender production and marketing. It is very important to network and gain experience with the plants.

Lavender Creek has a flair for marketing its wide selection of fragrance products. Ruth takes lavender products to 20 fairs a year. They also do business on-line and by mail order, and promote Lavender Creek Farm through national advertising. The Hertzfeldts love hosting the public.

In 2005 Lavender Creek Farm began serving luncheons (for six or more) and featuring garden walks Wednesday through Friday.

The Hertzfeldts’ work with the town of Mackinaw (pop. 1,452) to develop local festivals and tourist attractions has paid off. Featured at the festivals they have started are lavender-spiced culinary treats: lavender-flavored lemonade, iced tea, fudge, and barbecued beef. A mile down the road is a start-up vineyard and winery, and several other Mackinaw County farms now promote tourism through farm visits.

The Lavender Creek Farm profile was developed from information gathered on a farm visit by Katherine Adam in July 2001, through telephone interviews with Ruth Hertzfeldt, and from an article in the business section of the Peoria Journal-Star, July 17, 2001. p. C-2. Updated by e-mail 7/03 and from the Web site 9/05.

National Organic Program Ruling

Two rulings by the National Organic Program (NOP) in 2005 potentially affect lavender products. The NOP posted a memo to certifiers that any product meeting the Final Rule may be certified, and if it meets the requirements for “100 percent organic” or “organic,” it may use the USDA Organic seal. See www.ota.com/pp/usregulatory/606background.html.

The memo reverses an initial decision to disallow organic certification for some categories of products derived from certified organic agricultural products, including personal care items.

Another ruling makes it more difficult to use non-organic agricultural ingredients (such as small amounts of essential oils used for flavoring or fragrance) in otherwise organic products, even when organic counterparts are not available. (Source: *OTA News Flash*, Sept. 1, Sept. 9, 2005.)

Marketing ideas from Texas Hill Country Lavender Farms

Tours (annual Lavender Trail)
Festival
Bed & Breakfast
Cut-your-own bundle on Saturdays
Live plants, plugs
Farmers’ market bouquets
Pillows, room fresheners, car sachets
Moth repellent
Organic scorpion deterrent
Picnics in the lavender field, annual lavender luncheon
Aromatherapy workshops/seminars
Potpourri (sold to retailers)
Wreaths, wands
Candles, soaps, sachets, lip balm, lavender water
Food products, garnishes
Organic body care products

A list of lavender farms in California		
Communities	Farms	
San Diego	Vista	Rusty Acres
Santa Barbara	Clairmont Farms	
Santa Ynez	Rona Barrett Lavender	Lilly Bee Lavender
Ojai	Rivendell Aromatics	Ojai Lavender
Willows	Eatwell Farms	
Napa	Napa Valley Lavender	Harms Vineyards
Sonoma	Sonoma Lavender Lavender Meadows	Sonoma Lavender Barn
Santa Rosa	Matanzas Creek Winery	
Hollister	Fox Hollow Farm	
Bonny Doon	Bonny Doon Lavender	
Morro Bay	Lavender Central	Cherry Creek Herbs
Cash Creek	Cash Creek Lavender	
Rescue	A Friend of the Earth Lavender	
Whitmore	Tuscan Heights	
Sierra Nevada	Mountain Lavender Co.	
Corral de Tierra	Purple Pastures Lavender	
Mt. Aukum	South River Lavender	
Cayukos	Whalerock Lavender Farms	
<p><i>Many of the new California lavender farms do not have their own Web sites, and most belong to distillery grower groups. List was supplied by Susan Ditz. (10)</i></p>		

Products from Olympic Peninsula Lavender Farms

- Lavender splashes
- Iron water
- Bath soak
- Dried bundles
- Shower & bath gel
- Body lotion
- Sachets
- Lavender honey
- Lavender dijon mustard

winters. Sequim (pop. 4,400) is in the “rain shadow” of the Olympic Mountains—protected by the mountains from rain sweeping in from both east and west. Its annual mid-July Celebrate Lavender Festival draws thousands of visitors to view the purple haze of harvest-ready lavender fields. Sequim also has a thriving bedding plants industry and sponsors an herb festival each May. In fact, Sequim is a growing tourist and retirement center, with festivals scheduled for almost every month in the year.

The lavender farms around Sequim provide a significant boost to the local economy and are an established part of the local tourist industry, promoted by both local and state governments. The 2000 Festival was held in connection with a national conference on lavender, and 2003 marked the Seventh Annual Festival. Tours of lavender farms and a Lavender Street Faire showcase lavender products and services from the Sequim-Dungeness Valley, as well as regional garden products and natural crafts. Other attractions include an open air market, lavender crafting demonstrations, food, aromatherapy, dance, music, clowns, and face painting. (For contact information, see Lavender Farms on the Web.) For the publication *Entertainment Farming and Agri-Tourism*, please contact ATTRA.

The 2005 event (third week of July) was billed as a “Festival Conference,” sponsored by Washington State University Extension, Clallam Sequim Lavender Growers Association, and the 9th Annual Sequim Lavender Festival committee (www.lavenderfestival.com/special-events/seminar.html). The educational dimension featured seven speakers/presenters.

Olympic Lavender Farm, near Sequim, manufactures a number of fragrance products from its 1,200 lavender plants on five acres. This farm also hosts a U-pick operation during the Celebrate Lavender Festival.

Participants in the farm tour can view a demonstration of lavender oil distillation. Olympic also sells lavender in bulk to local cottage industries and provides custom distillation. Olympic sells its line of lavender

California Lavender Farms

California boasts 63 lavender farms, and 2004 saw the first regional festival in Ojai.

The Ojai Lavender Festival had its own Web site for the June 5, 2005, festival. At least two distilleries are in operation producing lavender oil from networks of growers. Lavender tourism in northern, central, and southern coastal California has blossomed.

Dungeness Valley Lavender Tourism

Sequim (pronounced *skwim*) in Washington’s Dungeness Valley has been proclaimed the “lavender capital” of the U.S. Sequim has a favorable geographic location for lavender, with warm summers and cool, dry

products on-line through its Web site (see list of farms, below). A recent communication from the farm confirmed that the primary purpose of its distillation operation is entertainment.

Purple Haze Lavender Farm offers lunch on the lawn, lavender margaritas, and lavender ice cream during the festival. Other attractions include aromatherapy classes, massages by the pond, crafting classes, photographers to take your portrait in the field, espresso, music, and a demonstration on the latest in organic composting techniques. This farm has five acres of lavender fields. (See list of farms for Web address.)

Sequim Valley Ranch is in the plant business, advertising itself as the “prime provider of beautiful two-gallon field-grown lavender plants and plug trays, as well as two-inch, four-inch and one-gallon lavender plants for the nursery market.” This 700-acre ranch has almost 20 acres planted in lavender. Plants are started in three large greenhouses. Demonstrations, food, and entertainment are offered during the festival.

Direct Marketing

Occasionally, lavender products are sold at farmers’ markets. For example, dried lavender wands, sachets, and other lavender products are offered for sale by the McGowans and the Morrills at the Fayetteville Farmers’ Market, Fayetteville, Arkansas. (However, it’s a small niche. A recent study by the Kerr Center, Poteau, Oklahoma, found that only 35 percent of farmers’ market patrons would consider purchasing “dried herbs.”) Methods for direct marketing of horticultural products are discussed in the ATTRA publications *Direct Marketing* and *Farmers’ Markets*. For more information about producing potted lavender plants (also direct marketed), see the ATTRA publications *Sustainable Small-Scale Nursery Production* and *Plug and Transplant Production for Organic Systems*.

For those interested in a cottage fragrance industry, there is an older method of small-batch production called enfleurage. Fats, oils, or alcohol are used to extract the plant essence, for scenting soaps, bath oil, lotions,

potpourris, aromatic waters, candles, ink, homemade paper, etc. Once made, scented oils must be used quickly or stored in a tightly sealed bottle. Making perfumes at home requires a recipe, additional un-denatured ethyl alcohol, and an appropriate fixative (such as storax oil, sandalwood oil, or orris root). More information on these methods and products, some of which may have potential as value-added farm enterprises, is provided in *Rodale’s Illustrated Encyclopedia of Herbs*. Additional recipes and formulas are found in *Growing 101 Herbs That Heal* (see **Further Reading** below).

Requirements for Success in Lavender Production

Successful lavender producers typically invest considerable time (at least a year) just doing research, traveling to conferences, and talking with established farmers before setting up operations. Many travel to France to view first-hand the lavender industry in Provence. The pioneers in the U.S. industry have had other assets such as familiarity with essential oils production, consulting experience, extensive marketing and engineering experience, a university connection, and ready access to capital. While there is no national lavender growers association and no comprehensive list of lavender farms, interest continues to grow. Curtis Beus, PhD, of Washington State University Cooperative Extension (11) writes:

Most U.S. lavender producers must develop their own products and markets, or partner with someone who will. There is no established U.S. market or market infrastructure for lavender. Value-added products are often key to marketing.



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Other U.S. Lavender Products

- Soaps
- Lotions, mists
- Shampoo
- Conditioner
- Teas
- Scones
- Cookies
- Biscuits
- Brownies
- Candles
- Bath blends
- Wreaths
- Arrangements
- Vinegars
- Jellies
- Wands
- Body scents

Lavender Farms on the Web

Arkansas

Owl Creek Lavender Farm www.owlcreeklavender.com	Stout Mountain Lavender www.stoutmountainlavender.com
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California

Green Acres Lavender Farm www.greenacreslavenderfarm.com	Rancho Alegre www.ranchoalegre-lavender.com Operates distillery.
Santa Ynez Lavender www.santaynezlavender.com Operates distillery.	Ornbaun-Gibson Ranch www.ornbaunlavender.com
Whalerock Lavender Farm www.whalerockcastle.com	The Lavender Fields® www.thelavenderfields.com

Idaho

Valley View Lavender Farm al@valleyviewlavender.com

Illinois

Lavender Creek Farm www.lavendercreekfarm.com

Massachusetts

Cape Cod Lavender Farm www.capecodlavenderfarm.com	Lavender & Herb Growers of Franklin Co., MA www.lavenderland.com
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Michigan

Leelanau Lavender Breezes www.leelanaulavender.com

Montana

Rocky Mountain Lavender www.rattlesnakecreekvineyard.com/rocky_mountain_lavender

Ontario, Canada

Stoney Hollow Herbal Treasures www.stoneyhollowherbaltreasures.com

Oregon

Shooting Star Lavender www.shootingstarlavender.com	Victoria's Lavender Gardens www.victoriaslavendergardens.com
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Pennsylvania

Lavender Green® www.lavendergreen.com

Tennessee

Scott County Lavender www.scottcountylavender.com

Texas

Hill Country Lavender www.hillcountrylavender.com	Becker Vineyards Lavender www.beckervineyards.com
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Virginia

Norfolk Lavender www.norfolklavender.com

Washington

Angel Farm www.sequimlavenderfarm.com	Cedarbrook Herb Farm www.cedarbrookherbfarm.com
Hood River Lavender www.lavenderfarms.net	Jardin du Soleil Lavender www.jardindusoleil.com
Lavender Fields Farm www.lavenderfields.com	Olympic Lavender Farm www.olympiclavender.com
Purple Haze www.purplehazelavender.com	Sequim Valley Ranch www.lavenderfestival.com/index.html
Willow Farm www.lavenderfarms.com/willow	

Other Lavender Farms

Mountain Crest Gardens, Etna, CA E-mail: mc-garden-gifts@mc-garden-gifts.com
Large-scale propagation of lavender plants by contract only.

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11. Curtis Beus
WSU Cooperative Extension
Small Farms Program
www.smallfarms.wsu.edu/crops/lavender.html
Propagation, soils, spacing between rows, price of plants, establishment, irrigation, fertilization, weed control, pests and diseases, cultivars, flower yields (Grosso), oil production (Angustifolia and lavandin), harvesting/pruning, marketing, products, prices, local sources for plants.

Additional Links

- Australian lavender industry
www.lavenderaustralia.com/
- Lavender listserv
Lavandula@yahoo.com
- New Zealand Lavender Growers Association
www.lavender.org.nz
- Soap Maker's Links (Magnolia Hill Soap)
www.magnoliahillsoap.com/links.htm
- Sequim annual Celebrate Lavender Festival
www.lavenderfestival.com
- Curtis Beus, Washington State University Coop. Ext.
Lavender Production and Marketing.
www.smallfarms.wsu.edu/crops/lavender.html
- Fifty States of Lavandula
Online list of lavender farms in all states (except AK, NV, RI, SD, WI, so far) being compiled by Susan L. Harrington.
Lavender@LabyrinthHill.com
- Doug Green, 26p. e-book, \$6.95
www.simplegiftsfarm.com/growinglavender.html
- Horizon Herbs
www.chatlink.com/~herbseed/
- Richters Herb
www.richters.com
Q&A has large amount of material on lavender.
- Lavender By Rona Barrett
www.lavenderbyrona.com
- North Carolina State University Horticultural Science
www.ces.ncsu.edu/fletcher/staff/jmdavis
This Web site produced by a doctoral student in North Carolina offers an excellent overview of lavender, including its history.

Purple Haze Lavender Farm
Mike Reichner
180 Bell Bottom Road
Sequim, WA 98382
888-852-6560 (orders)
360-582-3088 (office)

Sue Mattie
Stoney Hollow Herbal Treasures
Ontario, Canada

Stoneyhollow1@sympatico.ca
www.stoneyhollowherbaltreasures.com

*A Canadian grower offers an electronic copy of her article
"Locally Grown Organic Lavender with the Essence of
Provence" to anyone contacting her through the Web site.*

Further Reading

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Lavender Production, Products, Markets, and Entertainment Farms

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or
www.attra.ncat.org/attra-pub/PDF/lavender.pdf

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