Dill

Basil

Rosemary

Herbs

Ginger

Mint

Cilantro

What is an Herb?

- Plants that are used as flavoring agents
- Leaves, seeds or roots can be used
- Usually used in small amounts
- Many may be used for medicinal or ornamental purposes

Table 1. Statewide production of herbs and acreage by production regions in Texas.

	Statewide production			Acreage by production region				
Crop	Acres	$ Value per A	Total value ($x1000)	Lower Valley	Winter garden	Plains region	Far West Texas	Eastern areas
Basil	20	4,200	84	0	10	0	0	10
Cilantro	430	4,200	1,806	400	10	0	0	20
Dill	220	3,000	660	200	0	0	0	20
Mint	220	3,400	748	100	100	0	0	20
Parsley, dried	15	2,800	42	0	10	0	0	5
Rosemary	100	2,800	280	0	10	80	0	10
Other herbs	40	2,800	112	10	10	0	0	20
Totals	1,045	3,571	3,732	710	150	80	0	105

Smith, D.T. and J.L. Anciso. 2005. The Crops of Texas. Department Technical Report SCS-2005-01. Department of Soil and Crop Sciences. 63 p.

Basil

Basil

- Mint-like annual herb used for cooking, garnish, or medicinal purposes
- Readily cross pollinates and several hybrids available
- Grown in plots of less than 0.1 acre for local sales
- A source of organic insecticide and fungicide
- Pests: Japanese beetle; annual weeds
- Disease: Botrytis, leaf blight, Sclerotinia blight, Fusarium wilt

Mint

Mint

- Perennial, grown from vegetative material
- Multiple harvests from a field, sold fresh
- Pests: Loopers and Cutworms
- Diseases: Verticillium wilt and Rust
- Produced by 15 to 25 commercial growers in Texas
- Menthols and esters are distilled from peppermint and spearmint in the Pacific Northwest

Cilantro – Soil Preparation

- Prefers a light, well-drained, moderately fertile loam or sandy soil
- Can tolerate other soil conditions

Cilantro - Planting

- Will start to bolt when temperatures exceed 85 degrees F
- Plant in February for April harvest; September for November harvest
- Plant seeds 2 inches apart in rows 12 to 15 inches apart if plan to harvest leaves
- Plant seeds 8 inches apart in rows 15 inches apart if plan to harvest seeds

Cilantro - Planting

- Plant seeds about ¼ to ½ inch deep
- About 2,000 seeds per ounce, so don't purchase a lot of seeds for the season
- Weekly planting will ensure continuous crop

Cilantro - Fertilizing

- Should be fertilized twice
- Apply ½ teaspoon of ammonium nitrate (34-0-0) or urea (21-0-0) per square foot

Cilantro - Watering

- Most critical need for water occurs during seed germination and establishment
- Don’t need much water once established

Cilantro - Disease

- Bacterial Leaf Spot

Leaf Spot (Alternaria sp.) on cilantro.
Courtesy Tom Isakeit, TAEX, Weslaco, 1996.

Cilantro - Insects

Beet Armyworm

Cabbage Looper

Green Peach Aphid

Cilantro - Weeds

- Preplant – use corn gluten meal
- Postemergence – use 20% vinegar, cinnamon and clove oil, or d-limonene

Cilantro - Harvesting

- Ready to harvest 45 to 70 days after seeding
- Cut exterior leaves once they reach 4 to 6 inches long
- Cut whole plant 1 to 2 inches above soil level to use both small and large leaves

Dill

Dill Overview

- Perennial herb that reaches 2 to 4 feet tall
- Leaves are used fresh or dried
  - Dips, soups, salads
- Seeds used as a spice
  - Pickling and flavoring stews and roasts
- Native to southern Russia, western Africa, Mediterranean

Dill - Varieties

- Best for Texas
  - Bouquet
  - Dukat
  - Fernleaf
  - Long Island
  - Superdukat

Dill – Site Selection

- Plant in full sun
- Protect from strong gusts of wind
- Can survive temperatures down to 25 degrees

Dill – Soil Preparation

- Can grow fairly well in poor soil conditions
- Grows best in well-drained, sandy or loamy soil that is slightly acidic (pH 5.8-6.5)
- Soil temperature should remain at about 70 degrees

Dill - Planting

- Sow seeds directly in the ground April through May
- Should germinate in 10-14 days
- Do not transplant
- Seedlings should be planted ¾ to 1 inch deep and from 12 to 15 inches apart

Dill – Growing in Containers

- Can be easily grown in containers, both indoors and outdoors
- Choose a deep container to accommodate tall plant and long roots
- Place where container will receive at least 5-6 hours of direct sunlight daily
- Should be ready to harvest within about 8 weeks after seeds were sown

Dill - Fertilizing

- Broadcast fertilizer or apply as side dressing
- Apply either 20-20-20 at a rate of 0.70 pounds per 100 square feet or 15-5-10 at 1 pound per 100 square feet

Dill - Harvesting

- Outside, dill matures about 90 days after seeding
- Leaves can be harvested as soon as they are big enough to use
- Contains most flavor before flowering begins
- Clip leaves close to stem in the early morning or late evening

Dill - Harvesting

- Cut seed heads 2 to 3 weeks after bloom
- Place cutting in paper bag and allow to dry
- Seeds will fall off when they are ready

Ginger

Ginger Overview

- Often grown for its aromatic, pungent and spicy rhizomes – often called ginger root
- Main active component: Gingerols – responsible for fragrance and flavor
- Texture is firm, knotty, rough, and banded
- Flesh can be yellow, white or red, depending upon variety

Ginger Overview

- Benefits of ginger
  - Anti-inflammatory compounds can help alleviate arthritis pain
  - Helps boost immune system
  - Protects against colorectal cancer
  - Induce cell death in ovarian cancer

Ginger – Site Selection

- Thrives best in warm, humid climates
- Needs at least 2 to 5 hours of direct sunlight
- Protected from strong winds

Ginger – Soil Preparation

- Best soil is loose, loamy, and rich in organic matter
- Thick mulch can retain nutrients, retain water, and help control weeds

Ginger - Planting

- Cut rhizome into 1 to 1 ½ inch pieces before planting; set aside for a few days for surface area to heal and form a callus
- Plant in early spring
- If buying ginger from store to plant, soak the rhizomes overnight because they are sometimes treated with a growth retardant

Ginger - Planting

- Plant 6 to 8 inches apart, 2 to 4 inches deep
- Can be planted whole or in small
- Plants will grow to about 2 to 3

Ginger - Fertilizing

- Add a slow-release organic fertilizer at planting
- Liquid fertilizer may be applied every few weeks
- Ginger will benefit from fertilizer containing high levels of phosphorus (P)

Ginger - Watering

- Do not allow plants to dry out while actively growing
- Reduce watering as the weather cools
- Avoid overwatering

Ginger - Harvesting

- Harvested by digging up the entire plant
- Can be harvested at any stage of maturity; best time is when plant is 8 to 10 months old
- After harvest, choose rhizomes for replanting and promptly replant them

Ginger - Serving

- Store fresh ginger in refrigerator or freezer
- Young ginger does not need to be peeled
- Mature ginger has a tough skin that needs to be peeled
- Sliced, minced, julienned
- Level of flavor depends on when it is added
  - Early in cooking process – hint of flavor
  - Towards end of cooking – more pungent

Ginger - Nutrition

- Good source of:
  - Copper
  - Magnesium
  - Manganese
  - Potassium
  - Vitamin B6
- Used to relieve gastrointestinal distress

Rosemary

Rosemary - Overview

- Evergreen shrub native to the Mediterranean region
- Leaves are rich in essential oils
- Pine-like scent and pungent flavor make them a popular ingredient in foods
- Flowers can be white, pink, blue, or any shade in between
- Perennial – completes its life cycle in 3 or more years

Rosemary - Overview

- Two types
  - Upright
  - Prostrate
- Fairly drought resistant
- If healthy enough, can tolerate a light freeze
- Most successful when
  from cuttings or t

Rosemary - Varieties

- Best Varieties for Texas:
  - Albus
  - Arp
  - Blue Boy
  - Dancing Waters
  - Golden Rain
  - Pine Scented – best variety for cooking
  - Porstatus
  - Roseus
  - Spice Islands

Rosemary – Site Selection

- Can be grown in pots or in the ground
- Well-drained, loamy, slightly acidic soils
- pH between 6.0-7.0
- Should receive at least 6 hours each day

Rosemary – Soil Preparation

- Remove rocks, weeds, shrubs, tree roots from area to be planted
- Soil sample to determine fertility
- Amend soil as needed
- Add 4 inches organic matter to soil surface and incorporate to a depth of 4-6 inches

Rosemary - Planting

- Take cutting from already vigorous plant
- Clip a 3-inch branch from stem of the plant
- Trim off most of the lower leaves to 1 ½” up the stem
- Plant 1-2 cuttings into a 3-inch pot
- Water
- Place pot in windowsill with indirect light, temperature between 60-70 degrees F
- Transplant in about 8 weeks

Rosemary - Fertilizing

- Seldom needs fertilizer
- If growth is slow or plant is yellow, apply fertilizer in early spring
- To prevent leaf burning, do not apply fertilizer directly to the plant

Rosemary - Watering

- Too much water can cause root rot
- Water every 1 to 2 weeks, depending upon plant size and climate conditions
- Allow plants to dry out thoroughly between each watering

Rosemary - Diseases

- Resists most disease
- Susceptible to powdery mildew, aerial blight, bacterial leaf spot, and root rot
- Apply fungicide at first sign of disease
- Pruning overgrown plants to improve air circulation can minimize disease

Rosemary - Insects

- Fairly resistant to pests
- If plant has scales
  - Clip off and discard infested plant tips
- If plant has mealy bugs
  - Spray with water, pyrethrum soap, or insecticidal soap
- If plant has sucking insects
  - Decrease nitrogen fertilizer applied

Rosemary - Harvesting

- Can harvest several times during the season
- Allow plants to replace their growth between harvests
- Clippings can be used fresh or dried
- Fresh cuttings retain their best flavor for 2 to 7 days in the refrigerator

Usual span from planting to harvesting rosemary

Source	Time to harvest
Nursery	3 months
Cutting	1 year
Seed	15 months