TheHerbSocietyofAmerica's Essential Guide to





TheHerbSocietyof Americaisdedicated to promoting the knowledge, use anddelightofherbs througheducational programs,research and sharing the experience of its memberswiththe community



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Introduction

he mission of The Herb Society of America is to promote the knowledge, use and delight of herbs through educational programs, research and sharing the experiences of its members with the community.

In pursuit of fulfilling this mission, we have developed *The Herb Society of America's Essential Guide to Dill*. This guide is meant to be the starting point for your study of the dill plant, *Anethum graveolens. The Essential Guide* is divided up into three main sections, Knowledge, Use and Delight.

We hope that this guide will include a little something for everyone, from the novice herb gardener who is just beginning, to the expert herb gardener who is seeking to expand his or her knowledge through in-depth research. Think of this up-close and personal look at dill as your jumping off point for furthering your knowledge about this well-used but not always well-known culinary herb.

> ~ Janeen Wright *The Herb Society of America*

It is the policy of The Herb Society of America not to advise or recommend herbs for medicinal or health use. This information is intended for educational purposes only and should not be considered as a recommendation or an endorsement of any particular medical or health treatment.

TheHerbSocietyofAmerica's Essential Guide to Dill

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Knowledge

History and Origin

A nethum graveolens is believed to have its beginnings in the Mediterranean region. The plant has a long and ancient history in many countries as a culinary and medicinal herb. The earliest known record of dill as a medicinal herb was found in Egypt 5,000 years ago, when the plant was referred to as a "soothing medicine." (8) Around 3,000 B.C.E. the Babylonians were known to have grown dill in their gardens (4).

Dill was also a widely used and familiar plant in the Greek culture. Dill scented oil was burned in Greek homes, and the plant's essential oil was used to make some of their wine. Dioscorides, a Greek doctor and surgeon, wrote that scorched dill seeds were used to aid with healing wounded soldiers, a practice which was also shared by the Romans (14). Gladiators were fed meals covered with dill because it was hoped that the herb would grant them valor and courage. Pliny the Elder was the author of *Naturalis Historia* which was the precursor to the modern day Encyclopedia. He included information about dill in the sections that talked about exotic plants and spices.

Dill seeds are often called "meetinghouse seeds" because they were chewed during long church services to keep members awake or kids quiet. The seeds were also chewed in order to freshen the breath and quiet noisy stomachs. A. graveolens has long been a highly prized herb, and in many cultures it was taxed or tithed. One such case is that of Edward I of England, who did not have enough money to repair London Bridge. He imposed a tax on dill

and other spices that ships brought into the harbor to help raise the needed funds (7).

During the seventeenth century, dill became a popular herb in England and it could be found in many "hortus," or kitchen gardens. The plant most likely arrived in America by means of the early settlers. John Winthrop, who led a group of English Puritans to the New World, was known to have grown dill in his garden (8).

Taxonomy

Anethum on a vē-ŏ-lěnz Family: Apiaceae (Umbelliferae) Carrot family

Family: Apiaceae (Umbelliferae) Carrot family
Genus: Anethum
Specific epithet: graveolens
Synonyms: Anethum sowa Roxb. ex Fleming, Peucedanum graveolens (L.)
Hiern. Peucedanum sowa (Roxb. ex Fleming) Kurz (World Spice Plants/ Seidemann)

Common Names: dill, Indian dill

he name "dill" means to "calm or soothe," and most likely originates from the plant's known ability to calm troubled stomachs and colicky infants. The Latin name of a plant often tells us something about the plant's characteristics, and dill is no exception. The name *Anethum* describes dill's growth habits. The word is a combination of the words *ano* and *theo*, which when used together mean "upwards I run."(17) *Anethum* also originates from the Greek word *aneson* or *aneton*, which is most likely also the origin of the name anise (6). The Latin name *graveolens* comes from a combination of two words; *gravis*, meaning "heavy or weighty," and *oleo*, which means "producing a smell or odor." When combined into *graveolens* the meaning of these two words becomes "emitting a heavy odor or strong smelling." (1) Thus, the name *Anethum graveolens* means a tall plant with a vigorous growth habit that has a strong smell.

Description

nethum graveolens is a member of the Apiaceae family, which includes such herbs as parsley, cilantro, fennel, and Queen Anne's lace. Dill is an aromatic herb native to the Mediterranean area. While it is sometimes grown as a biennial, it is most commonly grown as an annual. Depending upon the variety, the plant can grow anywhere from 1 foot (for dwarf varieties) up to 4 feet in ideal conditions. The branching stems have white to off-white, vertical striations that run down their length, and they are devoid of hair. Unlike fennel, which resembles dill in appearance, the stems of dill are hollow. They also end with a broad, expansive inflorescence that is topped with vellow, scented, hermaphroditic flowers. Dill's inflorescences are arranged in umbels, in which the flower stalks develop from a common point. It is similar in

Photo by Billi Parus



appearance to an umbrella and it is this characteristic that gives the entire Umbelliferae family its name. The flowers develop into dry fruits called schizocarps that are split into two parts, each one holding seeds. The seeds are oval and progress from a bright green color when they first develop to dark brown later in the season. Like the stems, they have light colored lines or striations that run down their length. Dill's aromatic leaves are delicate in appearance and are often described as lacy, feathery, or needle-like. Dill produces a single taproot that can reach deeply into the ground in ideal conditions.



Cultivation

Watering

During prolonged periods of drought, dill will require supplemental watering. Keep the soil moist but make sure that it does not become waterlogged. The use of certain watering methods may affect the quality of *Anethum graveolens* and its cultivars, causing stem breakage, premature seed shattering, and susceptibility to disease. Overhead sprinkling is suggested when the plant is in its seedling stage until it is about 60 cm (about 24 in.). Dill also responds well to furrow irrigation, which helps to eliminate stresses caused by mildew on the seed heads (15).

Light and Climate

Dill grows best in full sun. However, hot weather can be a determining factor in causing the plant to flower early, which brings a halt to leaf production (15). *Anethum graveolens* is considered a cool weather crop and it grows well in temperatures ranging from 42.879° F (6-26° C) (15) High winds can cause great damage to a dill crop because the hollow stems break and bend easily. Staking may help minimize the damage. Hail and low moisture can also have a detrimental effect on this herb (15).

Soil

Dill grows well in a light to medium-textured soil that is kept moist and has adequate drainage. The plant also responds well to many types of organic soils. The recommended pH range of the soil is 5.0 to 8.2, with an average of 6.5 (17).

Fertilization/Composting

Dill may benefit from soil amended with compost or manure (15). Take care when fertilizing dill, because nitrogen and phosphorus fertilizer levels will affect oil content and plant yield (15).

Weeds, Diseases, and Pests

Steer clear of the use of chemicals for weed and pest control if dill is to be used for culinary purposes. Weeds should be controlled by hand or with mulch to allow dill the best chance for healthy growth (17). Crop damage can also occur because of dill's susceptibility to *Fusarium* root rot and aphids.

Harvesting and Storage

he optimum time for harvesting dill is in the early morning. The higher moisture content of the plants when harvested at this time results in better flavor and the possibility of seed shattering is minimized. Do not let your dill plants bolt if you want a continuous supply of dill leaves for harvesting; keep their tops trimmed regularly. Dill weed is best harvested before the plant is fully mature and before the flower buds have opened. Fresh

cut dill can be stored in the refrigerator safely for two to three days. The stems can be placed in a cup of water to help keep the leaves fresh. A majority of cooks prefer fresh dill to dried because of its superior flavor. However, there are several methods for preparing dill weed for long term storage. To dry naturally, lay freshly harvested dill on waxed paper and place it in a warm, dark spot with good air circulation. Dill weed can also be dried in a food dehydrator or



frozen. The leaves should then be placed in an airtight container and stored in a dark place.

Dill seed is harvested at the end of the plant's life cycle. The flowers will be spent, the stems will start drying out, and the seeds will have turned a golden brown color. Dill seed can be easily collected by hand using the following method: First, place a brown paper bag over the seed heads and tie the opening closed. Cut the stem off at the base of the plant. Next, hang the stems upside down in a warm, well ventilated area to dry. Take the stems down after about two weeks and crush the dried seed heads in your hands over a

container to separate the seeds from the seed head. An additional method involves laying the freshly harvested seed heads on a cookie sheet and then placing them in the freezer. Remove the frozen seed heads after a few days and rub the seed heads between your hands over a piece of paper to harvest. Store your dill seeds in an airtight container in a dark place.

Propagation

D ill seed can be sown directly in the garden from spring until mid-summer. Seed germination occurs seven and nine days after sowing, with flowers following 40-67 days after germination (17). The feathery leaves that are a distinguishing feature of dill plants usually follow after the emergence of the long, tapered true leaves. High temperatures are often a deterrent to successful seed germination, so it is best to plant during periods of cool temperatures. Madalene Hill

states in her book *Southern Herb Growing* that in The South "the plant performs quite well if the seeds are planted at the onset of fall." (5) An established dill plant will often reseed itself in the garden from year to year.

Anethum graveolens has a long taproot similar to that of carrots and other plants in its family. Gardeners are often warned against transplanting dill into the garden because of the low success rates. Art Tucker, co-author of *The Big* Book of Herbs, disagrees with this assessment, commenting that,



Photo by Billi Parus

"the advice is only useful for bareroot transplants. Transplants from containers; especially if the plants are young, have been known to do quite well." (17)

Chemistry and Nutrition

ill seed and dill oil both have GRAS (Generally Regarded as Safe) status. Dill seed is GRAS at 1,200 to 8,200 ppm and dill oil is GRAS at 1 to 750 ppm (17). Dill is not considered to be a great benefit nutritionally because it is normally consumed only in small amounts. The pale, yellow oil of dill is mainly composed of limonene (link to Wikipedia -), carvone, (link to Wickpedia http://en.wikipedia.org/wiki/ Carvone), and phellandrene (link to Wikipedia - http://en.wikipedia. org/wiki/Phellandrene). Carvone is responsible for the strong and sometimes acrid flavor of dill and it is also a known antiflatulent. Limonene and phellandrene can cause skin problems such as irritation or sensitivity to the sun (13). A common characteristic that dill shares with members of the Apiaceae (Umbelliferae) family is

that the essential oils of the leaves differ from that in the seeds. Oil obtained from dill weed is used in the food industry for flavoring, while oil obtained from the seeds is used to produce soaps and perfumes.

Cultivars

'Bouquet' is a tall variety that was developed for good seed production. The leaves have a wonderful, strong flavor, making this cultivar is a popular choice for pickling. This early-producing variety is known for its large seed heads.

'Delikat' is known for its dense foliage, making it suitable for field and nursery production. The plant is ideal for harvesting because of its high yields.

'Dukat' is a long lasting variety of Danish dill that is especially good for container growing. The compact foliage is greener than that of most dill cultivars because it is free of

continued on next page

Cultivars

anthocyanin. 'Dukat' is a great choice for flavorful fresh cut dill weed.

'Long Island Mammoth' is a tall variety and is often used for pickling. The plant is a reliable producer of both dill weed and dill seed.

'Vierling' is a tall variety that takes longer to flower than other dill cultivars, which makes it a wonderful choice for harvesting dill weed. This variety is a tetraploid strain of dill that produces high yields and is often used for pickling.

'Hercules' is another tetraploid that is slow to flower and produces high yields. As a result, this variety is often used by commercial growers. The foliage is more robust and coarser than other varieties. Therefore, it is better to harvest the leaves when they are young and tender.

'Fernleaf' is a dwarf variety that grows 12-18 inches tall. 'Fernleaf' won the 1992 All-America Selection, and it blooms from midsummer into the fall. This cultivar does best when sown directly into the ground and is a great choice for growing in containers. The plant is increasing in popularity because of its size and ability to produce foliage with superior color and flavor.

'Mammoth' is a vigorous grower which can reach heights of 3-5 feet. This cultivar has a tendency to bolt quickly and is considered best for use in pickling (Deni Bown)

'Tetra' is a slow bolting variety with bushy, compact growth.

Use

Commercial Use

D ill is used commercially mainly by the food industry. Most of the dill used in the United States is imported from other countries such as India, Egypt, and Canada. Donna Tainter and Anthony Grenis report in *Spices and Seasoning: a Food Technology Handbook* that "in 1999, the United States imported 57% of its dill seed from India and 22% from Canada." The quality of the imported dill varies depending upon the country because of differences in harvesting and drying. For example, dill grown in India is harvested by hand and left out in the sun to dry, leaving it more open to insect infestation, while dill in Canada and the United States is usually harvested and dried more quickly with machines. Indian dill is different from that grown in other areas. *Anethum sowa* is native to India, and it produces bigger, flatter seeds with yellow edges when compared to *A. graveolens* (16). However, experts disagree on whether or not *Anethum sowa can* actually be considered as its



own species or if it is only a slight variation of *A. graveolens*.

In the food industry dill is primarily used for making dill pickles. Dill seed can be used whole for this purpose, or dill weed oil might be used. Many home canners often elect to use the whole seed head for making pickles. The essential oil of

Culinary Uses

ill is most commonly known for giving dill pickles their characteristic flavor. However, dill has a myriad of culinary uses that go beyond pickles. The general home cook most often

uses dill in two forms: dill seed and dill weed. Cooks often prefer to use dill weed because it has a stronger flavor than that of dill seed.



dill is also used by the food industry for flavoring and as an ingredient in liqueurs. Dill weed, seed, and oil are frequently added to baked goods, snacks, condiments, and meat products. The fragrance industry makes much use of dill essential oil to produce soaps, perfumes, detergents, creams, and lotions.

bage, potatoes, cumin, chili powder, and paprika (12). Additionally, they can be added to casseroles, lamb, fish, vegetable dishes, and sauces. Dill seeds take a long time to release their flavor, so it is best to add them early on in the cooking process. Dill

> vinegar can be made by adding the seeds to vinegar and allowing the mixture to steep for several days.

Dill weed also has a taste similar to that of anise

Dill seeds are often described as

being bitter in flavor with subtle undertones of caraway or anise. Cooks use them in whole or powdered form. The seeds are often used as a condiment, but they can also be combined with onions, cabPhoto by Janeen Wright

and caraway, but the flavor is much stronger and more pronounced. Chopped or whole dill weed can be added to soups, stews, casseroles, meat dishes, pasta, and eggs. It can also enhance all types of sauces,

Culinary Uses Around the World

Dill is a well-known culinary herb used for cooking around the world. The plant is especially popular in Germany, Scandinavia, and Russia.

Sweden: (dill) The Swedish people use dill to make a dish called gravlax, which consists of salmon pickled in salt, sugar, and dill. Gravlax is often served as an appetizer with a dill and mustard sauce.

Sri Lanka: The immature flower heads are added to salads.

French: (aneth) Dill is sprinkled on pastries and baked goods.

North Africa: Dill fruits are used in a variety of meat dishes.

Poland: Polish cooks have traditionally preserved dill for winter use by chopping it finely and packing it between layers of salt in stone crocks or jars and storing in a cool place Middle East: (Shabath, Shibitt, Sjachet, Sjamar) Dill is added to rice, beans, meat, spinach, salads, and vegetables.

Greece: The Greeks make dolmadakis, which are essentially grape leaves that are filled with a mixture of dill weed, rice, garlic, and pine nuts.

Holland: Dill is steeped in hot milk to help induce sleep.

Turkey: Dill is mixed with pureéd beans and other spices and served as a salad.

India: (Sowa, Anithi, Sua bathi) Dill is used to flavor a dish called dhansak.

Russia: (ukrop) The herb is used to make Russian Borscht and pickles.

Germany: (Dill, Gurkenkraut) Dill is most often used for dill pickles, which are very popular in Germany.

dips, butters and cheeses. An especially good combination is that of salmon and dill. Ian Hemphill in *The Herb and Spice Bible: A Cook's Guide* states "the

combination of green dill with coriander leaves and other spices is an unusual but addictive combination." Unlike the seeds, dill weed is used later in the cooking process because of its strong flavor.

Cooking ratios

3¼ tsp. dill seeds= one dill head
1 Tblsp. dill leaves (minced) = 1
tsp. dried dill leaves
http://homecooking.about.com/od/
herbsspices1/a/dilltips.htm

Dill can be used as a substitute for

fennel when a cook is in a bind. However, the cook must keep in mind that the flavor of dill is less strong and more subtle than that of fennel. Dill seed can also be used as a substitute for dill weed in many recipes although most cooks do not recommend it.

Medicinal Uses

n the past, dill has been a versatile plant used in a variety of ways to treat different medical conditions. The herb was listed as one of the components for making a painkiller in the Ebers papyrus in 1,500 B.C. (7). The Egyptian writings are some of the earliest records that we have of the dill plant being used medicinally (8).

Dill was most often associated with being an effective remedy for flatulence and as an aid for digestion. Ancient Greeks believed that parts of the dill plant could help with the hiccoughs. Pliny and Dioscorides shared this belief and wrote that dill could "stayeth the hickets [hiccoughs]." (8) The Greeks also used dill as a sleep aid. They would cover their eyes with the plant to help them get a good night's rest (7).

Dill water, or "gripe water," is an ancient remedy that has been used by mothers for centuries to calm colicky babies or to help them sleep. Dill was even recommended in the past to help mothers increase their milk flow. Charlemagne, who was not fond of hiccoughs and stomach noises, insisted that bottles of dill oil be made available to his dinner guests. Nicholas Culpeper recommended dill in his writings, as a tonic "which strengthens the brain." (14)

Today, recent studies are bearing out the belief that dill is a useful remedy for indigestion and ulcers. Researchers have found that dill inhibits the secretion of stomach acids in mice and that it may help to prevent ruptures in the stomach lining (11). Dill is also believed to have anti-cancer properties, because it is high in monoterpenes (9).

Other Uses

ill is a wonderful host plant for butterflies, providing ample food and protection for their eggs and larvae. Be sure to plant enough dill in your garden to meet your needs as well as those of

Dill in the Bible

the butterflies. You won't be sorry when you are enjoying the black swallowtails in your garden. Dill is not the ideal herb for crafts, but it can be incorporated into garlic braids and baskets.

ill played a minor and often disputed role in the Bible. For example, in the Revised Standard of the Bible Matthew 23:23 reads,

Woe to you, scribes and Pharisees, hypocrites! For you tithe mint and dill and cumin, and have neglected the weightier matters of the law...

In the King James Version of the Bible the verse in Matthew reads much the same. However, the word "dill" is replaced with the word "anise." This difference in the translation has been the cause of much dispute among scholars, many of whom think that the word "anise" is mistranslated and refers instead to dill.

The herb was also subject to the tithe according to the Talmud. The Lebanese often teach that Abraham shared his knowledge of dill with his people when he came from the North (2). The herb definitely had a presence during biblical times either in a homeowner's garden or growing wild. Today it can still be found growing in Palestine along the plains of Sharon and near Nazareth (7).

Delight

Myths and Folklore

D ill was believed to provide protection from witchcraft, most likely because of its strong smell. People thought that if a witch cast a spell on you, the cure could be found by drinking a cup of dill water. Conversely, dill was also thought to be used by magicians and witches when they were casting their spells. Charms were often made from sprigs of dill to provide protection from witchcraft; they were hung around the house or worn on the clothing.

Dill was often added to love potions and aphrodisiacs to make them more effective. The herb was also believed to bring happiness and good fortune to marriages. In Germany and Belgium, brides would attach a sprig of dill to their wedding gowns or they would carry it in their bouquets in the hopes that happiness would bless their marriages. A bride who did not want her husband to be in charge of the marriage could secretly bring mustard and dill seeds to her wedding and repeat the words "I have you, mustard and dill, Husband, when I speak, you stay still!" (10) Dill means "good spirit" or "to lull" in the language of flowers. European monks believed that dill could hinder fertility and that it had the power to chase off incubus or male demons that preved sexually on sleeping women.

Recipes Dilly Cheese Sauce

1/2 lb. Velveeta®, cubed1/2 cup salad dressing1/4 cup milk1/4 tsp. dill weed

Heat Velveeta®, salad dressing and milk over low heat until sauce is smooth, stirring constantly. Add dill. Makes 1½ cups.

(Reprinted with permission from Amanda Formaro and FamilyCorner.com) http://www.thelaboroflove.com/house/kitchen/dill.html

Cucumber Dill Dip

medium cucumber
 1/4 tsp. white pepper
 Tbsp. fresh dill, chopped OR
 2 tsp. dried dill, crushed

1 1/2 cup mayonnaise3/4 cup sour cream1/4 cup green bell pepper,diced

(Reprinted with permission from Amanda Formaro and FamilyCorner.com) http://www.thelaboroflove.com/house/kitchen/dill.html

Jamie's Dill Dip Mix

1 cup dried minced onion
 1 cup dried parsley
 1 cup dried dill weed
 1/3 cup sugar

1 Tbsp. salt ½ tsp. garlic powder 1 ¼ tsp. celery salt

Blend ingredients thoroughly and store in the freezer. To make dip, blend 3 Tbsp. Jamie's Dill Dip Mix with 1 cup mayonnaise and 1 cup sour cream. Refrigerate and allow flavors to blend for several hours. Use dip for crackers or vegetables or mix with hot potatoes, cauliflower or beans.

Jamie Barrow, HSA President 1992-1994. Reprinted with permission from HSA's Essential Guide to Growing and Cooking With Herbs

Dilly Green Beans

4 cups fresh cut green beans OR	1/4 cup cro
two 10 oz. pkg. frozen cut green	Heat oven t
beans	with onions
2 Tbsp. chopped onion	Add Velveet
1/4 tsp. dill weed	
1/2 lb Velveeta® cheese spread,	a 1-quart ca
cubed	croutons. B

1/4 cup croutons Heat oven to 350°F. Cook beans with onions and dill weed; drain. Add Velveeta®, mix lightly. Place in a 1-quart casserole dish, top with croutons. Bake for 12-15 minutes.

(Reprinted with permission from Amanda Formaro and FamilyCorner.com) http:// www.thelaboroflove.com/house/kitchen/dill.html

Creamy Dill Dressing This creamy dressing has no Combine all ingredients in a added oil. It's made with silken food processor or blender and tofu. blend until completely smooth. 1-10.5 oz pkg. firm silken tofu Store any extra dressing in 1 ½ tsp. garlic powder an airtight container in the or granules refrigerator. 1/2 tsp. dill weed Makes 11/2 cups. ½ tsp. salt (Reprinted with permission from 2 Tbsp. water Amanda Formaro and Family-1 ½ Tbsp. lemon juice 1 Tbsp. seasoned rice vinegar Corner.com) http://www.thelaboroflove.com/ house/kitchen/dill.html

Salt Method for Preserving Dill, Basil or Fennel

In a wide-mouthed glass jar, alternate layers of kosher salt and fresh herbs. Cover with plastic lid and store in a dark, dry place. Allow to sit for at least two weeks.

When ready to use, break up any lumps that may have formed in the salt. Carefully remove herbs for use in cooking, lightly brushing off the salt. Reserve the flavored salt for cooking as well. Alternatively, after 2-3 weeks, you may empty contents of the jar into a food processor and chop lightly. Use as a seasoning salt.

Ellen Adams, member at large, Great Lakes District. Reprinted with permission from HSA's Essential Guide to Growing and Cooking With Herbs

Dill Snack Crackers

package ranch dressing (dry mix)
 cup vegetable oil
 tsp. garlic salt
 tsp. dill
 box oyster crackers

Stir together all ingredients except crackers. Add crackers, mix well and bake at 200°F for two hours.

(Reprinted with permission from Amanda Formaro and FamilyCorner.com) http://www.thelaboroflove.com/house/kitchen/dill.html



Dill Pickles

Clean cucumbers. Prick with fork Juice Mixture: Boil ¼ cup of salt 2 cups of vinegar 6 cups of water

Pack in pickles, add juice mixture. Tighten lid, then loosen one-quarter turn to allow steam to escape. Boil bottles for 8 minutes then tighten the lids back up.

Per Jar, Add:

1 clove of garlic ¼ tsp. chilies clump of dill (Reprinted with permission from Amanda Formaro and FamilyCorner.com) http://www.thelaboroflove.com/house/kitchen/ dill.html

Fresh Dill Vinegar

8 sprigs fresh dill 4 cups (1 quart white vinegar) Wash dill and dip in solution of 1 teaspoon household bleach in up to 6 cups of water. Rinse thoroughly under cool running water. Place dill in a sterilized quart jar. Heat vinegar to just below boiling point (190°F); pour over dill. Cap tightly and allow to stand in a cool, dark place for three to four weeks.

Strain vinegar, discarding dill. Pour vinegar into clean, sterilized bottles with tightly fitting covers. Add a fresh sprig of cleaned and sanitized dill. Store in the refrigerator. (Reprinted with permission from Amanda Formaro and FamilyCorner.com) http://www. thelaboroflove.com/house/kitchen/dill.html

A Few More...

Slightly Sweet Dill Refrigerator Pickles (http://www.epicurious. com/recipes/food/views/Slightly-Sweet-Dill-Refrigerator-Pickles-242476) Chilled Cucumber Soup w/ Smoked Salmon and Dill (http:// www.epicurious.com/recipes/food/views/Chilled-Cucumber-Soup-with-Smoked-Salmon-and-Dill-108433) Warm Green Bean Salad with Dill (http://www.epicurious.com/ recipes/food/views/Warm-Green-Bean-Salad-with-Dill-13312) Carrot Soup with Dill Pesto (http://www.epicurious.com/recipes/ food/views/Carrot-Soup-with-Dill-Pesto-2306) Salmon and Smoked Salmon Rolls with Dill Sauce (http:// www.epicurious.com/recipes/food/views/Salmon-and-Smoked-Salmon-Rolls-with-Dill-Sauce-3140)

Study Group Questions

A study group is an excellent way for an herb or garden group to learn more about a particular topic. Suggested topics for a monthly study group on dill are listed below.

January: What are the differences between dill and fennel? How can I tell them apart? February: What are the different dill cultivars and which ones will work best in my garden? **March:** Is it dill seed or dill fruit? Take a look at the botany of Anethum graveolens **April:** What is the chemical content of dill? What characteristics does it get from these chemicals? What chemicals give it anti-flatulence properties? **May:** What types of butterflies are attracted to dill

and what do they look like? **June:** What is the difference between dill seed and dill weed?

How do I use them for cooking? Try having each member of your group bring in a favorite recipe that uses dill for taste testing. **July:** What are the best methods for harvesting and storing dill? How is dill harvested commercially in the United States, Canada, and in India? August: What is gravlax, dolmadakis, and dhansak? What do they have to do with dill? What ingredients do they contain and how are they made? In addition to making dill pickles, what are some other ways that

> dill can be used for cooking? September: Is there a difference between Anethum graveolens L. and Anethum sowa or are they the same plant? October: Fact, fiction, myth or truth? Study dill's

history and try to determine what beliefs about the plant are fact and which are fiction. **November:** How was dill used in the past for medicine? What medical research is being carried out on dill today? **December:** Is dill really mentioned in the Bible? How was dill used in biblical times? What is the herb of the year for 2011?

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Web Sites Taxonomy

USDA: GRIN taxonomy for plants http://www.ars-grin.gov/cgibin/npgs/html/index.pl Plants for a Future: database search: http://www.ibiblio.org/ pfaf/D_search.html Royal Horticultural Society Database: (a database that introduces plants that may be available in the trade but have not always had their taxonomy verified.) http://www.rhs.org.uk/databases/Summary.asp ITIS (Integrated Taxonomic Information System) - http://



www.itis.gov/ USDA Plants Profile - http:// plants.usda.gov/java/ profile?symbol=ANGR2 MoBot: W3 Tropicoa: http:// mobot.mobot.org/W3T/Search/ vast.html

Cultivation

Botanical.com - http://www.botanical.com/botanical/mgmh/d/ dill--13.html United States Department of Agriculture: Growing Herbs: http://www.nal.usda.gov/ref/ herbs.html Henriette's Herbal Homepage: http://www.henriettesherbal. com/

Breeding

Dill Breeding for Quality Production (ISHS-International Society for Horticultural Science) - http://www. actahort.org/members/ showpdf?booknrarnr=244_26 **Harvesting/Preservation:**

University of Illinois Extension: Herb Gardening: http://urbanext.illinois.edu/herbs/ University of North Carolina: Harvesting and Preserving Herbs for the Home Gardener: http://www.ces.ncsu.edu/ depts/hort/hil/hil-8111.html

Chemistry and Nutrition:

Dr. Duke's Phytochemical and Ethnobotanical Databases http://www.ars-grin.gov/duke/ UK Cropnet - http://ukcrop.net/ perl/ace/search/PhytochemDB Nutrient data Laboratory Home Page - http://www.ars. usda.gov/main/site_main. htm?modecode=12-35-45-00 Green Pharmacy/Dr. Jim Duke - http://www.greenpharmacy. com/

TOXNET (Toxicology Data Network) - http://toxnet.nlm.nih. gov

Cooking:

Cook's thesaurus - http://search. freefind.com/find.html?id=8129 6093&pageid=r&mode=ALL&n= 0&query=Dill&sp-a=00051144sp0000001 http://www.apinchof.com/freshordriedqanda.htm) The Culinary Café: http://culinarycafe.com/Spices_Herbs/ Epicurious: http://www.epicurious.com/ **Medicinal/Health:**

Dill Benefits and Side effects http://www.zhion.com/herb/ Dill.html The Herb Research Foundation: http://www.herbs.org/ National Toxicology Program: Medicinal Herbs: http://ntp. niehs.nih.gov/ntp/Factsheets/ HerbalFacts06.pdf Henriette's Herbal Homepage: http://www.henriettesherbal. com/ Medline: http://www.ncbi.nlm. nih.gov/sites/entrez **Other:** Agricola: http://agricola.nal. usda.gov/ Penn. State Horticulture Dept. Directory of Herbs: http://horti-

culture.psu.edu/extension/vegcrops/herb directory.html

Glossary

Anthocyanin: a water-soluble pigment that results in plant or flower colors that range from violet-blue to red. Anthocyanins are a type of molecule called a flavonoid. (http://en.wikipedia. org/wiki/Anthocyanin) Carvone: classified as a terpene in the chemical family. Carvone is a common ingredient in many essential oils. This chemical has known anti-flatulent properties. (http://en.wikipedia.org/wiki/ Carvone)

Hermaphrodite: Male and female flowers are contained on the same plant. (http:// www.ngoye.com/content/ view/17/33/#h)

Inflorescence: a group of flowers that develop on a single stem such as umbels, spikes, panicle, corymb, and so forth (http:// www.botany.com/16.in.htm) Limonene: a hydrocarbon that is categorized as a terpene. At room temperature limonene is a colourless liquid that has a strong smell similar to that of oranges. (http://en.wikipedia. org/wiki/Limonene) Monoterpene: phytochemicals found in citrus fruits, eggplant, green vegetables, tomatoes and yams; act as an antioxidant; help protect immune system (http://www.google.com/ search?hl=en&client=firefoxa&rls=org.mozilla:en-US:officia l&hs=4FH&defl=en&q=define: Monoterpene&ei=CR-9SrrcCaP g8Abptsy4AQ&sa=X&oi=glossa ry_definition&ct=title) Phellandrene: is classified in the chemical family as a monoterpene. Phellandrene has a pleasant smell so it is often used by the fragrance industry. Its smell is described as being citrusy or minty. (http:// en.wikipedia.org/wiki/Phellandrene)

Tetraploid: plants with four sets of chromosomes instead of two sets. (http://www.google.com/ search?hl=en&client=firefoxa&rls=org.mozilla:en-US:offici al&hs=mXq&defl=en&q=defin e:Tetraploid&ei=_U_LSpWsC4f ENrDnoMAD&sa=X&oi=glossa ry_definition&ct=title) **True leaves:** The leaves of a seedling that develop after the cotyledons. (http://www.bayercropscience.co.uk/content.output/1036/1042/e-Tools/Weedspotter/Weed%20Glossary.mspx)

Schizocarps: a dry, compound fruit, which splits into two or more parts and contains one-seeded indehiscent carpels, as in most Umbelliferae.