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PICKLES AND RELISHES FROM FLORIDA FRUITS AND VEGETABLES

BY ISABELLE S. THURSBY



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PICKLES AND RELISHES

By ISABELLE S. THURSBY

Pickles and relishes are important to the meal. While they are not real food, they go far towards making real food more interesting. It is for flavor that pickles are eaten, and for their crisp spiciness that stimulates appetites for other wholesome but less flavorful foods, and gives a different tang to the bill of fare. The season for making the homely pickles, the spicy fruits, the delectable relishes is always with us.

The true flavor of pickles and relishes really comes from spices and herbs, carefully selected and perfectly blended to suit a given product. We travel far and spend time and money freely to secure spices and herbs, for many of them thrive only in tropical countries, as cloves, cinnamon, mace and pepper. There are many herbs and other seasonings, however, that thrive equally well in Florida and hence should be found growing in our own yards. Mustard seed and dill are two of the most common. And we all should be familiar with the roots of the pungent and racy ginger, of tumeric, and of many others.

The discussion in this bulletin will be confined to the principles of making both fermented and quick process pickles and to relishes of fine flavor and keeping qualities from Florida fruits and vegetables, and of growing and using savory and aromatic herbs.

TYPES AND PROCESSES

The term pickle applies to any food that is preserved in brine or vinegar, either with or without bacterial fermentation, and either with or without the addition of spices and sugar.

Pickling is an art and the making of high grade pickles involves considerably more than just the mere putting of the products into brine. In the first place the products themselves must be fresh, sound, of fine quality, and of proper maturity and must be given the requisite time to cure and then time to develop flavor.

There are two types of pickles, the quick process pickles, which are made from fresh vegetables, and salt stock pickles, which are made from vegetables that have first been "cured" in a salt solution, or brine, for six weeks or longer. Such pickles are termed "salt pickles" or "salt stock". The brining process is the secret of successful commercial pickle making.

The first step—brining—is a most important one, as it is responsible for the success or failure of the pickles. The brine

cure better prepares the tissues of the fruits or vegetables to absorb the vinegar or the spicy syrup.

Brining or "curing" vegetables and fruits in salt solution produces in them desirable changes in color, texture and flavor. While it is possible to make pickles from uncured, fresh vegetables, pickles made from salt stock are finer in flavor, more crisp in texture, and more attractive in color and general appearance and have better keeping qualities than have quick process pickles. If a homemaker is ambitious to build up a small business for the sale of pickles of superior quality, she must learn first of all to make high grade salt stock. Well cured stock, if properly cared for, keeps for months and from it, sweet, sour, mustard or mixed pickles and various type relishes may be made.

LACTIC ACID FERMENTATION

The object of brining is to bring about a lactic acid fermentation that will produce good flavor and texture and so change the composition of the vegetables that they will keep for a long time. The brine is made of salt and water carefully proportioned and accurately measured. A weak brine permits the growth of desirable yeasts and lactic acid bacteria, but prevents the growth of putrefactive bacteria that would naturally cause the product to spoil. However, if the solution is too weak the pickles will be soft and only the putrefactive bacteria will develop; if it is too strong the action of the lactic acid bacteria is hindered. Therefore, the strength of the solution must be accurately measured. This is done by means of a device called a salinometer. As most vegetables contain 80% or more of water and as the salt in the solution draws out part of the water, the brine solution should be tested frequently and kept from dropping below the minimum that makes for safety.

The brine also extracts the vegetable juices and fermentable sugars and this aids the required acid fermentation. The lactic acid and the salt preserves the product, **provided air is excluded** and yeast scum has not been allowed to develop. In the presence of air, aerobic micro-organisms, so-called "pickle scum", develop and destroy the acid so that softening and spoilage take place. Not only is exclusion of the air after lactic fermentation is complete an essential part of the process, but it is most desirable to carry on the process of curing under practically air-tight conditions.

SALT SOLUTION OR BRINE

Strong (20% to 25%) brine acts as a preservative, while a 5% to 15% brine will permit desirable fermentation during which process the sugars present in the vegetable juice will be largely changed to lactic acid bacteria on the vegetable, which, with the brine, acts as a preservative.

The storage of vegetables or fruit in brine until certain desired changes in color, flavor and texture take place is called curing. Lactic acid fermentation may or may not have taken place. Those cured with fermentation have a pleasant fermented flavor while those cured without have less flavor. Vegetables lose their raw flavor and become crisp, the flesh becomes semi-transparent and the color changes from green to a dark olive or yellowish green. When fermentation has stopped the pickles are considered "cured" and are known commercially as "salt stock". With proper care this salt stock may be kept in the solution for a year or so.

The vegetables most often used for making salt stock besides cucumbers are cauliflower, chayotes, tiny silver skinned onions, beans, peppers, green tomatoes, okra, mangoes, and gherkins. Watermelon rind or the citron melon is largely used for sweet pickles. The citron of commerce is always cured in salt before it is introduced to the sugar syrup.

All vegetables used for pickling should go through this process to prepare the tissues to better absorb the vinegar or sweet spiced syrup. Overnight soaking in brine or parboiling are not recommended and short cuts and overnight methods are based on a mistaken idea of what really constitutes a good pickle.

When the vegetables are ready to be made into vinegar pickles they are removed from the brine, soaked overnight in cold water (warm water hastens the process) to remove the excess of salt from their tissues. Then they are stored in vinegar which may be plain or sweetened and spiced.

MATERIALS NEEDED IN PICKLING

Salt: Dairy salt used in butter making is suitable for pickling purposes. Table salt or salt to which anything has been added to prevent caking is not recommended for pickling and brining. Alkaline impurities in the salt are especially objectionable. A high grade of half ground or three-quarters ground white rock salt may be used.

Vinegar: Vinegar is a condiment made from fruit juices or

other solutions rich in sugar or starch which undergo fermentation to yield acetic acid. Since it is the acetic acid in vinegar that is responsible for the preservation of pickles it is necessary that the vinegar not be too low in acidity. A vinegar of 40 to 60 grain strength should be used. (The acid content of vinegar is normally expressed in "grains". A "10 grain" vinegar contains 1% of acetic acid and a 40 grain vinegar 4% acid.) The flavor of vinegar is due in a large degree to the product from which it is made. Vinegar made from fruit juices has a fruity flavor and odor. Apple or cider vinegar is the type most used by housekeepers. It is amber colored and is noted for its excellent flavor, fine bouquet and sharp, acid taste.

Distilled, malt, spirit or grain vinegar is made by the acetic acid fermentation of dilute distilled alcohol. These vinegars lack the fruity flavor and aroma of fruit juice vinegars, though they contain the same amount of acetic acid. They are much cheaper than fruit vinegars and may be used if white color and low cost are more important than aroma and flavor.

Malt or distilled vinegar has a more constant acid content than fruit vinegars. The use of a malt vinegar or a white grape vinegar with white vegetables such as cauliflower, young ears of corn, and onions will cause them to retain their clear, white color. Vinegar, like salt, increases the crispness of pickles.

Sugar: Granulated sugar is used in pickle making. Too much sugar causes pickles to shrivel.

Spices: The kind and amount of spices used will vary with the type and kind of pickle. Whole spices are to be preferred to ground ones. They should be tied loosely in a cheesecloth bag and be pounded lightly before using. Spices should be used in moderation and with a discriminating hand.

Water: Soft water is recommended. Much lime and other salts, as occur in many natural waters, may prevent proper acid formation in pickles made by the fermentation process. If present in even very minute proportions, iron is most objectionable, as it may cause blackening of the pickles.

COLORING AND HARDENING AGENTS

An old-time custom still prevails to a slight extent of "greening" pickles by heating them with vinegar in a copper kettle. This is not a recommended practice, as in this treatment copper acetate is formed and the pickles take up appreciable quantities of it. **Copper acetate is a poisonous substance and pickles so treated are regarded as adulterated and cannot be marketed.**

Alum is sometimes used for the purpose of making the pickles firm. The use of alum in connection with food products is of doubtful expediency, to say the least, and its use should be discouraged. If proper methods are used in pickling, the salts and acids in the brine will give all the firmness desired. In making pickles by the quick process, as with watermelon rind or sliced green tomatoes, hydrated or powdered lime may be used with safety and good results.

EQUIPMENT USED IN PICKLING

Containers: Half gallon and gallon all-glass fruit jars are ideal for use in fermenting pickles and for storing the pickles when fermentation is completed. See Figure 1. The ordinary Mason jar and similar type containers covered with zinc screw caps, with or without porcelain linings, are not desirable because the zinc or other metallic cap is corroded by the acids in the brine. The zinc salts thus formed are poisonous. Of course stoneware open crocks, malted milk jars and similar containers

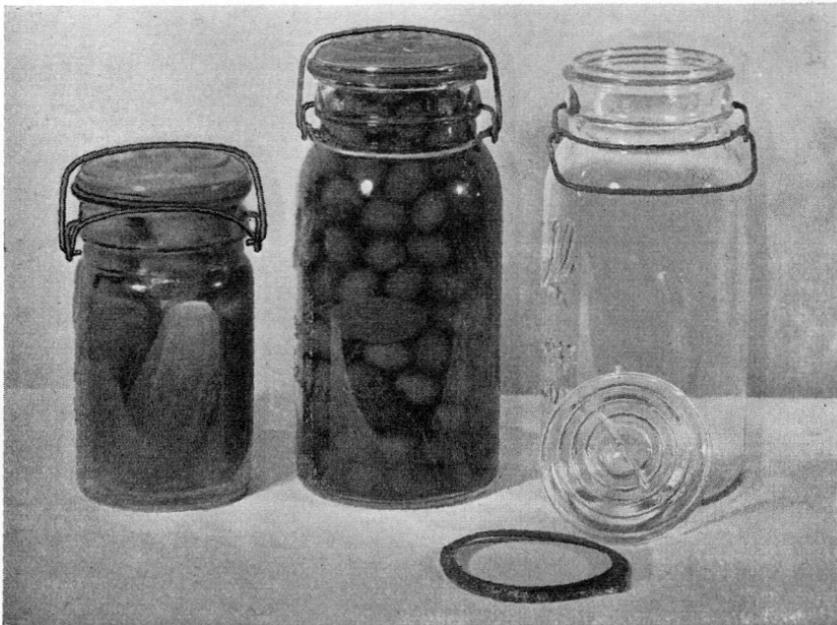


Fig. 1.—Glass top jars are satisfactory for use in pickling. Note position of bale on jar at left, correct for pickles to be fermented in the jar—rubber and top being in place. The jar is kept full of brine during fermentation. When fermentation is complete the jar is sealed by bringing bale downward to position as seen in center jar.

may be used but they are not as convenient as the all-glass jars with the easily adjusted rubber and top. Vinegars sometimes act upon the glazing of earthenware containers and form unwholesome products.

A circular piece of wood should be cut to fit each crock to serve as a float to place a weight to keep the products submerged



Fig. 2.—A stone churn or crock is an excellent container for fermenting or storing pickled tomatoes. The cover (shown in front) should be used under the rubber on which the sand bag is resting.

in the brine, or a plate may be used instead of the wooden disc. A piece of rubber cut several inches larger than the opening of the container and a bag of sand may be made to serve as a practically air-tight cover on the crocks or similar containers. See Figure 2. Wooden kegs or casks are used to advantage in making large quantities of pickles. New hardwood barrels or new paraffin lined spruce barrels with a 6" opening in the head are recommended. If old barrels are used they must be treated to remove all odors and flavors. A solution made of one ounce of salsoda or one half ounce lye per gallon of water is effica-

cious. Fill barrel and allow solution to remain in it several days until it smells "sweet". Then "soak out" barrel with hot and cold water. When thoroughly dry, line the inside with melted paraffin, to prevent the pickles acquiring any undesirable flavor.

Salinometer: If much salting and pickling is done, the purchase of a simple instrument called a salinometer, which costs about \$1.00, is advisable. With its use the exact salt content of the brine can be measured. To make the reading, some of the brine is put in the cylinder and the salinometer is floated in it. The depth to which the bulb sinks varies with the salt

content of the brine. The figure on the instrument at the surface of the brine gives the strength of the brine in degrees. If the salinometer is floated in clear water at 60° F., the reading is 1°; in saturated salt solution, it is 100°.

Scales: If a salinometer is not available, more satisfactory results will be obtained if the salt is weighed rather than measured. Kitchen scales are satisfactory.

In making sauerkraut it is most important that both the salt and shredded cabbage be weighed accurately.

HOW TO MAKE SALT STOCK

SELECTION OF PRODUCTS

For pickling, products must be fresh, crisp and whole. Do not allow to stand after gathering. Cucumbers should be cut from the vines leaving $\frac{1}{8}$ to $\frac{1}{4}$ inch of stem and should not be bruised; tomatoes should be mature but not show signs of coloring and the calyx should be retained. Jerusalem artichokes should be carefully scraped. Ears of corn should be very young. Okra too should be young and tender and cut with as much stem as possible. Chayotes also should be young and tender and cut with as much stem as possible. There should be no sign of toughening of skin at either blossom or stem end and with a portion of the stem left on. In like manner, beans, the fleshy seed pods of the rat-tailed radish, martynias or unicorn pods, burr gherkins and other products should be freshly gathered and prepared immediately for the fermenting process.

The secret now of successfully making pickles by the fermentation process lies in bringing about acid fermentation quickly and under conditions that are most favorable to the lactic acid bacteria and unfavorable to micro-organisms capable of spoiling the product. To do this, air should be excluded from the brined products before, during and after fermentation. The exclusion of air will prevent the growth of spoilage organisms that require air for growth. Containers if not fitted with airtight covers like

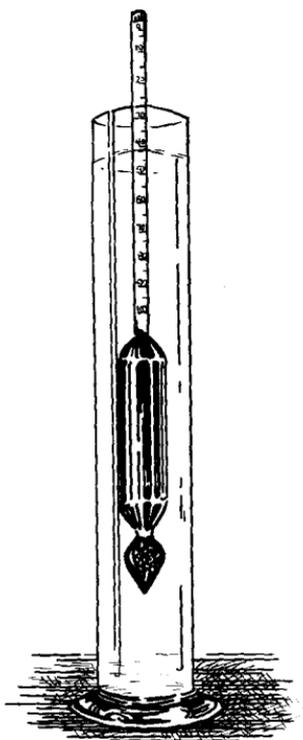


Fig. 3.—The salinometer measures quickly and accurately the salt strength of brine.

the lightning type jars, may be covered practically airtight by means of a sheet of rubber and a sack of sand. See Figure 4.



Fig. 4.—A 3-quart glass malted milk jar filled with okra, showing cover (consisting of a sheet of rubber and a sand pouch) in position. A similar method is used for tomatoes and other vegetables during fermentation.

CUCUMBER SALT STOCK

- 4 one gallon lightning type glass jars
- or
- 1 to 4 gallon crock or paraffined wooden container
- 12 pounds (about $\frac{1}{4}$ bushel) cucumbers
- 9 quarts brine (10% or 40° salinometer reading)

Brine should just float a fresh egg and requires—

- 9 quarts (2 $\frac{1}{4}$ gallons) soft water
- 2 pounds (about 3 $\frac{1}{4}$ cups) salt

If desired to hasten fermentation, add 4 tablespoons sugar. If hard water is used, add $\frac{1}{2}$ cup or preferably 1 cup vinegar to the gallon. One pound and three ounces (about $1\frac{7}{8}$ cup) salt placed on the cover the second day. Five ounces (about $\frac{1}{2}$ cup) placed on the cover at the end of the week for five weeks. Final brine strength should be 15% or 60° salinometer reading.

Use only freshly gathered, unbruised cucumbers with stems intact. Weigh and wash. Pack into the jars or crock—glass jars to within an inch of the top or crocks to within two inches of the top, and fill to overflowing with the brine in which the sugar and vinegar—if used—are dissolved. Adjust rubber and glass covers, if glass jars are used, and leave the bale up. If in a crock, cover cucumbers with a plate or a paraffined board and weight it down well below the surface of the brine. Cover with the sheet of rubber and the sack of sand as directed on page 10. Set the containers in a pan or where the overflow during the period of fermentation will not do any damage. This loss or overflow of brine should be replenished every few days with fresh brine. Keeping the containers full and overflowing prevents the formation of mica-derma or pickle scum as in the open crock method, which, if not removed at frequent intervals, attacks the vegetables underneath and spoilage ensues.

Every week it is the part of precaution to test the strength of the brine which should never fall below 40° salinometer reading, but should gradually increase in strength from 3 to 4 degrees each week. Since the brine was steadily diluted by the juices drawn from the cucumbers, at the end of the first day one pound and three ounces (about $1\frac{7}{8}$ cup) of salt should be placed on the cover, so it will not sink to the bottom before it is dissolved; if it sinks the salt solution at the bottom will be very strong while that near the surface may be so weak the pickles will spoil.

At the end of each week thereafter until five weeks have passed, place on the cover $\frac{1}{3}$ pound salt or $\frac{1}{2}$ cup for each 12

pounds of cucumbers. At testing after the end of the second week, it should be noted that the brine gradually increased in strength, until at the end of 5 or 6 weeks, when fermentation is over, the strength of the brine will have reached 15% or a 60° salinometer reading. Curing is complete when fermentation ceases.

The cucumbers then will be firm and crisp in texture, translucent and free from whitish spots, dark olive or yellowish green in color and of course strongly salty. The cucumber salt stock is now ready to be stored in air-tight containers in a cool place until needed to be made into various kinds of pickles.

TO FRESHEN SALT STOCK

Drain off the brine, cover with fresh water that feels fairly hot to the hands. Hold at about this temperature, changing and stirring occasionally, for 10 to 12 hours or longer, according to the salty flavor desired. Do not remove all salt, as some is needed for flavor. The stock is now ready to make into salt, sour, sweet or spiced pickles, cucumber rings, chow-chow, Dixie relish, picalilli, India relish, or combined with other stock and made into mustard and mixed pickles.

VEGETABLE SALT STOCK

Fermented salt stock may be made from other vegetables by following the same directions as given for cucumbers. (See page 13.) In preparing cauliflower, leave it whole or break heads into flowerets. Peppers should be left with stems on; green beans should be left intact, as should martynias, chayotes and other vegetables. Avoid crushing or bruising.

FRUIT SALT STOCK

Fermented fruit stock may be made from papaya, watermelon, cantaloupe, or "pie" melon, the citron of commerce, and other fruits, by following the outline for making cucumber salt stock. Under-ripe cantaloupes should be cut into convenient pieces, seeds and soft centers removed and the sections pared. Pare off the thick green skin from watermelon rind, all the red portions, and cut into well shaped pieces. Small green papayas may be left whole. Grapefruit peel, Seville or sour orange peel, and other citrus products may be held as salt stock until needed for preserving or candying. (See Bulletin No. 75, Preserving Florida Citrus Fruits, for detailed directions for curing and crystallizing the citron of commerce.)

RECIPES FOR MAKING SALT STOCK PICKLES

After the pickles have been freshened or had excess salt removed, they should be drained and sorted. To secure the most attractive pack, the pickles should be as nearly uniform in size as possible. Cover the pickles with 45 to 50 grain vinegar and store for a week or 10 days and then transfer to a fresh vinegar if a very sour taste is desired. When only one application of vinegar is used after a few weeks the water in the pickles dilutes the acid greatly and may permit softening and the pickles may spoil. Covered with a second vinegar of the right strength, with spices and other flavoring agents added, if desired, they should keep indefinitely—after being sealed of course.

Since the flavor and other appetizing qualities of the many kinds of pickles are due largely to the spices added, it is left to the housewife with a flair for testing and experimenting for something different, to blend and perfect new ones and interesting flavor combinations from the variety of herbs and other seasoning agents that may always be at hand, if a place is provided for growing them in the home or flower garden.

SPICED VINEGAR NO. 1 FOR SOUR PICKLES

Allow about 1 quart of vinegar for each 2 quarts of cucumbers or other vegetables.

1 quart vinegar	$\frac{1}{2}$ tablespoon whole cloves
$\frac{1}{2}$ cup sugar	$\frac{1}{2}$ tablespoon mustard seed
$\frac{1}{2}$ tablespoon celery seed	$\frac{1}{2}$ tablespoon pepper corms
	2 sprigs tarragon

Mix vinegar and sugar. Add spices tied loosely in a piece of cheesecloth. Simmer the mixture for 5 minutes. Allow the spices to stand in the vinegar overnight. Pack salt stock pickles that have been freshened and then stored in vinegar for 10 days into clean, hot containers, and strain the spiced mixture over them. Seal.

SPICED VINEGAR NO. 2 FOR SOUR PICKLES

2 tablespoons white mustard seed	1 tablespoon mace
1 tablespoon whole black-pepper	3 tablespoons grated horseradish
1 tablespoon whole allspice	1 tablespoon celery seed
1 inch piece ginger root	1 tablespoon whole cloves
4 to 6 cups vinegar	2 large cloves garlic
	4 dried red peppers

Heat vinegar and spices together at simmering for 5 minutes, and set aside overnight. Then strain to remove spices and pour the liquid over the drained cucumbers or other vegetables packed in glass top jars that have been prepared as directed above.

SPICED VINEGAR NO. 3

3 cups vinegar	1 tablespoon mustard seed
1 cup water	2 hot, red peppers
1½ cups sugar	1 tablespoon celery seed
½ ounce Spice Mixture (below)	

Mix and bring to the boiling point and pour while boiling hot over the brined, prepared vegetables. Seal in sterile, airtight jars and store in a cool place.

SPICE MIXTURE

5 tablespoons allspice	¼ cup white mustard seed
½ cup coriander	6 dried red peppers
6 bay leaves	

Mix well and use as stated above.

DILL PICKLES

(FERMENTED)

Dill pickles are made by a special process. The flavor of dill is characteristic and a weak brine is used which permits fast fermentation and curing. Some manufacturers add dill in a vinegar solution, after the pickles are cured with salt. Others add the dill direct to the brine in which they are cured, using no vinegar at all. This is the genuine dill pickle, or German "dill" and is the type that the housewife should be most interested in making. However, for Florida conditions it is recommended that a small amount of vinegar be added to the brine to flavor fermentation and inhibit the spoilage organisms in the first stages of fermentation.

DILL CUCUMBER PICKLES

4 gallon glass top jars or 1 4-gallon crock or paraffined wooden container, a sheet of rubber and a sack of sand	12 pounds (about ¼ bu.) cucumbers (5% or 20° salinometer reading)
2 cups vinegar	Brine requires 8½ quarts soft-water
2—3 layers of dill	1¼ pounds (about 2 cups) cooking salt
	1 ounce (4 tablespoons) mixed pickled spices
	2 cloves garlic
	1 layer grape leaves

Use medium size freshly picked cucumbers with small portion of stem left on. Wash and drain. Cover bottom of container with a layer of the dill and spice. Add the cucumbers, packing in gently and firmly, with alternate layers of the mixed pickle spice and dill. Then pour the brine mixed with the vinegar over the cucumbers. The addition of one tablespoon of sugar per gallon capacity of the container assists in the development of the proper acidity. If a glass top jar is used, fill to over-

flowing with brine, adjust rubber and top, leaving the bail of the lid in the half closed position so that gas formed during fermentation can escape. Any loss of brine during fermentation and storage must be replaced at frequent intervals with fresh, as the jars must be kept filled with brine at all times. When fermentation is over the jars may be filled and sealed completely or preferably be packed in smaller containers for more convenient use, ones that can be made air-tight. Drain off the brine, after transferring the pickles to the smaller glass jars, bring the brine to the boiling point, fill the jars to overflowing, seal and store in a cool place. Dill pickles should be ready for use 4 to 8 weeks after they are first placed in the brine.

If crocks or wooden containers are used instead of glass jars, fill with the cucumbers, spice and dill to within 2 to 3 inches of top, and if they can be obtained finish with a heavy layer of clean grape leaves. Cover with plate or a circular piece of wood one inch less in diameter than container and a weight sufficient to keep cucumbers submerged. Pour over the pickles the brine and vinegar mixture to overflowing. If containers are not fitted with some kind of air-tight cover, use a sheet of rubber and a sack of sand as directed on page 10. This device furnishes a practically air-tight seal, and if container is kept full and running over with brine, will prevent the formation of "pickle scum" which causes softening and spoilage.

When pickles are sufficiently cured, which may be determined by their agreeable flavor and dark green color, it is best to transfer them to quart glass jars or cans. Fill completely with old brine or make up new, adding a small amount of fresh spice and dill. A clove of garlic to the jars adds an interesting flavor.

Do not store glass jars in the sun or light as the light will kill the lactic bacteria. Dill pickles cure slowly, usually six weeks or longer is required before they acquire the desired flavor, color and texture; also dill pickles keep less well than others because the brine in which they are fermented and stored is weak. It is difficult to make good dill pickles in open containers, hence the glass top jar is recommended. If large quantities are desired, a sealed keg or barrel should be used.

DILLED GREEN TOMATOES

Medium size green tomatoes make exceptionally choice dills when used freshly gathered and fermented under proper conditions as given above. In about 6 weeks the tomatoes should

be ready to use, crisp, well flavored with dill and clear throughout with no white spots when cut. For storage pack in all-glass jars, add $\frac{1}{4}$ to $\frac{1}{2}$ cup vinegar to each jar. Fill the jars with the pickle brine, but first strain it, bring to a boil and cool. Seal jars air-tight and store in a cool, dry place.

DILLED OKRA

Small, tender pods of okra cut with as much stem as possible also make fine dill pickles. Follow directions as given above. In about 6 weeks the okra should be clear, of good flavor and texture and with no suspicion of the mucilaginous substance within them.

NOTE: For more detailed information regarding making of pickles, read carefully Farmers Bulletin No. 1438, Making Fermented Pickles.

SAUERKRAUT

(FERMENTED CABBAGE)

Select only sound heads of cabbage. Remove all decayed or bruised leaves. Wash well, drain and quarter heads and slice off and discard the core portion. Shred the cabbage either with a knife or a slaw cutter with blades set to cut the shreds about the thickness of a dime. Cut about 5 pounds of cabbage at a time, weigh accurately and mix lightly but thoroughly with 2 ounces of salt, until juices flow freely. If small amounts of cabbage and salt are mixed at a time the mixing will be more thorough. When salt has dissolved pack the cabbage-salt mixture into the container.

Large size all-glass jars are excellent but malted milk or other jars and crocks may be used. To force out the air, pack the mixture down gently but firmly with a large wooden masher but do not pound kraut. Pack glass jars to barely within one inch of top, leaving space for the frothing to prevent an overflow. Pack into crocks until nearly full. Cover the kraut with a clean cloth, a plate and heavy weight. Put the container in a warm place where fermentation may begin at once. A temperature of 70° to 75° F. is usually used, in which case fermentation is completed in from 10 days to two weeks, depending on temperature. Fermentation is more rapid at higher temperatures, but spoilage is more likely to occur and a better quality kraut is produced at a lower temperature.

Fermentation will begin within a day after packing, as will be shown by the rise in the level of the brine and possibly by the formation of gas bubbles at the surface. A scum usually forms on the surface of the brine within a few days. Remove

the scum every few days and wash and scald the cloth frequently, replacing it and the cover, and the weight on top of it. Cover container with another cloth to keep out dust. Do not permit scum to accumulate unchecked, as it slows fermentation, endangers spoilage, and results in an inferior product. When fermentation is complete, bubbles cease to rise to the top of the liquid and the liquid settles. The sauerkraut should then be canned. Canning is simple and assures a good supply throughout the year.

TO CAN SAUERKRAUT

After fermentation is complete, pack the cold kraut firmly but not too tightly into hot, sterile, glass jars. Add enough of the kraut brine to fill the jars completely; if there is not enough kraut brine, add a brine made by dissolving 2 tablespoons of salt in 1 quart of water. Adjust the rubbers and covers, partially seal the jars. Place them in water bath, and process pints 15 minutes at simmering. Set the jars far apart so that they will cool as quickly as possible.

SPOILAGE OF SAUERKRAUT

Kraut may discolor, soften, or spoil for the following reasons: A wrong proportion of salt to cabbage; poor mixing of salt and cabbage; poor packing; poor skimming; dirty containers; the rising of the shredded cabbage above the surface of the brine, or the storage of the kraut in too warm a place.

MUSTARD PICKLES

(SALT STOCK OR FRESH)

2 cups small cucumbers about 2 inches long	3	red peppers, seeded and chopped
2 cups large cucumbers	3	green peppers, seeded and chopped
2 cups pickling onions	1½	quarts vinegar, hot
2 cups small green tomatoes cut in halves or quarters	2	Also 3 cups vinegar for soaking cups brown sugar
1 cup snapbeans, cut diagonally in 1 inch pieces	6	tablespoons flour
1 cup cauliflower, flowerets, cut uniform size	1	teaspoon celery salt
	6	tablespoons powdered mustard
	1	tablespoon tumeric

If salt stock is used, freshen it first and then cut into desirable pieces. If fresh vegetables are used, cut and soak them overnight in brine made by dissolving 1 cup of salt to 2 quarts of water, then drain them. Soak the drained vegetables 1 hour each time in 2 changes of clear water, and drain them again.

Cover the vegetables with a mixture of 3 cups of vinegar and 3 cups of water. Let the mixture stand for 24 hours. Heat it to the simmering point, then drain the vegetables and discard

the liquid. Mix the sugar, flour and spices. Add the $1\frac{1}{2}$ quarts of hot vinegar slowly, stirring to make a smooth paste. Cook this over a pan of hot water until the mixture is well thickened. Pour the mixture over the drained vegetables while they are hot. Stir thoroughly. Pack the pickles hot into clean, hot jars, and seal at once.

PICKLED ONIONS

(SALT STOCK OR FRESH)

4 quarts of small white onions	3 tablespoons allspice
$\frac{1}{4}$ cup grated horseradish	3 tablespoons white mustard seed
1 quart white vinegar	1 small hot red pepper for each container
$\frac{1}{2}$ cup sugar	

If salt stock is used, freshen it first. If fresh onions are used, drop them into hot water to loosen the outside skin; cut off the dark portion from the root and slip off the skin, leaving the onion perfectly smooth. Cover the onions with boiling hot brine made by dissolving 1 cup of salt in $1\frac{1}{2}$ quarts of boiling water. Soak the onions for 24 hours, then drain them. Soak them in fresh water for 1 hour, and drain them.

Mix vinegar, sugar and spices. Boil the mixture for 1 minute. Pack the onions into clean, sterile, hot jars. Cover the pickles with boiling syrup after packing a hot red pepper in each jar, and seal. Cool the jars quickly and store in a cool place.

SWEET VEGETABLE PICKLES

As with sour pickles, better sweet pickles are obtained by using vegetables previously cured in brine than by using fresh vegetables. The vegetables should be freshened as directed for sour pickles. Prick the vegetables through and through with a silver fork, otherwise the sweet vinegar may cause shriveling. Store the pickles in strong unsweetened vinegar for about 1 week. Then drain and use $\frac{1}{2}$ the drained vinegar for making the syrup.

Prepare the syrup of—

2 pints vinegar drained from the pickles	1 tablespoon each of mace, ginger root, and whole cloves
2 pints fresh vinegar	2 tablespoons stick cinnamon
2 cups sugar, granulated or brown	

Simmer the vinegar, sugar, and spices together for 5 minutes and let stand overnight. Strain. Return sweet spiced vinegar to pickles and seal.

Onions, cauliflower, green and red peppers, round yellow tomatoes, red and green pear-shaped tomatoes, small ears of corn, tiny melons, yellow and green pod beans, $\frac{1}{2}$ grown pods of

the unicorn plant, okra, chayote, burr gherkins, as well as cucumbers are used for making delicious mixed pickles in the same way. (All these vegetables should be first cured in brine for best results.) Very small vegetables are to be preferred. When larger vegetables are used it is better to cut them into pieces of desired size and shape.

Careful arrangement of the various pickles in the jar, giving some thought to color as well as kind and shape of the product will give a more attractive pack and more satisfying results.

If sour pickles are desired, fill the jars completely with 45 grain vinegar and store for 10 days. Pour off and add fresh vinegar to them and seal. If sweet ones are wanted, cover the second time with a liquor made by dissolving four to six pounds of sugar in a gallon of vinegar. Seal hot.

MIXED SWEET PICKLES (SALT STOCK OR FRESH)

- | | |
|---|--|
| 1 quart small whole cucumbers | 1 large green pepper, seeded and sliced |
| 1 quart large cucumbers, sliced | 2 red peppers, seeded and sliced |
| 1 quart small white onions, cut in half | $\frac{1}{4}$ cup horseradish, cut in pieces |
| 1 cup Golden Wax beans, cut $1\frac{1}{2}$ inches on the "bias" | 3 quarts vinegar |
| 1 cup green beans, cut same way | 3 pounds brown sugar |
| 1 cauliflower broken into flowerets | 4 tablespoons celery seed |
| 4 small chayotes, cut into eighths | 4 tablespoons white mustard seed |
| 1 cup small okra | $\frac{1}{2}$ teaspoon black pepper |

If salt stock is used, freshen it first and then cut as desired. Soak for 10 days in 45 grain vinegar before putting in the sweet spiced solution. If fresh vegetables are used, cut and soak them overnight in brine made by dissolving 1 cup of salt in 2 quarts of water, then drain; wash the vegetables with fresh water and drain again.

Add the horseradish to the drained vegetables. Mix the vinegar, brown sugar, and spices. Boil the mixture for 10 minutes. Pour the boiling hot syrup over the vegetable mixture. Soak the pickles for 2 days, then drain and again heat the syrup to the boiling point. Pack the pickles into clean, sterile, hot jars. Cover the pickles with boiling syrup, and seal the jars.

SWEET SPICED PICKLED TOMATOES (QUICK PROCESS)

- | | |
|---|---------------------------------|
| 5 pounds small yellow or green tomatoes | 1 teaspoon whole allspice |
| $3\frac{1}{2}$ pounds sugar | 1 tablespoon stick cinnamon |
| 2 cups vinegar | 1 teaspoon whole cloves |
| 2 lemons sliced thinly | 1 tablespoon white mustard seed |

The green plum or peach tomatoes are best for this pickle, although the large green tomatoes may be cored and cut in quarters. Wash, and peel thinly, if desired. If small tomatoes are used, prick well to prevent bursting. Mix the vinegar, sugar, and spices. Boil the mixture for 5 minutes. Pour the boiling syrup over the tomatoes, let them stand for several hours or overnight, then drain off the liquid and boil it until it coats a spoon. Add the tomatoes, and boil the mixture until the tomatoes are clear. Pack the tomatoes into clean, sterile hot jars. Cover the tomatoes with the boiling syrup, and then seal the jars.

SWEET GHERKINS
(SALT STOCK OR FRESH)

2 quarts small, green cucumbers, uniform size, 1-2 inches	2 tablespoons whole allspice
2 quarts boiling vinegar	1 tablespoon celery seed
2 pounds of sugar (4 cups)	2 tablespoons stick cinnamon
	2 tablespoons whole cloves
	$\frac{1}{2}$ cup mustard seed

If salt stock is used, freshen it first, as previously directed. If fresh cucumbers are used, cover them with boiling hot brine by dissolving 2 cups salt in $1\frac{1}{2}$ quarts boiling water, soak the cucumbers in this brine for 24 hours, then drain them. Heat the vinegar to the boiling point and pour it over the cucumbers. Let the mixture stand for 24 hours, then drain. Save the vinegar and add the sugar and spices. Boil the mixture for 5 minutes. Pack the pickles into clean, sterile, hot jars. Cover the cucumbers with the boiling syrup and seal the jars.

CUCUMBER MANGOES NO. 1
(SALT STOCK OR FRESH)

12 large cucumbers	3 - 4 quarts spiced vinegar
Celery relish, other chopped pickle, or chutney	

If salt stock is used, treat as directed for Sweet Vegetable Pickles, page 20. If fresh cucumbers are used, mix them with $1\frac{2}{3}$ cups of salt, let them stand for 5 or 6 days, drain, soak them in fresh water for several hours, and then drain them again.

With an apple corer carefully remove from the stem end the central seed portion. Fill the cavity with celery relish, honey beet (page 35) or other chopped pickle or with Palm Beach Pineapple Relish (page 37). "Plug" the cavity with a portion of the end removed. Pack the cucumbers into clean, sterile, hot jars. Cover with boiling Spiced Vinegar No. 2 (page 15), or if Palm Beach Pineapple Relish is used with Sweet Spiced Vine-

gar (page 28), partially seal the jars. Process the cucumbers 5 to 10 minutes at simmering. Seal at once.

SWEET MANGO PICKLE NO. 2

Remove centers from large sweet cucumber pickles as directed above. Or young pickled papayas (3 to 4 inches in length) may have a circular piece removed from one side and be filled with the following mixture:

1 cup citron or watermelon rind	¼ cup preserved or candied
¼ cup preserved ginger	Surinam cherries
½ cup spiced orange or grapefruit peel or 1 cup spiced kumquat or a mixture of these fruits	¼ cup sweet red pepper jam

Close openings with the pieces removed or with a preserved cherry or orange peel. Cover with a hot spiced syrup, seal and process pints 5 to 10 minutes at simmering.

SWEET PICKLED WATERMELON RIND (SALT STOCK PROCESS)

Best texture, flavor and keeping qualities for watermelon pickles are made by curing the rind in brine rather than by the old fashioned heat treatment method. Proceed to freshen the rind as previously directed. Then store in strong, unsweetened vinegar for one week. Prepare a syrup of—

3 pints of vinegar, white, if light color is desired	3 pounds of sugar
2 lemons, sliced	1 tablespoon each of mace, ginger root and whole cloves
2 sticks cinnamon	

Simmer vinegar, sugar, spices and lemon together for about 5 to 10 minutes, and let stand overnight. Strain hot liquid over melon rind and bring all to a boil. Let stand overnight and repeat the process the following day. The rind will be crisp, tender and well flavored. If a less sour product is desired use part of the first vinegar in making the syrup, though fresh, new vinegar is to be preferred.

SWEET PICKLED WATERMELON RIND (QUICK PROCESS)

4 pounds watermelon rind	1 pint water
2 tablespoons lime	} lime water
2 quarts cold water	
2 quarts vinegar	4 pounds granulated sugar
2 lemons, sliced	2 tablespoons whole cloves
	4 long pieces stick cinnamon

Select rind from a firm, not over-ripe melon, and before weighing, trim off the green skin and pink flesh. Cut in inch cubes and soak for 2½ hours in the lime water. Freshen in

cold water. Drain, cover with fresh water and cook for 1½ hours, or until tender, and add more water as it boils off. Let stand overnight in this same water, and next morning drain. Bring to the boiling point the vinegar, 1 pint of water, the sugar and the spices tied loosely in cheesecloth. Add the drained watermelon, and boil gently for 2 hours, or until the syrup is fairly thick and rind clear. Remove the spice bag, pack the watermelon pickle in sterilized glass jars, seal air-tight, and store in a cool place.

NOTE: The lime (calcium oxide) may be secured from the drugstore or use air slacked lime—2 ounces (2 tablespoonfuls) to 2 quarts of water for 2 pounds of fruit.

PICKLED PLUMS OR "PLUM OLIVES"

Select firm, rare-ripe cultivated or wild plums. Do not remove stem or seeds. Wash and pack, without crushing, into sterilized jars. Add 2 tablespoons of salt and 1 tablespoonful of sugar to each quart jar, fill the jars with a mixture of ½ vinegar and ½ water. Seal and store.

They will be ready for use in about 6 to 8 weeks. They are somewhat like olives in taste.

NOTE: A more desirable product may be obtained by fermenting the plums by the method given for dill pickles (page 16), omitting the pickle spice and dill.

PICKLED KUMQUATS

(FERMENTED)

Either fully mature kumquats still in the green stage, but just before they turn yellow, or ripe, well colored fruit may be used for making into fermented pickles. The little Meiwa is especially nice to use.

Use freshly gathered fruit. Wash and scrape thoroughly to remove any scale or dust. Pack, without crushing, in all-glass containers to within 1 inch of top, and place weight or some slats across the fruit in such way as to prevent their rising in the pickling solution—at no time should the kumquats be exposed above the solution. Adjust rubber and top on jar and partially seal. As fermentation takes place and liquid recedes, it should be replaced with new brine.

The kumquats should be cured in about six weeks to two months. They will be found to make an admirable substitute for olives, and with the super-abundance of kumquats in Florida they should be pickled in quantities.

Caution: Do not wait until fruit is becoming dry before using.

PICKLED CALAMONDINS

Follow directions as given for kumquats.

PICKLED ORANGEQUATS

May be pickled as directed for kumquats; also limequats may be used in same way.

NASTURTIUM PICKLE

Nasturtium seed pods make a delicious pickle and also serve admirably as a substitute for capers. An ordinary garden plot of nasturtiums (if allowed to go to seed) will supply a generous number of pods. They should be gathered when large but green, and cut with a little stem. Let the pods stand in strong brine for 48 hours, then cover with fresh, cold water and let stand overnight. Drain and pack the pods in small bottles (olive bottles are fine). To each pint of vinegar needed, add 1 blade of mace, 12 whole peppers, and 1 tablespoonful of sugar. Heat the vinegar mixture to the boiling point and add the pods. In the meantime, heat the bottles in which the pods are to be packed. Fill with the boiling hot pods and seal. Store in a cool place for 4 to 6 weeks before using.

**BREAD AND BUTTER PICKLE NO. 1
(QUICK PROCESS)**

In recent years a type of cucumber pickle known as the "bread and butter" pickle has appeared on the market and has found great favor. This pickle differs from the ordinary cucumber pickle in that it is not made from cucumbers which have previously undergone a lactic acid fermentation in brine. Fresh green cucumbers are used in its preparation. The cucumbers are washed, graded and uniformly sliced cross-wise. The round cucumber chips so obtained are packed in a sweet spiced vinegar in glass jars generally with a few pieces of onion. The "bread and butter" pickle owes its attraction to its delicious crispness and care must be taken in preparation to avoid too long heating as this will destroy the crispness and make the chips "mushy". Please observe the following directions:

Use fresh green cucumbers and a few onions.

Wash the cucumbers and peel and wash the onions.

Cut the cucumbers and onions into coarse slices, cross-wise.

Prepare a light brine by dissolving $\frac{1}{2}$ pound of salt in one gallon of water.

Cover the cucumbers and the onions separately with this brine and let stand overnight and then drain thoroughly.

Make a liquor of equal volumes of vinegar and water and use to scald the pickles about 5 minutes, or until they are tender. Be careful not to get them too soft. Drain this liquor off thoroughly. Do not use again. Dissolve 6 pounds brown sugar in a mixture of 1 quart water and 3 quarts vinegar. Then add the following spices: 2 tablespoons celery seed, 2 tablespoons mustard seed, and 2 tablespoons ground tumeric. Pack the drained pickles in glass top jars. Bring the vinegar and spices to a boil and pour hot over the pickles and seal.

BREAD AND BUTTER PICKLES NO. 2

(QUICK PROCESS)

Slice 25 cucumbers of medium size and 12 small onions. Soak in cold water with a large handful of dairy salt for 3 hours. Then drain well. Scald 1 quart of vinegar, 2 cupfuls of white sugar, 2 tablespoonfuls of mustard seed, 2 tablespoonfuls tumeric, 2 tablespoonfuls celery seed, and 1 large teaspoonful of cassia buds. Pour this scalding hot mixture over the cucumbers and onions previously packed in jars. Seal.

CUCUMBER OLIVE PICKLES

(QUICK PROCESS)

100 small cucumbers	1 pint of small white onions
1 cupful dairy salt	½ cupful white mustard seed
½ cupful celery seed	1 cupful salad oil
½ tablespoonful ground black pepper	

Slice the cucumbers and onions very thin, sprinkle with the salt and let stand overnight. In the morning drain well, add the celery and mustard seeds, salad oil, and pepper, mixing all together very thoroughly. Put into fruit jars and fill jars with cold vinegar. Seal. While these are delicious they will remain firm a few months only.

PICKLED WALNUTS NO. 1

Pickled walnuts are popular in European countries but seldom made in America. The whole nuts should be picked after they have become about two-thirds grown but before the shell has begun to harden. It should be possible to pierce them through easily with a pin or a darning needle, that is, the shell must still be soft. As they are intensely astringent a rather prolonged curing process is desirable to render them edible.

To 3 pints of vinegar add 2 tablespoonfuls of salt and 1 tablespoonful each of allspice, whole pepper, cloves, and ginger. Puncture the walnut with a fork and store the walnuts in this vinegar 4 months. Drain. Prepare a fresh spiced vinegar as

above and bring to boiling. Half a cupful of sugar may be added if desired. Pour hot on the nuts. Seal. Store 3 weeks. They are then ready for use.

Instead of the first vinegar the walnuts may be stored in sealed jars in a brine of 1 pound of salt to 6 pints of water for 2 months. Then soak in hot water for several hours to remove excess salt. Then place in the final hot, spiced vinegar as directed above.

PICKLED WALNUTS NO. 2

Make enough brine to cover walnuts thoroughly, using 6 ounces of salt to the quart of water. Stir them night and morning and change the brine every three days. After nine days in the brine, strain off the walnuts and leave them on dishes exposed to the air until they turn quite black, which they should do in a few hours.

Boil the vinegar, allowing half a gallon of vinegar to about 100 walnuts with (for each half gallon) a teaspoonful of salt, 2 ounces of black pepper, 3 ounces bruised ginger, a drachm of mace and $\frac{1}{2}$ ounce of cloves, stuck in two or three small onions, and 4 ounces of mustard seed. When these have been well boiled together for 5 minutes, pour the hot seasoned vinegar over the nuts. Repeat in two days. Then pack nuts in jars, cover with the boiling hot vinegar and seal at once.

SWEET SPICED FRUIT PICKLES

There exists a growing demand for quality fruit pickles, both for the well known sweet, spiced pears and peaches as well as an unsupplied demand for the newer and more intriguing pickled guavas, kumquats, papayas and others of the better known sub-tropical fruits that only Florida can supply at this time.

Spiced fruit, or the so-called sweet pickle fruit, saturated with a spicy, sweet-sour syrup, is the easiest of all pickles to make. Only fresh, high quality fruits should be used and should be graded for size and stage of ripeness. The ripest should be kept in one lot if there is a marked difference. If fruits like carissa, green papayas, kumquats and plums are not peeled, puncture them thoroughly with a silver fork or in some other way to permit the syrup to penetrate without causing shriveling. Guavas, ripe papayas, and peaches, should be pared; grapefruit and other large citrus fruits should be carefully grated and cut into convenient halves or quarters as preferred.

In general it may be said that figs, guavas, ripe papayas, pineapple, and all fruits that make good preserves can be easily made into pickles by adding to the rich preserve syrup a small amount of high grade vinegar and whole spices—stick cinnamon, whole cloves, allspice and ginger being commonly preferred. Pour the boiling hot spiced syrup over the preserves and let stand to permeate and penetrate the fruit. The next day or days after, drain off the syrup and repeat the operation until the fruit is thoroughly saturated and flavored and is clear, tender, translucent and shapely.

For spicing crabapples, figs, peaches, pears, pineapple, and many other fruits prepare the following syrup:

3 pounds sugar	1	tablespoon ginger root
2 pints water	1½	teaspoons whole cloves
1 pint vinegar	2	tablespoons stick cinnamon

Prepare fruit, puncturing if needed to prevent shriveling. If pears are very hard, pre-cook 10 minutes in water to cover and use this liquid to dilute the vinegar for the syrup.

Peaches, like pears and quinces, may need pre-cooking before being placed in syrup. To prevent discoloration, drop the fruit as it is prepared into a salt solution made by dissolving 1 tablespoon salt in each quart of water. Very soft fruits like guavas and ripe papaya may need the opposite treatment, i. e., may need to stand in the sugar overnight to be "firmed" and this liquid which the sugar draws out can then be used in place of a syrup made with water. Also a higher proportion of sugar, $\frac{3}{4}$ pound to 1 pound of fruit, produces a finer quality product than the proportions given for syrup above and is to be preferred for the best quality guava or papaya pickle.

Thoroughly ripe, fresh, firm figs, with stems trimmed to $\frac{1}{4}$ inch, benefit if they are placed in a strainer and are dipped for one minute in boiling water before being added to the spiced syrup. A soda treatment for figs is never necessary when ripe, fresh, unbruised figs are used. When used, the repeated washing and handling that the practise calls for, only serves to destroy or break down the delicate structure of the fig. Figs require a long cook to get rid of the white chalky color.

Boil the syrup, vinegar, and water together. Tie spices loosely in a cheesecloth bag and pound lightly to increase the flavor. Whole spices do not cloud and darken products as much as ground spices.

Place the fruit in the syrup and cook gently until somewhat clear and tender. Cover and let stand in the syrup overnight.

Reheat and, if clear, pack boiling hot into hot containers and seal at once. Processing pints 5 minutes at boiling ensures an air-tight seal.

Many fruits like the papaya call for many boilings of syrup which is poured back boiling hot over the fruit on successive days rather than giving one long cook. Better color, flavor and texture is obtained in this way.

SWEET SPICED LOQUATS

2 quarts loquats (with stems, blossom ends and seeds re- moved)	2 tablespoons stick cinnamon
½ pint vinegar	1 cup hot water
1 tablespoonful whole cloves	1 lemon
	4 cups sugar

Wash loquats and remove stem and blossom ends. Cut down one side and remove seed. Slice lemons. Steam loquats in the water 2 to 3 minutes to soften and prevent shriveling. Add other ingredients and cook gently about 10 minutes. Let stand overnight. Bring to the boiling point in the morning and cook until syrup is somewhat thick. Pour into jars and seal boiling hot. Very delicious to serve with cold meats.

SWEET PICKLED FIGS

5 quarts figs	1 quart sugar
1 quart water	1 tablespoonful whole cloves
1 pint vinegar	1 teaspoonful allspice
2 tablespoonfuls stick cinnamon	1 teaspoonful mace
1 pint sugar	1 lemon sliced

Prepare figs in same manner as for fig preserves, that is, cook 5 quarts of figs until tender in about a 30 degree syrup made by allowing one quart of water to each pint of sugar, cooking about one hour.

When figs become tender, add 1 quart of sugar, 1 pint of vinegar, the spices—one tablespoonful of allspice and one teaspoonful of mace. Cook until figs are clear and transparent. Allow them to stand in the syrup overnight. Pack in pint jars and process for 15 minutes at boiling.

SPICED PLUMS

(ABUNDANCE, EXCELSIOR OR SIMILAR TYPES)

7 pounds of fruit	3 tablespoonfuls whole cinnamon
1 pint of vinegar	2 tablespoonfuls whole cloves
4 pounds sugar	
1 tablespoonful allspice	

Make a syrup of the sugar, spices and vinegar. Cool slightly, add the fruit. Cover and let stand overnight. Drain off liquid

and boil rapidly for about 10 to 20 minutes. Add plums and let stand until cold. Pack into jars and process pints 15 minutes at simmering (180° F.).

SPICED MUSCADINE GRAPES

Pick the grapes from the stem, wash and slip the pulp from the skins, steam the pulps over a vessel of hot water in a double boiler until they can be rubbed through a coarse sieve to remove the seeds. Combine pulp with skins and weigh. To each 7 pounds allow the same proportions of sugar and spices as for spiced plums given above. Cook all together until very thick, and skins very tender; pack while hot, and seal at once.

MANGO SWEET PICKLE NO. 1

Fibrous mangoes, not yet mature, should be used. Pare, cut into thick slices. Cook in clear water until barely tender—not soft—then drain. Make the following syrup:

3 pounds brown or white sugar
 1 pint cider vinegar
 1 teaspoonful whole cloves
 1 tablespoonful stick cinnamon
 1 teaspoonful whole allspice
 1 lemon sliced, or
 4 calamondins, cut in halves

Cook the syrup until thick. Pour over the mangoes and allow them to heat through in the syrup. Can and seal while hot. These are delicious.

MANGO SWEET PICKLE NO. 2

Select small, ripe mangoes. Peel and place in a kettle or crock, covering with syrup made by boiling 1 pint of sugar and 1 pint of vinegar and water with sufficient whole cloves, allspices, and cinnamon to produce the desired flavor. When cold, drain off liquid, and pour over the fruit. Repeat several times. The last time put the fruit in boiling syrup and when well heated transfer to clean, sterile jars and seal at once. The continued draining off of the liquid and reheating cooks the fruit without breaking it. Only mangoes free from fibre should be used as directed above, and the syrup should become increasingly heavy as it receives the repeated cooks.

SWEET PICKLED SURINAM CHERRIES

Wash and remove pits from large freshly gathered Surinam cherries (may stuff with pineapple, raisins, preserved orange peel, if desired). To each pound of cherries add $\frac{3}{4}$ pound of sugar. Sprinkle the sugar over the fruit in layers, and let stand

overnight. In the morning, stir gently until the sugar is dissolved, and drain. For each pound tie whole spices—one teaspoonful each of the cinnamon stick, allspice, and mace—in a loose cheesecloth bag, drop this into the juice together with $\frac{1}{2}$ lemon, limequats or calamondins sliced, and boil together for about 10 minutes. While the syrup is hot, add $\frac{1}{4}$ cupful cider vinegar to each pint. Cool slightly and pour over the drained cherries. Let stand overnight. Repeat process. Pack and simmer pints 10 minutes.

SWEET SPICED PAPAYA

Peel and cut fruit in medium size, shapely, uniform pieces—or if desired in large pieces, cut in quarters. Do not remove seed. Weigh and for every pound of papaya add $\frac{3}{4}$ pound of sugar. Sprinkle over fruit and allow to stand a few hours or until sugar is dissolved. Place over heat, bring to a boil and boil 10 minutes. Cover tightly and remove from heat and let stand overnight. Next day drain off syrup, bring to boil and pour over papaya, repeating process until fruit is clean and syrup heavy. Then add $\frac{1}{2}$ cup best vinegar to each pint syrup and whole spices—1 teaspoon each cinnamon, cloves and allspice tied in bag—to syrup. Boil 5 to 10 minutes, then add fruit and cook another 5 minutes. Transfer to hot, sterile jars and seal at once. If preferred the vinegar and spices could be added to the dissolved sugar in the beginning.

PICKLED PINEAPPLE CHUNKS

4 quarts prepared pineapple	2 tablespoons stick cinnamon
2 cups vinegar	1 tablespoon whole cloves
5 cups sugar	2 slices each of lemon and oranges

Cut full ripe pineapple in thick slices, then pare and remove eyes and cores. Mix the vinegar, sugar and spices. Boil for 5 minutes. Place the chunks in syrup and simmer until the pineapple is tender and clear. Let stand overnight. Reheat, pack fruit in hot jars. Cover the pineapple with boiling syrup and seal at once.

HEMPHILL HOUSE SPECIAL PINATA SWEET PICKLE

3 pounds green tomatoes, sliced rather thick or cut in quarters	1 cup orange blossom honey
2 pounds pineapple, fresh or canned, sliced about $\frac{1}{2}$ as thick as tomato slices, or	3 cups vinegar
2 pounds green mango, peeled and sliced	1 tablespoon celery seed
3 pounds granulated sugar	1 tablespoon each stick cinnamon, cloves, and allspice
	2 tablespoons white mustard seed
	1 blade mace

Mix vinegar, sugar, honey. Tie cinnamon, cloves and allspice in thin muslin bag and add. Bring to boil and cook 10 minutes. Pour over tomato and pineapple. Cover and let stand overnight. Drain off liquid and boil as before. Add fruit and cook until fruit is tender and clear and syrup somewhat thickened. Let stand overnight. Pack in pint jars and simmer 10 minutes.

NOTE: Any syrup left over is delicious diluted with hot water and used to baste roast, ham, or lamb, or stiffened with gelatine as a jelly for piquant garnish for cold meats or for molded fruit or in American or other salads.

PEACHES, PEARS, PINEAPPLE, PAPAYA

For Sweet Spiced Pickle Peaches, Pears, Pineapple, Papaya and other fruits, see pages 27, 28 and 29.

GUAVA SWEET PICKLE

3 pounds prepared guavas	3 dozen whole cloves
3 cups brown sugar	2 large sticks cinnamon
1 cup white sugar	½ cup preserved ginger, or
¾ cup best vinegar	4 pieces of ginger root
1 tablespoon allspice	¼ teaspoon salt

Select large, meaty guavas. If with clean, unblemished skin, do not peel. Cut off stem and blossom ends, cut in halves and scoop out centers. Place fruit in preserving kettle; add other ingredients, and let stand 3 to 4 hours. Then cook until fruit is tender and syrup heavy. Time required depends on type of guavas used. Seal boiling hot in hot, sterile jars. If dry ginger is used, remove before serving.

SWEET SPICED KUMQUATS

2 pounds whole kumquat	1½ pints water
1½ pounds sugar	1 cup vinegar
	Whole Spice

Thoroughly clean well colored kumquats by scraping with a paring knife and a stiff brush. Rinse well and drain. Make a slit with a sharp pointed knife into and across the sections of each kumquat to prevent them from bursting open and to facilitate penetration of the spiced syrup. Drop kumquats into an abundance of boiling water and cook until tender.

Drain and add to sugar-vinegar mixture. Cook briskly until kumquats are clearing and syrup is becoming thick. Add spice, 1 stick cinnamon broken, 1 tablespoonful each cloves and allspice tied in bag. Cover and let stand overnight to "plump". Boil again until kumquats are clear, shining and transparent and syrup is thick. Let stand again, covered tightly. When

cold, pack in sterile jars, adding small amount of spice, heat syrup, strain over fruit, seal and process pints for 5 minutes.

BAKED PICKLED ORANGE SLICES

Grate and boil whole oranges, preferably Navels, in a generous amount of water one hour or until tender, changing water twice and adding salt to the first boiling. Drain, cut into half-inch slices. Prepare the following spiced syrup:

2 cupfuls of sugar	$\frac{1}{2}$ cupful water
$\frac{1}{4}$ cupful corn syrup	20 whole cloves
1 cupful vinegar	2 two inch pieces of stick cinnamon
Contents of 2 cardamon seed pods	12 bruised coriander seeds

Boil 5 minutes, add orange slices, and boil 15 minutes. Transfer to a casserole and bake $\frac{3}{4}$ hour in a slightly hotter than moderate oven (400° F.). If syrup does not completely cover the fruit, baste occasionally. Seal in sterilized jars. Serve with hot or cold meats.

BAKED PICKLED WHOLE CITRUS FRUITS

Proceed exactly as for Pickled Orange Slices, except that small whole fruits are needed, such as kumquats, orangequats or calamondins. Puncture well but do not grate.

NOTE: A group of 5 or 6 copper nails about 1 to 1 $\frac{1}{4}$ inches long, placed in a circle about $\frac{1}{8}$ " apart in a wood spatula, is convenient and effective for puncturing small fruits like kumquats, limequats, and calamondins. Puncture both blossom and stem ends. Thus treated, the fruit is not as likely to burst or split in cooking as when cut with a knife.

SWEET SPICED GRAPEFRUIT PICKLE

Select tree ripened fruit of good quality and thick peel. Wash and grate carefully, removing all the yellow rind. Remove peel and cut into convenient quarters or in half inch strips as preferred. To one pound of fruit add at least 3 pints of water and bring slowly to a boil and boil 10 minutes. Then change water and bring to boil as before. Taste liquid and if very bitter, drain off and renew. If only slightly bitter, boil peel until tender. Drain and add peel to a syrup made by adding $\frac{3}{4}$ pound sugar to 1 pint of water for each pound of fruit taken. Boil until peel is clear and syrup heavy. Add $\frac{1}{2}$ cup white vinegar to each pound of fruit and whole spice—cinnamon and cloves—tied in cheesecloth bag and lightly bruised. Bring to a boil and let stand covered 24 hours. Reheat and pack. The peel should be beautifully clear, tender, yet firm, well flavored and the syrup heavy. Sweet pickled citrus fruit should be among the most popular of Florida pickles.

TANGERINE SWEET PICKLE

Choose small, firm tangerines of uniform size and unblemished skins. Wash. Push a fine knitting needle entirely through each fruit 6 or 8 times. Let fruit stand overnight well covered with salt water—weighting down with a plate.

In the morning put the fruit with an abundance of cold water in a large preserving kettle and boil gently until tender—changing the water twice. Remove fruit with skimmer. Make a syrup sufficient to cover well tangerines, using 1 cupful water and 1 cupful pickle vinegar to each pint of sugar, $\frac{1}{2}$ stick cinnamon, 10 whole cloves and 1 lemon sliced. Stir until sugar is dissolved, add fruit and cook until syrup is thickened and tangerines are somewhat clear. Let stand overnight or several nights.

Boil again until fruit is translucent and syrup heavy. Pack carefully in jars. Process pints at simmering 15 minutes. This is an unusual and delicious pickle to serve with chicken, veal and other meats. If additional flavor is desired, tangerine juice may be used in place of water.

PICKLE SYRUPS OR JUICES

Left-over sweetened, spiced vinegars, excess juices drained from various pickles and relishes—peach, plum, watermelon, mango, citrus, the fruit pickle juices in particular with their rich characteristic flavors—are especially desirable for use in general cookery.

The delightful syrup is very valuable for using with mincemeat. It is delicious to use diluted with hot water to baste baked ham or roast lamb—the sweet, spice and sour all adding greatly to the final flavor. The syrup stiffened with gelatine as a jelly for piquant garnish for cold meats or for jellied fruit or vegetable salads, for fruit salad dressings or the sweetened vinegar used alone as a dressing for lettuce is liked by many; a half cup of the rich syrup may serve for part liquid and part sweetening in spice cake. In all there are many uses for this combination: good vinegar, sugar and spices combined with fruits and vegetables.

RELISHES AND CHUTNEYS

Relishes consist of mixed, chopped or ground fruits or vegetables or a combination of both fruits and vegetables with the addition of spices and other seasoning agents. As adjuncts to the menu they are prized mostly for their flavor. Just as sweet

vegetable pickles, mustard pickles and other mixtures are best made from the vegetables cured in brine rather than by the use of the fresh products, so are all vegetable relishes best made in the same way, while the relishes such as tomato catsup, chili sauce and chutneys are made from the fresh chopped or ground fruits and vegetables, spiced and cooked down to a sauce.

Chutneys are of East Indian origin. True chutneys are a hot, sweet, spicy mixture, flavored largely with fresh ginger and the ingredients minced fine. Proportions seem very capricious and the pungency and spiciness may be easily regulated to suit the taste.

Whatever the type, the purpose is to get a tart, spicy flavor through the vegetable or fruit, to keep or develop attractive color and to give crispness to those made from vegetables. For quick process pickles the vegetables are often salted down overnight to draw out the juices. Quick process vegetable relishes are not so crisp as those made from salt stock and the flavor is different, but they require much less work. While the author personally objects to the salting down overnight process, feeling that it is a wasteful and undesirable practise, a few recipes for so making are given.

ARTICHOKE RELISH

1 quart artichokes, scraped and put through medium food chopper	3 cups sugar
1 pint onions, put through medium food chopper	1 quart vinegar
1 pint pimiento, chopped or ground	1 tablespoon of tumeric
	4 tablespoons white mustard seed
	2 tablespoons celery seed

Soak the artichokes, pimientos, and onions in brine overnight, using 1 cupful of salt to 1 gallon of water. In the morning, drain dry, mix with mustard seed and tumeric. Dissolve the sugar in the vinegar and bring to boiling, then pour over the vegetable mixture.

Heat to boiling, fill sterilized jars, and seal.

NOTE: The Jerusalem Artichoke is a plant belonging to the composite family, and is a tuberous rooted sunflower. The tubers may be served like potatoes. The smoother growing White French variety is to be preferred for table use rather than Red Brazilian.

HONEY BEET RELISH

Chop together 4 cupfuls peeled raw beets and 2 cupfuls of raw cabbage until quite fine. Add 1 cupful of grated horseradish root, 2 cupfuls sugar, 1 cupful strained honey, 3 teaspoonfuls

salt, 2 hot, red peppers with seed removed, and enough vinegar to cover. Bring to a boil and cook together 10 minutes. Pour into sterilized jars and seal.

ROSY RADISH RELISH

1 pint French Breakfast Scarlet Globe or similar type radish, ground	1 tablespoon mustard seed
½ cup celery, ground	½ tablespoon dill seed
1 cup onion, white or red, ground	2 hot, red peppers with seed removed
1 cup sugar	2 teaspoons salt
	Vinegar to cover

Use only fresh, crisp radishes. Wash, remove tops and roots. Put all vegetables through coarse blade food chopper, chopping into bowl. Combine all ingredients. Let stand a few hours. Bring to a boil and cook 10 minutes. Pack boiling hot in sterilized jars and seal.

SWEET PEPPER RELISH NO. 1

12 red peppers, seeded and ground coarsely	12 red onions, medium size, ground
12 green peppers, seeded and ground coarsely	2 cups vinegar
	2 cups sugar

The peppers must be of unquestionable freshness. Mix all ingredients and boil about 20 minutes. Pour into hot, sterile jars and seal at once.

SWEET PEPPER RELISH NO. 2

Remove the seeds from 1 dozen large, fresh, sweet red peppers. Grind, mix with 1 tablespoonful of salt, and let stand 3 hours. Drain; add 1 pint of vinegar and 3 cupfuls of sugar; then cook until like jam, usually about 45 minutes. Pour into small, hot containers and seal. This jam is fine for potato and other salads, is delicious mixed with cream cheese for sandwiches.

SWEET MANGO RELISH

Peel green mangoes, cut from seed, chop or put through coarse blade of food chopper enough to make one quart. Chop or grind two large onions, six sweet red peppers and two large hot peppers. Add 1 tablespoonful of salt, 1 tablespoonful each white mustard seed and celery seed, 4 cupfuls sugar and 1 cupful vinegar. Two cupfuls raisins also may be added if desired.

Combine all ingredients. Bring to boil and boil 5 minutes. Let stand overnight. Next morning cook until slightly thickened (about 10 minutes). Pack boiling hot and seal. Mango may be combined with sweet fruits as papaya or pineapple for making jams and other products.

NUT AND RHUBARB RELISH

- | | |
|-------------------------|-------------------------------------|
| 2 quarts rhubarb, diced | 2 cups raisins, chopped |
| 1 pint granulated sugar | 1 cup pecans or walnuts,
chopped |
| Juice 1 large lemon | |

Pour sugar over the rhubarb and allow to stand several hours or overnight, until dissolved. Add raisins and cook rapidly until thick. Add lemon juice and nuts about 10 minutes before removing from fire. Pour into clean, hot jars and seal at once. Delicious to serve with cold meat, hot roast beef or chops.

FRUIT RELISH

- | | |
|--------------------------|-------------------------------------|
| 4 pounds sliced peaches | 2 teaspoons salt |
| 1 quart vinegar | 1 clove garlic |
| 3 pounds sugar | ½ ounce dried chili peppers |
| 2 pounds raisins | 2 tablespoons white mustard
seed |
| 1 pound preserved ginger | |

Juice, pulp, rind of one orange and one lemon
OR

- 1½ cups sliced kumquats (may be canned kumquat stock)

Peel the fruit and slice. Add sugar and vinegar and boil 10 minutes. Grind the lemon, orange and garlic and chili peppers and add with the remaining ingredients to the fruit and boil the mixture until thick, stirring as needed. Let stand overnight. Bring to a boil and boil 10 minutes. Pack into sterilized containers and seal boiling hot. Guavas, pears, pineapple, mango and other fruit may be used in place of peaches or in combination.

PALM BEACH PINEAPPLE RELISH

- | | |
|-----------------------------|----------------------------|
| 4 cups pineapple crushed | 3 cups granulated
sugar |
| 1 cup tarragon vinegar | 1 teaspoonful cloves |
| 1 tablespoon stick cinnamon | |

Cook the pineapple with the vinegar and spices (tied in a bag) until fruit is clear and syrup thickened—about 45 minutes. Remove spice bag and seal hot. A wonderful sauce for cold meats.

PINEAPPLE CHUTNEY RELISH

- | | |
|-----------------------------------|----------------------------|
| 1½ quarts shredded pine-
apple | 1 cup cider vinegar |
| 12 large green mangoes | 1 cup grapejuice |
| 4 onions | 2 cups brown sugar |
| 4 sweet red peppers | Juice of 3 lemons or limes |
| 2 hot red peppers | ¼ cup mustard seed |
| 6 medium size green
tomatoes | 1 tablespoon ginger |
| | 2 cups raisins |
| | 1 tablespoon salt |

Chop or grind the mangoes, onions, peppers, and tomatoes. Add the other ingredients in the order given and cook all together until thick, stirring carefully. Seal while boiling hot.

GUAVA CHUTNEY NO. 1

3 pounds prepared guavas	3 pounds tamarinds
3 pounds brown sugar	3 pods chili pepper, dried
2 pounds raisins	2 cloves garlic
1 pint pimiento	1 pound onions
1 pound green ginger	$\frac{1}{4}$ cup mustard seed
1 tablespoon each ground allspice, cloves, cinna- mon and salt	$\frac{1}{4}$ cup celery seed
	$\frac{1}{4}$ tablespoon pepper

Remove fibrous hulls of tamarinds and soak pulp in 2 quarts of best vinegar, stirring often to dissolve the pulp from the seed. When pulp is dissolved, run through fruit press or colander to remove seed. Put guavas, from which seeds have been removed, through the medium knife of the food chopper. Put the raisins through the same chopper. Use the finest blade for the green ginger, peppers, garlic (or onions) and mustard seed. Mix all ingredients together and boil 30 minutes. Let stand overnight. Reheat to boiling, re-season if needed, and pour in hot, sterilized jars and seal at once.

GUAVA CHUTNEY NO. 2

3 pounds guavas	1 clove garlic
3 pounds sugar	1 pound onions
2 quarts best vinegar	$1\frac{1}{2}$ tablespoons mustard
2 pounds seeded raisins	$1\frac{1}{2}$ tablespoons powdered ginger
2 tablespoons salt	3 small hot peppers
2 teaspoons each cinna- mon and cloves	

Put guavas through fruit press to remove seed. Boil until smooth and thick. Put raisins, onion, garlic through food chopper. Add these and sugar, vinegar, and seasonings. Cook until thick, stirring occasionally, and let stand overnight. Reheat, seal boiling hot. Hold several weeks before using.

Peaches, pears, pineapple, carissa, surinam cherries, mangoes may be used in place of guavas in above recipe.

MANGO CHUTNEY NO. 1

4 pounds sliced and peeled green mangoes	$\frac{1}{2}$ pound onions
1 quart vinegar	3 pounds brown sugar
2 pounds currants	2 ounces yellow chili
2 pounds raisins	$\frac{1}{2}$ pound green ginger
	1 tablespoon salt
	2 cloves garlic

Chop all fine except raisins and currants. Mix and let stand overnight before cooking if possible. Can be made with sweet budded mangoes, using the juice of 5 limes or lemons. Cook until thick as desired. Seal boiling hot.

MANGO CHUTNEY NO. 2

3 pounds green mangoes, pared and sliced	$\frac{1}{4}$ ounce cloves
3 pounds tamarind	4 large cloves garlic
2 pounds raisins	$\frac{1}{4}$ ounce pimiento
8 pounds brown sugar	4 tablespoons salt
$\frac{1}{2}$ pound chilies	3 pints strong vinegar
2 pounds green ginger	$\frac{1}{4}$ ounce mace

Remove hull from ripe tamarinds and soak the pulpy pods in the vinegar—after reserving $\frac{1}{2}$ cup. Stir them about with a wooden spoon to get the pulp off the seed; then remove seed and the leathery parts in which they are enclosed. Cut the raisins small. Scrape the ginger and grate it. Pound the chilies, garlic, and mustard seed in a mortar, using a little of the vinegar to moisten. Mix all ingredients thoroughly. Let stand five days. Pack in containers and process pints 25 minutes at simmering.

NOTE: The tamarind (*Tamarindus indica*), a beautiful leguminous fruit tree whose brown pods contain a pulp rich in sugar and acid, is used as an important ingredient in chutneys and for making a healthful, delightful drink. Many bushels of fine tamarinds waste every year when they could so well be used to further enrich and add flavor to guava and other chutneys.

TROPICAL MINCE MEAT

4 quarts green tomatoes (ground)	1 pint vinegar or $\frac{1}{2}$ vinegar and $\frac{1}{2}$ pint grape, plum, pine- apple, mango, or other fruit juice
3 oranges and 3 lemons or	1 teaspoon cloves
2 pints kumquats (ground)	5 pounds sugar (brown)
1 pint coconut, grated	1 glass tart jelly or jam
1 pound raisins, seedless	1 teaspoon mace
3 teaspoons cinnamon	1 teaspoon allspice
1 pint figs	Salt
1 pound pineapple shredded	

Select oranges and lemons with clear, well ripened skins. (Oranges artificially colored have tough, undesirable peeling.) Scrub thoroughly and cut into convenient pieces for putting through food chopper, grinding all portions except seeds. If kumquats are used, clean and cut in halves to remove seed before putting through chopper. Grind tomatoes and seeded raisins. Combine all materials. Let stand several hours. Boil 20 minutes. Let stand overnight, re-season if necessary. Boil again 10 minutes, pack hot in jars, and process pints 10 minutes at boiling, quarts 15 minutes. This mince-meat serves not only as a choice filling for pie but may be used as a filling for cakes and sandwiches; as a thick spread on Angel cake, topped with whipped cream and a surinam cherry for garnish, it serves as a delectable dessert for any special occasion.

PEAR RELISH

1 peck pears	5 medium size onions
6 medium peppers (3 red and 3 green)	2 pounds sugar
2 tablespoons mixed whole spices	1 tablespoon tumeric
	1 tablespoon salt
	4 cups vinegar

Drain juice from peppers but allow the juice of other ingredients to remain in mixture. Grind pears in food chopper with onions. Combine all ingredients and cook 30 minutes. Seal while hot in sterilized jars.

CATSUPS AND SAUCES

Tomato and other catsups and sauces differ considerably in texture and appearance from pickles but are used in much the same way as relishes. Catsups made from acid, juicy varieties of fruits are preferred to very sweet fruits. Catsups should be cooked to a very thick consistency to prevent separation.

CHILI SAUCE

1 gallon red-ripe tomatoes, ground	1 tablespoon white mustard seed
1½ cups sweet red peppers, or pimientos	1 bay leaf
1 cup green peppers	1 teaspoon garlic finely minced
1 hot pepper	½ ounce stick cinnamon
1 cup brown sugar	1 teaspoon cloves (whole)
1 tablespoon celery seed	¼ nutmeg, grated
3 tablespoons salt	1 tablespoon ginger

Select sound, fresh, red-ripe tomatoes. Wash, scald, remove skins, cores and any green or yellow spots and put through food chopper with the onions and peppers, using fine blade. Tie spices loosely in a cheesecloth bag. Boil the spices with the vegetables until the mixture is reduced one half. Stir well to prevent scorching. Add the vinegar, sugar and salt. Boil mixture rapidly and stir well for 5 minutes. Pour the boiling chili sauce into clean, sterile, hot jars and seal immediately. *

BORDEAUX SAUCE

3 quarts green tomatoes, put through food chopper	1 clove garlic
3 quarts cabbage, put through food chopper	6 tablespoons mustard seed
1 pint celery, put through food chopper	4 tablespoons celery seed
1 pint onions, same way	2 tablespoons each black pep- per, cloves, allspice, ginger and tumeric, tied loosely in bag and lightly pounded
6 tablespoons salt	2 quarts of good vinegar
1 cup sugar	

Mix well and boil rapidly for 20 to 25 minutes. Seal boiling hot in hot, sterile jars.

PEPPER SAUCE NO. 1

Wash small cherry or Chili peppers (red and green), prick with a needle. Pack into bottles. Cover with good cider vinegar, and cork. It will be ready for use within a few days. As the sauce is used more vinegar may be added to the peppers.

PEPPER SAUCE NO. 2

4 dozen red tabasco or chili peppers	1 clove of garlic $\frac{1}{2}$ cupful spiced vinegar
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Boil the finely chopped garlic and peppers until tender, drain, rub through a sieve, and add to the paste enough spiced vinegar to make it of a creamy consistency. Bottle and seal. Onions may be used in place of garlic if desired. Use spiced vinegar. (Page 15.)

PIMIENTO CATSUP

6 pounds ripe, roasted and peeled pimientos	2 tablespoons powdered ginger
2 tablespoons salt	2 tablespoons powdered cinnamon
2 pounds sugar	1 quart vinegar

Roast and peel the pimientos as for canning. Remove stems and seeds, weigh and pass through a food chopper. Rub spices together, add sugar, and mix well with the pepper pulp. Heat thoroughly and add the vinegar slowly. Cook all together until smooth and of the proper consistency. Pack hot into hot bottles, cap and seal. Process pints 25 minutes at 180° F.

WALNUT CATSUP

200 young green walnuts	4 quarts vinegar
1 pound chopped shallots	4 cloves garlic
1 cup anchovies	$\frac{1}{2}$ pound salt
1 cup whole peppers	4 tablespoons cloves
	2 tablespoons mace

Wash, then pound the walnuts until well bruised. Put them into an unglazed jar with shallots, garlic, salt and vinegar and stir daily for 10 days. Strain and put the liquor into a pan with the cloves, mace, pepper, and anchovies, and simmer for 20 minutes. Strain and pour into hot, sterile bottles. Seal. Process.

**FLORIDA CRANBERRY CATSUP
(ROSELLE)**

5 pounds roselle (use calyx only)	$\frac{1}{2}$ tablespoon paprika
1 cup water	3 tablespoons cinnamon
1 pint vinegar	$\frac{1}{2}$ tablespoon ground cloves
2 pounds brown sugar	$\frac{1}{2}$ tablespoon salt

Cook together roselle and water until tender. Rub through a sieve. Add other ingredients and cook rapidly until thick. (Reduce to about $\frac{1}{3}$ the original quantity.) Put in sterilized containers and seal.

TROPICAL CATSUP

4 pounds prepared guavas	1 teaspoon salt
1 quart vinegar	1 clove garlic
2 pounds sugar	2 tablespoons chilies or hot peppers
1½ pounds raisins	¼ cup each white mustard and celery seed
1 pound preserved ginger	

Cut blossom and stem ends from fruit; peel if blemished, and remove seed. Put through food chopper with raisins, garlic, ginger, mustard seed and chili. Add remaining ingredients and boil 30 minutes. Let stand overnight. If too heavy, dilute with vinegar. Reheat, bottle and seal. Allow to season several weeks before using.

Carissa, mangoes, tamarinds, may be substituted for guavas.

SPICED YOUNGBERRY CATSUP

3 quarts rare ripe Youngberries	2 sticks cinnamon
3 cups sugar	1 dozen whole cloves
	½ to ¾ cup vinegar

Wash, drain and mash berries. Tie the spices loosely in a cheesecloth bag. Add vinegar, spices, and sugar to the berries and cook rapidly until the mixture is thick. Pour into clean, sterile, hot jars, and seal at once.

GRAPE CATSUP

4 pounds grapes	¼ teaspoon cayenne pepper, or 1 hot red pepper
2 tablespoons cinnamon	1 cup vinegar
1 tablespoon cloves and allspice	2 pounds sugar
	1 teaspoon salt

Use firm but fully ripe fruit. Wash, stem, and separate skins and pulps. Heat pulps until soft enough to liberate seeds. Rub through fruit press and combine with skins. Steam covered until tender and run through fruit press again. Add remaining ingredients and cook rapidly until thick. Use whole spices, tied loosely in a bag to prevent darkening the product, and remove before bottling. Pour in hot, sterile bottles to within 2 inches of cap. Seal and process immediately 10 minutes at boiling.

Grape catsup is a pleasing sauce to serve with cold meats. Moreover, it holds an important place in muscadine grape utili-

zation, because it can be made from varieties which, owing to their acidity, are not well adapted for use in other ways. In making catsup the juicy varieties are best, and an acid juicy variety is to be preferred to a very sweet one.

The bunch grapes may of course be used in the same manner as the members of the muscadine family.

PICKLE POINTERS

POINT I

Quality of pickles depends upon the quality of products used and requires:

1. Absolutely fresh, high grade fruit and vegetables, sorted for size and degree of ripeness.
2. Highest quality whole spice preferably—used with a light hand. (Flavor comes out as pickles stand.)
3. High grade cider vinegar, with fine, fruity flavor and aroma—or distilled vinegar—clear and colorless for light vegetables such as onions and cauliflower.

POINT II

Fine texture, flavor and color of pickles require:

1. Excluding air from the brined vegetables before, during and after fermentation.
2. Maintaining a fairly uniform temperature during fermentation.
3. Maintaining a salt content of brine high enough to prevent growth of spoilage organisms.
4. Adding a small amount of vinegar to brine for all "dills" to favor desirable fermentation and to inhibit undesirable fermentation.

POINT III

Types of pickles include:

1. Fruit pickles, as whole peaches, pears, papayas, pineapple, cooked in a spicy, sweet-sour syrup.
2. Quick process pickles salted overnight and combined with spices and vinegar the second day, as "Bread and Butter" pickles.
3. Salt stock, or fermented pickles, requiring three to six weeks to cure—in general the recommended method vegetable pickles.
4. Relishes, catsups, chutneys and sauces, consisting of spiced, cooked and strained fruits, vegetables and nuts.

TABLE 1.—SALT SOLUTIONS OR BRINES.

Quality of salt for making brines: Use cooking salt. Avoid the use of salt to which materials have been added to prevent caking.

Quality of water for making brine: Use soft water. Rain water, boiled, cooled, and, if necessary, filtered is very satisfactory. If soft water is not available, it is best to boil, then cool, tap or well water, and carefully pour it off from any sediment which settles. Filter it through closely woven cloth. Add one tablespoon of vinegar to each quart of hard water after it has been boiled, cooled, and filtered.

Quantity of brine needed: Allow from one-half to two-thirds the volume of the material to be brined. Example: One gallon of the vegetable will require from one-half to two-thirds gallon of brine.

APPROXIMATE STRENGTH OF BRINE		APPROXIMATE AMOUNT OF SALT PER QUART OF WATER		NATURE OF BRINE	USES OF BRINE
Salt Solution Percent	Salinometer Reading Degrees	Ounces	Cups		
5	20	2	Scant $\frac{1}{4}$ cup or 3 level tablespoons	Permits rapid fermentation with formation of lactic acid. Must be watched closely for signs of spoilage. Small quantities of vinegar about $\frac{1}{4}$ cup to 1 quart of water, may be added to help prevent spoilage.	For making dill pickles. Sometimes for making dilled green tomatoes, snap beans, okra, or chayotes.
10	40	4	$\frac{3}{8}$ cup or 6 level tablespoons (will just float a fresh egg).	Permits rather slow fermentation with formation of lactic acid. After fermentation, pickles keep well in this brine for 2 to 3 months: (1) if kept below surface of brine; (2) if brine is protected from air; (3) if stored in a cool place.	For "curing" cucumbers and most other vegetables which are to be made into a salt stock for pickles.
15	60	6	$\frac{9}{16}$ cup or slightly over $\frac{1}{2}$ cup.	Permits very slow fermentation with formation of lactic acid. After fermentation, pickles keep in this brine indefinitely: (1) if kept below surface of brine; (2) if brine is protected from air; (3) if stored in a cool place.	For curing vegetables such as cauliflower and pimientos which do not shrivel much. For storing vegetables previously fermented in a 10 percent brine.
20	80	8	$\frac{3}{4}$ cup.	Practically no fermentation takes place and no lactic acid is formed.	For making unfermented salt stock of silver skin onions, green peppers, Kieffer pears, clingstone peaches and other vegetables and hard fruits which do not shrivel much and which do not require fermentation for flavor or color.
25	100	10	1 cup.	Saturated salt solution, no fermentation takes place. Produced when a large amount of salt is added to vegetables.	For preserving vegetables indefinitely, merely a method of preservation.

From Pickles and Relishes, N. Y. State College of Agriculture.



SAVORY OR AROMATIC HERBS AND OTHER SEASONINGS AND CONDIMENTS

It is a commodious and a pleasant thng to a Mansion, to have an orcherde of sundry fruits. But it is more commodious to have a fayre garden repleted with herbs of aromatycke and redolent savours.—Andrew Borde.

The salubrious climate of Florida should be potent with the fragrance of the aromatic or savory herbs grown not alone for their reputed medicinal qualities, but also for use in the fine seasonings of foods and in making choice pickles and relishes.

Herbs grown and cured in our own gardens even under adverse conditions would have more flavor value and fragrance than the near-fresh ones purchased at the store. Far more satisfying results can be obtained with many recipes in this bulletin if home-grown herbs are used. For housewives unfamiliar with the production of many of these, a few cultural suggestions are offered for the most commonly used and easily grown.

While it may not be practical for every gardener to grow any large number of savory or aromatic herbs, yet every Florida home should grow at least anise, basil, benne, chives, coriander, dill, ginger, lavender, sage, savory, mint, thyme, tarragon, tumeric, and a few others most in demand for seasoning. These should prove profitable and exceedingly interesting to the Florida housewife. Whether they are grown in a real bed of various aromatic plants, or a scattering of such plants among the flowers in the perennial border, or in a kitchen window box, this opportunity to add spiciness to the potpourri of both summer and winter fragrance, and to give "seeming and savor" to soup, sauce, salad, stuffing and other every-day foods, as well as to all pickles and relishes, should not be overlooked.

They are a very satisfactory group to work with, exceedingly pleasant to handle because of their fragrant and aromatic foliage, least exacting of plants and their culture is simple. However, since the fragrance and flavor of the herbs depend upon the characteristic essential oil it manufactures, it is important to grow plants under conditions producing the finest quality.

CULTURAL REQUIREMENTS

In the southern sections of the state many of these herbs may be grown in the open throughout the year. In the more northern sections certain of the biennials are grown as annuals on account of their tendency to winter-kill. Others do not like extreme heat or direct exposure to the sun and so require semi-shade and plenty of moisture. Still other herbs make best growth during the long, cool, winter nights.

Culture of herbs is not difficult. Their production can be handled to the best advantage by setting aside a small portion of the vegetable garden or preferably the flower garden, where the biennials and perennial herbs may be grown year after year without disturbance. This plot should be convenient to the water supply, should dry weather prevail, and conveniently near to the operations of the kitchen for gathering in small and frequent quantities as needed. A strip of land at one side of the garden that is not needed and which can be conveniently skipped in the plowing would be an ideal place for the herb garden. It should be rather long than wide—so that the herbs can be gathered without walking on the bed; three feet is a good width as that can be reached across fairly well. The soil should be rich and mellow. Since many herbs are either biennials or perennials and occupy the same place for more than one year, it is imperative that the soil be well prepared—spaded or plowed—and a liberal amount of bone meal and compost be thoroughly mixed with the soil before seeding or setting the plants. Their culture does not differ greatly except as to methods of propagation, planting distances, and moisture requirements.

For best quality the herbs require to be grown rapidly, hence the soil should be well cultivated, free of weeds and be well watered during periods of droughts.

Some of the herbs may be started by sowing the seeds where the plants are to remain—thinning of course when well established. Others should be started in boxes and later transplanted to their place in the garden.

DRYING AND STORING

Methods of drying herbs and preparing them for use are also very similar, the main point being to gather them at the proper stage of maturity and dry rapidly in the shade, so that they will retain their color. Herbs when sufficiently dry are crisp. Many of them are stored in powdered form, and should be separated from the stalks and crushed with a rolling pin or passed

through a fine sieve or food grinder to make a fine, uniform powder. Each different variety may be stored separately or may be blended, in a suitable mixture, with or without the addition of spices.

Here follow a few statements relative to some of the desirable savory or aromatic herbs most easily grown under conditions offered in Florida.

BASIL

Basil is considered one of the finest spices for use in pickling. It is of two types—sweet green basil and a dwarf form. Basil is an annual and the seeds may be planted in the open ground where the plants are to remain. A very few plants are sufficient for the needs of the average family. Sometimes one or two plants of basil may be grown in the flower border.

The leaves and flowers have a clove-like, spicy flavor and are prized for use in spiced vinegar, for pickles, in gravies, for soups, stews, salads, and meats and fish cookery. Basil is an especially choice flavor for tomato dishes. It is said that it was the distinct and peculiarly pleasant flavor of sweet green basil that once made Fetter Lane sausages so famous.

Sweet green basil, too, is just the right herb for flavoring turtle soup; sea coast towns should take notice.

When dried and powdered, basil is used for spicing meat or other fish, sausage, liver paste and similar products. The flowers with the tender tips of the stems with their foliage are cut, tied in very small bunches and dried.

CARAWAY

Caraway belongs to the same family as the herb anise and carrots. The finely cut leaves with tiny white flowers in umbels resemble Queen Anne's Lace or wild carrot. The flavor is most familiar to us through its use in ryebread, cakes and confectionery, cheese and pickled beets. The young shoots and tender leaves are sometimes used in raw salads. Caraway also "peps" up a cooked vegetable salad.

The very young leaves can be finely chopped and added to vegetable soups and gravies. The seed are saved by cutting off the heads before the ripening seed begin to shatter and spreading them on muslin to dry in the shade. When reasonably dry the seed are rubbed out of the heads, separated from the chaff and then stored in thin cloth bags in a well ventilated spot to avoid their heating and becoming rancid. When dried and

powdered caraway is used as spice for liver, smoked and other sausage.

CHIVES

The chive is the smallest member of the onion family. Its tiny bulbs grow in thick bunches, but the young tender leaves which may be cut freely are of delicate and pleasing flavor, similar to that of a very mild onion. They add a delicate snap to salads and dressings, dry bean dishes, jellied chicken, hot vegetables, omelets and other mixtures. The plant grows to a height of 6 to 8 inches with dark green, grass-like foliage and bear pretty, violet clusters of bloom, hence chives should be used more often as ornamental border plants. They are propagated by dividing the clumps and resetting in the fall, preferably in rich soil.

CORIANDER

Coriander is an annual as easily grown in Florida as dill, growing about the same height as dill with flower heads much the same size. Like dill it is grown for its seeds which are harvested and used for flavoring bread, poultry dressings, smoked sausage, curries, spiced meat, fish and pickles in the same manner as caraway seed is used.

Coriander is also used in candies—it is the interesting little rough coated pink or white sugar plums found in some of the best mixed sweets and that are so extremely good. It is ground for cakes or sprinkled over cookies, sweet rolls, or bread, like poppy or caraway seed.

While the seed of coriander are valuable as spice, they must be thoroughly ripe and stored for sometime before using, as when green they have an unpleasant taste.

DILL

Dill is one of the very easiest and hardiest of the herbs to grow and often reaches a height of four to five feet in Florida. The seed should be planted in the fall and if given rich soil and plenty of moisture will have seed heads ready to cut by the following April or May. One of the most common uses of dill is for flavoring pickles. For this purpose the seed heads, with several inches of the stem bearing them, are cut about the time the seed begin to ripen and tied in bunches to cure in the shade. In making dill pickles, generous layers of the dill are placed in the jars or kegs with the pickles to add their distinctive and popular flavor.

GARLIC

Garlic is used in minute quantities as a seasoning in almost all forms of savory cooking, in omelets, salads, soups, sauces

and dressings where a delightful, piquant flavor suggestive of onions is desired. Garlic adds a distinctive, desirable flavor to dill pickles.

Garlic is the mighty atom of the onion family and is no seasoning to hand to a raw recruit in the kitchen. The skilled cook has a definite technique of garlic control—uses frequently, but in undetectable quantities. If garlic can be actually identified, too much has been used.

The garlic comes in a bunch of cloves which are separated and planted like onion sets.

GINGER

Ginger, *Zinziber officinale*, often confused with the common ornamental, ginger lily, grows well in Florida and produces choice roots if given rich soil, sufficient moisture and semi-shade. Ginger will long remain as one of the world's most popular spices and should be grown in every Florida home garden. It is an erect herb, 12" to 24" high, canna-like in appearance and grows from thickened rhizomes which branch finger-like and send up new shoots from the tips near the surface of the soil. If desired for preserving or candying, the roots should be dug while tender and succulent, rather than when old, tough and fibrous. Fresh green ginger is an indispensable part of chutneys, from which they get much of their spiciness and pungent flavor.

SWEET MARJORAM

The leaves and stems of this plant have a very pleasing odor and a peculiar, aromatic taste. The plants are cut when the flowers are not quite open. The green parts are used for seasoning soups, meat pies and dressings. The dwarf form of marjoram known as pot marjoram is sometimes used as an ornamental bedding plant.

Sweet marjoram was one of the most popular herbs in the colonial garden. This with rose geranium, rosemary, lemon verbena, and lavender are the five fragrant herbs used by those careful housewives to scent linens.

MINT

Both peppermint and spearmint are easily propagated. It is done by taking a few of the stems with roots attached and transplanting them to rich, moist soil. The mint bed improves with frequent cutting and watering during dry periods. It is well to keep one portion of bed closely sheared down while mint is being used from another portion, thus providing a continuous supply of fresh tips. Peppermint is not grown in home gardens

as much as spearmint, yet it may well be included in a collection. The tender leaves and stems are used for flavoring; they must also be dried and stored. Of the several kinds of mints grown for their essential oils and characteristic flavors, the one known as spearmint is most commonly planted.

Five or six plants, occupying a space 3x3 feet, will supply an abundance for flavoring iced tea and other cool and refreshing drinks, ices and dessert sauces.

Spearmint is also used for flavoring jellies, to which it gives flavor in addition to an attractive color. In fact, mint jelly is highly esteemed. Mint vinegar may be used at the table as a spice or may be added to meat dishes and to different kinds of gravy where mint flavor is desired.

NASTURTIUM

The common dwarf as well as the tall nasturtiums take their important and colorful place among the savory herbs. The half-ripened seed, with their pungent flavor, are frequently added to mixed pickles and to mustard pickles and are a good substitute for capers. Both leaves and flowers are used in salads. Where a continuous supply of fresh leaves and flowers is desired, plantings should be made at intervals of five to six weeks.

PARSLEY

The best known and always reliable seasoning and garnishing herb is the moss curled variety of parsley and is commonly grown in the home gardens, though the coarse leaved turnip rooted varieties are used extensively in soups and stews, especially by the people of the Mediterranean regions. Only a few plants of the curled parsley are needed, as the plants continue to produce stems and leaves as long as kept closely cut.

PEPPER

Peppers are not herbs, of course, but they are too closely associated with the making of pickles and relishes not to take an important place in a bulletin of this kind.

They belong to the nightshade family and are of many fascinating types. Their culture should have a strong appeal for the maker of pickles, for no pack could be considered complete without their decorative touch of beautiful color, and some types contribute a desired hotness and pungency. There are two types of peppers, the hot, pungent varieties classed as spices and the large, sweet peppers classed as vegetables and used in salads and general cookery and in pickles and relishes.

The mild, large fruited, meaty, sweet peppers, of which the best known are Bell or Bullnose, Ruby King and World Beater, and the thick meated pimiento or Spanish pepper, are grown for market in Florida in large quantities. The pimiento, sweet and especially thick meated, is used for canning. It is often confused with pimento, which is allspice, a species of aromatic trees. A few of the best known hot peppers are of the following:

Chili (or chilli). Several types of chili peppers varying from 6 to 8 inches in length to 1 inch and less, of varying degrees of hotness, are used for canning and pickling purposes and in chili con carne and in tamales. The small hot red peppers—Red Chili, Cherry, Birdseye and others are used for making pepper sauce. Cheyenne or Mexican Chili, an exceedingly hot variety, is used almost exclusively for grinding and is sold as Cayenne.

Peppers for Gifts or Sale: There is a profit to the gardener who will specialize on these small varieties of peppers like Coral Gem Bouquet, Red Cluster, Celestial and Birdseye. Their neat, compact habit of growth, their fruits, turning from yellow to bright red as they mature, all contribute to make most attractive potted plants for gifts or for sale, especially for the festive holiday season.

SAGE

Salvia officinalis, the kitchen sage, is cousin to the vivid scarlet *Salvia*. It is easily grown and one of the few herbs that still belongs to modern everyday life. There are several varieties of sage—green, purple and variegated sage. The type having whitish, oval leaves is most commonly grown in kitchen gardens and one or two plants will supply the leaves required for seasoning poultry dressing, sausage, and other meats. For the best quality of dried sage the leaves should be taken before the plants reach the blooming stage.

Clippings can be tied in very small bunches and should be dried quickly over the stove and stored in air-tight containers to preserve the flavor. The common sage when in bloom is quite ornamental and deserves a place in the flower garden.

SAVORY

The tender stems and leaves of both summer and winter savory are both popular and useful herbs and are grown, cut and dried in the same manner. The savorys, like thyme and sage, do much for meats but are strong flavored and should be used sparingly.

TARRAGON

Tarragon, like mint, should be in every kitchen garden as it contributes a special flavor to any dish to which it is added. However, its delicate, aromatic flavor best seasons salads, vinegar, mustard and pickles. One of its principal uses is for making tarragon vinegar. The leaves, fresh or dry, are the portion used and every effort should be made to force the plants into vigorous growth. Whenever the flower stems appear they should be cut out.

TUMERIC

Tumeric, one of the principal ingredients of the famous Oriental curry, is grown and handled like ginger, which it resembles somewhat both in its growing habits and in appearance. This colorful condiment is used in the popular bread and butter pickles, mustard and similar types.

THYME

Thyme belongs to the mint family but is a bit more difficult to propagate and grow. After the plants are two to three years old they become too woody to yield a good grade of tender stems, and new plants should be started. The plants should be in full bloom when bloom is sheared off together with an inch or so of the tender stems and leaves. Like sage, thyme must be stored away from the light in air-tight containers to preserve color, delicate flavor and aroma. If thyme plants are grown vigorously three or four crops of bloom are produced during the year. There are many species of thyme—lemon thyme, clean smelling and fragrant and a pleasant seasoning; golden thyme, silver thyme and others. Thyme and sage are practical necessities to every home garden. What savor would the Thanksgiving and Christmas feasts have without them?

HERBS FOR COOKERY AND PICKLING

Make up the essential "Kitchen Bouquet", if blended seasoning and good flavoring are to be preserved.

Soup essences with their subtle flavors of the old-time kitchen should be revived. Old fashioned as well as the best modern cookery calls for their use. A bundle of herbs, for instance, belongs in every stock pot, and when supplemented by a dash of lemon peel imparts to good stock the delicious flavor brought out by the French chefs. An "herb bouquet" is invaluable in pot roasting meats and in baking fish. The term sweet herbs, or "fine herbs" as the French say, includes sage, balm, marjoram, basil, summer savory, chervil and thyme.

RECIPES FOR POWDERED MIXED HERBS AND SOUPS AND SAUCE ESSENCES

FAGOT OF HERBS

One ounce each of sweet basil and lemon peel, two ounces each of dried parsley, thyme, and sweet marjoram. Dry. Mix and seal in a jar for use as desired.

BOUQUET GARNI

One sprig each of sweet marjoram, rosemary, thyme, two of parsley, two green onions, three whole cloves, one or two blades of mace, two good sized peppers (*Capsicum*) with one or two of the black peppercorns, a stalk of celery, and a quarter of a lemon.

ESSENCE OF SWEET HERBS

Peel one carrot, onion, sweet potato, and parsnip; seed one large red pepper; chop with one shallot and two cloves of cinnamon, and mace, and three bay leaves. Mix thoroughly and season with salt and pepper. Spread layers of mixture in a baking pan, alternating with layers of brown sugar. Place in a hot oven till it is dark brown. Add $\frac{1}{2}$ cup of cold water; place on top of stove; cook (stirring the while) until it forms a brown, thick, rich syrup. Strain. Seal boiling hot in jars. This is so concentrated a very little will flavor and color sufficiently. This should be kept conveniently near for fine seasoning, gravies, stews and soups.

HOW TO PREPARE POWDERED AND MIXED HERBS FOR GIFTS AND SALES

Cellophane envelopes or bags make excellent packages and they have the added conveniences of being transparent. Dried leaves may be packed in glass jars. Powdered herbs may also be packed in narrow-necked bottles. Dry and powder each herb and mix in the proportions and cork tightly in bottles or jars with labels showing their use. These labels may be made more attractive if they are labeled for interesting occasions, such as—the Thanksgiving turkey, the Christmas turkey, the Christmas goose, Christmas pig, St. Michael's goose (September 29), Christmas sausage.

For goose, pork and duck, sage and onion predominate. Other sweet herbs such as thyme, sweet marjoram, and chervil may be added. Sage and thyme predominate in pork sausage.

Chicken may be stuffed with chives, parsley, sweet marjoram, thyme, a little sage and basil. Sage, summer savory, sweet

marjoram, thyme, parsley, chervil, may be used for turkey, quail and squab. In Denmark the entire stuffing for roast chicken is often just parsley.

Tarragon is especially good in fish sauces; spearmint in lamb sauce; basil in tomato dishes; winter savory in string beans.

For use in omelets, bottle thyme, tarragon, chives, marjoram and a bit of chervil.

For use in ground meats, bottle marjoram, winter savory with half as much basil, thyme and tarragon. Powder and cork.

HERB VINEGARS

Dried seeds and herbs are sometimes added to vinegar to give flavor and aroma to a preparation which is most advantageous to have ready for use in various dressings and sauces, for serving with salads, and for flavoring pickles. For pickling the aromatized vinegars are especially valuable, as the flavor is more evenly blended throughout the pickles, and the herbs from which it is made serve as a garnish when mixed through them. While these vinegars can be made at home at small cost, they are quite expensive when purchased at the first class grocery as an imported luxury product. The various kinds of herb vinegars make most acceptable gifts.

TARRAGON VINEGAR

Make it at a time when the leaves are at their best. Cover the leaves with vinegar, let stand three weeks, stirring each day. Strain and bottle. Some think it should steep longer.

MINT VINEGAR

Mint vinegar may be used the same way. First heat a pint of vinegar to simmering point. Pour this over a pound of chopped mint, stir; cool and seal. For a "sweet vinegar" add a pound of sugar and stir until dissolved. Use for lamb, mutton, beans, peas or for salads.

SWEET BASIL VINEGAR

This is made in the same manner as tarragon vinegar.

SWEET MARJORAM VINEGAR

Made also as tarragon vinegar.

CELERY VINEGAR

1 quart vinegar	1 pound chopped celery
½ ounce celery	2 teaspoons sugar
seed (crushed)	1 teaspoon salt

Heat vinegar (being careful not to boil) with the crushed celery seed, salt and sugar to nearly simmering, and pour over the chopped celery and allow to cool. Pour the mixture into a large bottle and shake it well each day for 12 to 14 days. Then strain, cool, cork and store it until needed for use.

SALAD VINEGAR

A very good salad vinegar can be made of a mixture of 3 ounces each of tarragon, savory, chives, shallots, a handful of the tops of mint and balm, all dried and pounded. Put into wide-mouthed bottle or jar with a gallon of the best vinegar. Cover closely, and let stand for a month, shaking or stirring daily. Then press all the juice and vinegar from the herbs. Let stand a day to settle, then strain through flannel bag. Bottle and seal.

OTHER SEASONINGS

FELI

The young tender sassafras leaves gathered in the early spring, dried and powdered make delightful seasonings. The French use feli in gumbo and for seasoning and thickening gravies and sauces.

SWEET BAY

Grey green, spicy and aromatic are the leaves of the sweet bay tree, common to Florida hammocks. The leaves are always to be found in mixed pickled spices. They are usually sold dry. Smoked fish are often packed between layers of green bay leaves. Bay leaves are used in cooked vegetables and sauces but removed before serving. A bit of bay is especially good in tomato mixture.

CHUTNEY

An East Indian condiment or relish compounded of tropical fruits—mango and tamarind—is made sweet and hot with spices, ginger, chilies, lime juice and the ingredients minced fine; domestic variations may contain apple, peaches, tomatoes, and raisins. The proportions seem capricious and the punginess and spiciness may be easily regulated to suit the taste. (See pages 34, 35, 37 and 39.) pungent

CURRY POWDER

A prepared powder consisting of pungent spices, hot chilies, tumeric, and ginger, mixed together.

CAPERS

The small, flat, green flower bud of the Caper plants, having a mixture of flavor like horseradish and water cress. Capers

are usually picked and are used for seasoning sauces and salads. May be purchased dry.

CAYENNE

A fine grained granite colored powder, very hot, used in salad dressings and sauces; not to be confused with paprika, the sweet Hungarian pepper, which is added to salad dressings mainly for color.

CELERY SEED

Very small, round yellow seed of the celery plant mixed with vegetable salads and with pickling spices.

HORSERADISH

The pungent root is grated or scraped and is used as a condiment, like mustard. It is always propagated from cuttings taken from the roots. After grating and covering with vinegar and storing in bottles it must be kept lightly sealed from the air in order to prevent discoloring.

OLIVES

The most familiar is the green olive pickled in brine. Other types are ripe pressed salted olives and canned ripe olives. Olives are mainly served as a relish or salad ingredients.

PEARL ONION

This is the smallest variety of white onion, usually pickled in brine and usually sold in bottles. Imported from Holland mainly.

MUSTARD

Powder of light yellow color, very piquant in flavor, used mainly for dressing.

MUSTARD SEED

Small round, brown and yellow seed used in salads, salad dressings and in pickles and relishes.

PAPRIKA

Bright red powder of mild, peppery flavor. Paprika is added to soups, omelets, salads and salad dressing, mainly for color.

PEPPER

Sold as round pepper corns, also as a powder, black and white, the white being stronger than the black.

SALT

Common salt, celery salt and onion salt.

SHALLOTS

Small brown onions. More powerful than onion in flavor but not quite as strong as garlic; used as seasoning for cooked and raw vegetables as well as in sauces and dressings.

LIQUID CONDIMENTS**CATSUP**

Cooked, concentrated highly seasoned pulp of numerous varieties, such as tomato catsup, cucumber catsup, mushroom catsup and others. (See pages 40, 41 and 42.)

CHILI SAUCE

Cooked, concentrated tomato base, seasoned with pepper, onions and spices. (See recipe page 40.)

SOY SAUCE

Fermented juice of the soybean, dark brown and of an intense saltiness. Soy sauce is the staple condiment on the table of Chinese restaurants.

HOT PEPPER SAUCE

Thin liquid with a cayenne pepper base and vinegar, extremely hot and can be used only in very small quantities; is sometimes added to French dressing, meats, and soups. (See recipe page 41.)

VINEGAR

Fermented acid derived from malt, apples, grapes, wine, berries, herbs, and spices. The most widely known are tarragon vinegar, chili vinegar, raspberry, nasturtium vinegar, wine vinegar and cider vinegar. (See Farmers' Bulletin 1424, Making Vinegar in the Home.)

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Thanks are due Dr. B. V. Christensen of the University of Florida for the preparation of the herb planting table. Only the herbs that have been grown successfully by Dr. Christensen in his Medicinal Plant Garden at the University of Florida are listed.

Appreciation is also expressed to the authors of the bulletin, *Herbs—Their Culture and Use*, Circular 83, Vermont Agricultural Experiment Station, and to others who have offered valuable suggestions.

TABLE 2.—PLANTING TABLE FOR SAVORY AND AROMATIC HERBS.

Common and Botanical Name	Plant Family	Duration of Plant	Propagation Method	Planting					Soil Preference				Remarks
				Place	Depth	Distance, Inches	Rows, Inches	Month	Exposure	Fertility	Type	Moisture	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Anise, <i>Pimpinella anisum</i>	U	A	S	O	1	10	20	S,O,F,M	S	M	A	M	Seeds used in medicine and cookery
Balm, <i>Melissa officinalis</i>	L	A	S	I	½ M	15	20	S,O,F,M	S	P	L	A	Fragrant, leaves used for tea
Basil, <i>Ocimum basilicum</i>	L	A	S	I	½ M	15	20	S,O,F,M	S	P	L	A	Clove-like seasoning for soups and meats
Borage, <i>Borago officinalis</i>	B	A	S	O	¾	15	30	S,O,F,M	S	P	A	A	Leaves used in punch and claret cup
Caraway, <i>Carum carvi</i>	U	A	S	O	½ M	10	20	S,O,F,M	S	M	A	A	Seeds used in cakes and candies
Catnip, <i>Nepeta cataria</i>	L	(A)	S	I-O	½ M	15	30	S,O	P-S	M	A-H	A	Spreading in habit; keep away from pets
Coriander, <i>Coriandrum sativum</i>	U	A	S	O	1	10	20	S,O	S	P	L	A	Seeds used for flavoring bread and poultry dressing
Dill, <i>Anethum graveolens</i>	U	A	S	O	1	15	30	S,O	S	M	L-A	A	Flavoring for pickles
Fennel, <i>Foeniculum vulgare</i>	U	(A)	S	O	1	20	40	S,O	S	M	L-A	A	Seeds used in French and Italian cookery
Fennel, sweet.....	U	A	S	O	1	20	40	S,O	S	M	L-A	A	Important, commercially
Ginger, <i>Zingiber officinalis</i>	Z	P	R	O	3	8	20	F,M	P	R	A	M	Tender, succulent roots for candying and preserving; green ginger for chutneys and gingered fruits
Horehound, <i>Marrubium vulgare</i>	L	P	S	I-O	¼ M	20	30	S,O,F,M	S	M	A	A	Used in making cough remedies
Hyssop, <i>Hyssopus officinalis</i>	L	P	S,C,D	O	¼ M	8	20	F,M	P	P	L	A	Tender leaves used in salads

TABLE 2.—PLANTING TABLE FOR SAVORY AND AROMATIC HERBS—Continued.

Common and Botanical Name	Plant Family	Duration of Plant	Propagation Method	Planting					Soil Preference				Remarks
				Place	Depth	Distance, Inches	Rows, Inches	Month	Exposure	Fertility	Type	Moisture	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Lavendar, <i>Lavandula</i> sp.....	L	P	C,D,S	I	¼ M	18	30	S,O,F,M	P	M	A	D	English, fragrant; French used for borders of herb garden; used in linen closets
Marjoram, Sweet, <i>Marjorana hortensis</i>	L	A	S,C,D	I	¼ M	15	30	S,O,F,M	S	M	A	A	Flavoring for soups, roasts, salads
Peppermint, <i>Mentha piperita</i>	L	P	R	O	3	15	40	F,M	S	M	A	M	Shear portions of bed alternately; tender leaves and stems used for flavoring
Rosemary, <i>Rosmarinus officinalis</i>	L	P	S,C,D	I	¼ M	15	30	S,O,F,M	S	P	L	D	Seasoning for meats, poultry, dressing
Rue, <i>Ruta graveolens</i>	Rut	P	S,C,D	I	¼ M	15	20	S,O,F,M	S	M	A	A	Very bitter
Sage, <i>Salvia officinalis</i>	L	P	S,C,D	I	¼ M	15	20	S,O,F,M	S	M	A	A	Good for all seasonings
Spearmint, <i>Mentha viridis</i>	L	P	R	O	3	15	40	F,M	S	M	A	M	Used for oils and flavorings
Tumeric, <i>Curcuma longa</i>	Z	P	R	O	3	10	30	F,M	P	R	A	M	Resembles ginger; used in Bread and Butter pickles, mustard, etc.

ABBREVIATIONS

- COL. 1. Family Name: B—Boraginaceae; L—Labiatae (Mint); Rut—Rutaceae; U—Umbelliferae; Z—Zingiberaceae.
 COL. 2. A—annual; P—perennial; (A)—treated as an annual.
 COL. 3. C—cuttings; D—divisions; R—rhizomes; S—seeds.
 COL. 4. O—open; I—indoors or in special seedbeds for later transplanting.
 COL. 5. The depth is given in inches. M indicates that the row or seedbed should be covered with mulch or burlap to conserve moisture until the plant is rooted.
 COL. 6. Refers to distance apart at final thinning.

- COL. 7. Rows should be spaced at intervals given.
 COL. 8. Refers to best time for planting; S—Sept.; O—Oct.; F—Feb.; M—March.
 COL. 9. S—exposed to sun; P—partial shade required for best results.
 COL. 10. P—poor; M—medium rich, any fair garden soil; R—rich, fertile.
 COL. 11. L—light soil; A—average garden soil, well tilled.
 COL. 12. M—moist, but well drained garden soil; D—dry; A—average well drained garden soil.

