

TRELLISED CUCUMBERS

Douglas C. Sanders and Jeanine M. Davis

Extension Horticultural Specialists

September 1993 LEAFLET NO. 14-B (Revised)

Fresh market (slicer) cucumbers have been produced commercially in North Carolina for many years. The average yield from commercial fields has been 850-950 bushels per acre or 2-3 times the average yield from non-trellised fields. Some reasons for higher yields and often higher prices from trellising appear to be:

1. Improved fruit quality, particularly with respect to color and shape. Trellised cucumbers have no yellow "ground spot".
2. More effective control of many diseases and insects.
3. Less damage to vines resulting in a longer harvest season.
4. More thorough harvesting resulting in fewer jumbos and culls.

Harvesting trellised cucumbers is easier than harvesting ground grown cucumbers since fruit hang where visible and easily reached. Production of cucumbers on trellises, however, involves a greater investment than when grown on the ground. Some reasons for this are:

1. Cost of erecting trellises.
2. Labor for trellising and pruning.
3. Field clean up at end of the season.

Handling plants during trellising and pruning may also spread certain bacterial and viral diseases in the field.

Selection of Site. Choose a field which is readily accessible. This is important for good management, especially at harvest time when the crop is being hauled to market. A nearby source of irrigation water can mean the difference between an average crop and a superior one if irrigation is required at critical times. Good air circulation and air drainage is important in guarding against frost. These will also minimize certain disease problems. Select a southern exposure if earliness is important.

A sandy loam to clay loam soil, high in organic matter, is ideal. Soils that cake or crust result in poorer stands. The soil should have good drainage and be naturally fertile. An ideal soil pH is 6.0-6.5. A soil sample should be taken well in advance of planting to determine the need for lime and to obtain proper recommendations for fertilization. The soil should also be assayed for the presence of nematodes, and if present, should be fumigated. Contact your county extension agent for proper procedures for taking and submitting samples for nematode assay and fertility analysis. Avoid planting cucumbers in fields that were planted to cucurbits (cucumbers, squash, pumpkins or melons) the previous year.

Varieties. The ideal variety must produce fruit with the size, shape and color desired by the market. It must have good yielding ability. It should also have resistance to certain diseases, particularly scab and mosaic in the mountain area. Several varieties having good disease resistance have performed very well in trials in the mountains. These include Sprint 440S, Marketmore 76, and Dasher II. Each of these has resistance to scab and mosaic. Take necessary precautions to insure obtaining and planting disease-free seed.

Field Preparation and Fertilization. Well prepared soil is important in obtaining uniform emergence of cucumber plants. Preplant fertilizers, applied based on soil test recommendations, should be worked into the seed bed during preparation. Lime, as required, should be plowed in as early as possible. Soil test results should recommend that phosphate and potash be raised to a high level. Sidedress with ammonium nitrate, beginning when plants start to run. At this time apply 35 pounds of nitrogen per acre (approximately 100 pounds of ammonium nitrate) as a sidedressing. A second application will be needed in 2-3 weeks after the first sidedressing to maintain good growth during the prolonged season for trellised cucumbers.

Planting. The cucumber is a warm season crop. Seed will not germinate at soil temperatures below 50oF with the ideal soil temperature being 70 F. The crop is killed by even light frosts. Ideal temperature for growth and development is 75-80 F.

Plant cucumber seed approximately 1/2 inch deep in well prepared soil. Space rows about 5 feet apart; plants within the row 8-10 inches apart. If seeding is done by hand, about 1 pound of seed per acre will be required. If machine planting is employed, 2 pounds may be needed. A slightly raised bed will aid in drainage and may help in control of certain diseases.

Trellises. The most satisfactory trellis is one approximately 6 feet high with a top (No. 8) and bottom (No. 12) wire and plastic twine tied between the two wires at each plant. Posts should be no more than 15 feet apart and the top wire should be very tight. A "stiff knee" (additional brace) between posts may be required in the season when the fruit load becomes heavy.

Cucumber_1993.txt

Training and Pruning. Cucumber plants will not climb the trellises satisfactorily by themselves. Training the main stem is required until it reaches and extends over the top wire. About 3 or 4 trips over the field are required to complete the vine training.

Pruning the lateral runners near the base of the plant will result in higher yields. The first 4-6 lateral runners that appear should be removed. Other runners above this point should be allowed to run where they will.

Pollination. Cucumber fruit are produced only when insects carry pollen to the female flower. Honeybees are essential for this purpose. Provide at least 1 strong hive per acre. Locate the hive near the edge of cucumber field and in a position that will protect it from direct contact with pesticides. Insecticides should be applied in late afternoon to minimize the number of bees killed. The least toxic insecticide that will control the pests is preferable.

Harvesting. Harvest normally begins about 50 days after planting. Pick as frequently as necessary to avoid oversized fruit. Picking every other day will normally be sufficient. Late in the season, during cooler weather, this interval may be extended slightly. With proper care of vines, harvesting in the mountain area should continue until late September or early October.

Removal of the fruit by applying pressure to the stem with the thumb, sometimes results in damage to the stem end of the fruit. If this becomes serious, the stem should be cut off with a knife

or small pruning shears.

The use of any form of mechanical aid, even simple hand carts, to hold picking containers and permit straight-through picking, from one end of the row to another, will greatly reduce harvesting labor. In long fields, provide cross alleys for pick up of filled containers to prevent unnecessary travel within the field.

Harvested fruit should be kept in the shade, prepared for and taken to market as soon as possible.

Pest Control. Crop rotation and the use of resistant varieties and disease-free seed are the most economical methods of pest control. Follow recommendations closely in controlling insects and diseases. (See Plant Pathology Information Note 144 and/or the current issue of the North Carolina Agricultural Chemicals Manual). The cucumber beetle is especially troublesome when plants are very young, and an effective insecticide program with recommended material must be followed to control this and other insect pests. The use of chemicals to control weeds has not been consistently satisfactory. Mulching with straw or plastic will help greatly in controlling weeds and is very beneficial from the standpoint of moisture conservation and stability. Plastic also produces an earlier crop.

STEPS TO SUCCESSFUL TRELLIS CUCUMBER PRODUCTION

1. Select a site with good soil and air drainage.
2. Test soil for fertilizer, lime and nematodes.
3. Choose proper variety.
4. Prepare good seed bed.
5. Produce good stand by carefully planting proper amount of seed.

6. Use a strong trellis with only 15 feet between posts.
7. Train and prune frequently.
8. Have a hive of bees for each acre.
9. Control insects, diseases and weeds.
10. Harvest frequently and grade for quality pack.

* * * * *

CUCUMBERS FOR FRESH MARKET
Jonathan R. Schultheis
Extension Horticultural Specialist
September 1993 LEAFLET NO. 14

SOIL SELECTION

Soil must be well-drained, not subject to standing water. The pH should be greater than 6.0 with optimum at 6.1-6.5. Turn and disk soil to prepare a smooth seedbed. Choose soil which was not planted to cucumbers or other cucurbit crops last year.

NEMATODE CONTROL*

Have nematode assay made. If treatment is recommended use fumigant type nematicide. Observe a 2-3 week waiting period. Double rates on peat and muck soils.

FERTILIZATION

Follow soil test report or apply 40-50 pounds each of nitrogen and phosphorus and 80-100 pounds of potassium; broadcast and disk in. Add 30-40 pounds of nitrogen as a sidedressing or sideplace 30-40 pounds each of nitrogen and phosphorus and 60-70 pounds of potassium. Add 30-40 pounds of nitrogen as a sidedressing when vines begin to run.

PLASTIC MULCH AND DRIP IRRIGATION

If you can justify top yields and management, mulch and drip are worth the money and effort. Use 6 inch high raised beds. Fumigate, lay plastic and drip 3-4 weeks before planting. Use double rows per bed. Transplant with a water wheel or use a polyplanter. Irrigate daily when soil moisture is below 70% available soil moisture.

Read more in Horticultural Information Leaflet No. 33 and Bulletin, Introduction to Drip Irrigation.

VARIETIES

Centurian - very early and high yielding variety. Fruits dark green, long and well-shaped; use for spring planting.

Dasher II - early, dark green smooth hybrid with adequate disease resistance; use for spring planting.

Guardian - three days later than Sprint. It has long, uniformly shaped fruit and has consistently been a good variety; use for spring planting.

General Lee - Excellent yields, high quality fruit, spring planting. Good disease resistance.

Marketmore 76 - good for mountain trellis production. High quality fruit, lower yields. Spring planting.

Maximore 101 - yielded well and produced high quality fruit in research trials. Spring and fall plantings.

Poinsett 76 - slightly later than Sprint. Good, dark green, uniform short length fruit with excellent disease tolerance.

Yields are very consistent in the mid-range. Continuous multiple harvest (good pick-your-own). Excellent for fall planting.

Revenue - same maturity as Sprint. It has a long, uniformly shaped fruit and has very good foliar disease tolerance. Use for spring crop only.

Sprint 440S - a very early hybrid and high yielding variety, but poor quality fruit. Dark green. Disease resistant.

SEEDS AND PLANTING

Use a precision seeder; this reduces seed cost and improves yields. Use only seed treated with a fungicide and insecticide. For earliest crop, plant on light soil. Windbreaks of small grain will provide protection for young seedlings in spring. Soil temperature at 2 inch depth should be above 60 F at planting. Plant seeds 1/2 to 1 inch deep in spring and 1 to 1 1/2 inches for fall crops. The final stand should be about 8-10 inches between plants. Row width can be from 42-60 inches apart depending on your needs. Plant on raised rows (4-8 inches high).

WEED CONTROL*

Generally, chemical herbicides should be used for controlling weeds, especially early season grasses. Consult the N.C. Agricultural Chemicals Manual for the latest recommendations. Avoid fields with difficult weeds like cocklebur, bermudagrass and Johnsongrass. Use the "stale bed" technique, where weeds are allowed to germinate and are then killed with a contact herbicide at planting.

GETTING AND KEEPING A GOOD STAND* The first insect to feed on young cucumbers is striped and spotted cucumber beetles. Spraying

will be necessary. If there are signs of young seedlings damping off, spray with a fungicide. This is more likely to occur on poorly drained soils.

FOLIAR INSECTS*

In spring crops, insects are generally not a problem once the crop is established, providing beetle populations have not been allowed to go unchecked. After July 1st, growers should be on the lookout for pickleworms, which can be devastating. Start the program shortly after blooming starts.

FOLIAR DISEASES*

If clean seeds were planted in soils which were not planted to vine crops last year, foliar disease will usually not be a problem until harvest begins. If you intend to keep foliage diseases in check, you will have to start early. Use a high pressure sprayer (200 psi plus).

FRUIT DISEASES

Belly rot (fruit rots) are very expensive to the cucumber grower. After the last cultivation, spray the row and soil surface with a cleared fungicide. Do not cultivate after this application. This treatment will not completely preclude belly rot but should greatly reduce it.

POLLINATION

Cucumbers are dependent on bees to transfer pollen from the male to the female blossoms. Use one strong colony per acre into the field after blooming has started. Protect bees from insecticide application by spraying late in the day. Read Extension Leaflet

AG 84, Pollination in Vine Crops for more information.

HARVESTING

Start harvest as soon as a reasonable number of fruits meet grade. Cucumbers are very perishable. Remove from the field, package and cool as soon as practical.

COOLING

Keep fruit in shade before packing to reduce weight loss. Use forced air cooling to reduce field heat rapidly. Hold in a coldroom at 50-55 F prior to shipment. Make sure truck is cooled before loading.

US GRADE REQUIREMENTS. (SOURCE US STANDARDS FOR CUCUMBERS-USDA)

March 1, 1958

Grade	Minimum Length	Maximum Diameter
U.S. Fancy	6 inches	2 3/8 inches
U.S. Extra #1	6 inches	2 3/8 inches
U.S. #1	6 inches	2 3/8 inches
U.S. #1 Small	No requirements	2.0 inches (1 1/2 inch min.)
U.S. #1 Large	6 inches	None (2 1/2 inch min.)
U.S. #2	5 inches	2 3/8 inches

* For up-to-date information on pesticides consult the N.C. Agricultural Chemicals Manual or your county extension agent.

STEPS TO SUCCESSFUL FRESH MARKET CUCUMBER PRODUCTION

1. Select well-drained soil.
2. Test soil for lime, fertilizer and nematocide needs.

3. Choose a variety well-liked in the market.
4. Prepare a fine seed bed.
5. Use raised beds.
6. Don't use excessive amounts of seed.
7. Sidedress at least twice.
8. Use bees.
9. Spray for insects with high pressure sprayer.
10. Irrigate frequently. It pays!
11. Grade carefully.
12. Cool after packing.

* * * * *

PICKLING CUCUMBERS

J. R. Schultheis

Extension Horticultural Specialist

September 1993 LEAFLET NO. 14-A (Revised)

SOILS

Pickling cucumbers grow well on a wide range of soils but a fertile, sandy loam with high organic matter content is preferred. Avoid soils that pack or crust. Plowing under cover crops will increase organic matter and reduce crusting. Subsoiling or ripping underneath the row allows greater root penetration and better growth and drought tolerance. Avoid planting in low wet areas of the field since they are cooler and may be prone to frost.

ROTATION

Some diseases that attack cucumbers survive during winter on debris of cucumbers and other cucurbits. For this reason it is best not to plant this crop behind cucumbers, muskmelons, squash,

pumpkins or watermelons. A good rotation is to follow small grain or corn.

SOIL SAMPLE

Have the soil tested early and follow recommendations. The best pH range is 6.0-6.5.

FUMIGATION*

Cucumbers are extremely susceptible to root knot nematode. Fumigant type nematicides are best. Have your soil tested for nematodes.

SOIL PREPARATION

Turn soil early to hasten decay of old plant material and cover crop, and reduce diseases and insects. Prepare soil into a fine seed bed. Plant on ridged row, usually 4-6 inch ridges are best. Prepare rows well in advance and "strike off" at seeding. Light sandy soils warm up faster than darker soils.

VARIETIES

Following is a list of the most commonly grown or recommended varieties with disease resistance and description.

Variety	Disease Resistance ¹	Description
Calypso	CMV,DM,PM,A,ALS,S	Consistent producer in spring and fall plants, multiple harvest
Cross Country	DM	Long fruit, once-over harvest

Cucumber_1993.txt

Discover	DM,A	Large fruit, fair color, once-over harvest
Fancipak	DM,A	Dark green color, multiple harvest
Johnston	DM,A	High yielding, quality fruit, once-over harvest
Primepak	DM,PM,A	Very long fruit, good quality, once-over harvest
Raleigh	DM,A	High yielding, quality fruit, multiple harvest
Regal	CMV,DM,PM,A,ALS,S	Long fruit, once-over harvest
Royal	CMV,DM,PM,A,ALS,S	Long fruit, once-over harvest
Transamerica	DM,A	Good yielding, multiple harvest

1 Disease resistance symbols: CMV = cucumber mosaic virus, DM = downy mildew, PM = powdery mildew, A = anthracnose, ALS = angular leaf spot, S= scab.

FERTILIZATION

Apply fertilizer on the basis of a soil test. If soil is not tested, broadcast 1,000 pounds of 8-8-8, 800 pounds of 10-10-10, or 400 pounds of 20-20-20; 7-10 days before planting, disk in and ridge rows.

SIDEDRESSING

Apply 20-30 pounds of nitrogen at layby, about 21 days after seeding. If leaching rains have occurred consider reapplying 20-30 pounds of potassium.

PLANTING

Do not plant too early. Cucumbers germinate very slowly when soil temperature is below 65 F and, in some instances, later plantings will harvest before cucumbers planted too early. Plant 1/2 to 1 inch deep in 42-inch rows and space plants 8-10 inches in the row. If wider rows are desired, space plants closer in the drill.

Note: Chemical recommendations in this leaflet are in effect at the time of printing. Since pesticide registrations are subject to change on short notice, growers should seek professional assistance in verification of current materials and/or rates. Additional information on diseases, insects, and weed control is available in the current issue of the N.C. Agricultural Chemicals Manual.

WEED CONTROL*

There are several good herbicides for cu-cumbers or a stall bed technique can be used.

INSECTS*

Cucumber beetles and pickle worms are major problems. They can be controlled with weekly sprays of the proper materials. The pickle worm should be controlled after first appearance in the spring by weekly sprays. Pickleworm is always a problem for fall cucumbers.

POLLINATION

Bees are essential for pollination. Place one strong (30,000 bees) colony per acre in or near the field after blooming starts. Fields having any dimension greater than 150 yards should have

hives placed in the field. Exercise caution with insecticides to avoid killing bees. Apply insecticides in late afternoon. Use spray formulations to reduce drifts.

DISEASES*

Control foliage diseases with any of several compounds according to manufacturer's label. For belly rot control, spray the soil surface after the last cultivation with proper material. Do not disturb soil after application.

HARVEST

Pick clean 2-3 times a week. The more fruit you pick the more the vines will produce. This point cannot be over-emphasized. Avoid leaving stems and blooms on fruit. Keep fruit in shade after harvest to reduce shriveling and weight loss.

IRRIGATION

Cucumbers have a very shallow row system and few plants suffer more during drought. The average grower can increase yields by as much as 50 percent or more in years of medium to low rainfall. Irrigate only in afternoon (after 4:00 p.m., preferably) to avoid reducing bee activity. Do not hesitate to irrigate. IT PAYS!

Steps to Successful Pickling Cucumber Production

1. Select a well-drained soil.
2. Test soil for lime, fertilizer and nematocide needs.
3. Choose a good variety.
4. Prepare a fine seedbed.
5. Use raised beds.

6. Don't overuse seed amounts.
7. Sidedress at least twice.
8. Use bees.
9. Spray for insects with high pressure sprayer.
10. Irrigate frequently. It pays!
11. Harvest frequently. Small fruits make profits!

* Consult the current issue of N.C. Agricultural Chemicals Manual and Extension Circular No. 593 or Horticultural Information Leaflet No. 31 for information regarding available materials for pest control. Consult your county extension agent if you have further questions.

* * * * *

TRELLISED CUCUMBERS

Douglas C. Sanders and Jeanine M. Davis
Extension Horticultural Specialists
September 1993 LEAFLET NO. 14-B (Revised)

Fresh market (slicer) cucumbers have been produced commercially in North Carolina for many years. The average yield from commercial fields has been 850-950 bushels per acre or 2-3 times the average yield from non-trellised fields. Some reasons for higher yields and often higher prices from trellising appear to be:

1. Improved fruit quality, particularly with respect to color and shape. Trellised cucumbers have no yellow "ground spot".
2. More effective control of many diseases and insects.
3. Less damage to vines resulting in a longer harvest season.
4. More thorough harvesting resulting in fewer jumbos and culls.

Harvesting trellised cucumbers is easier than harvesting ground grown cucumbers since fruit hang where visible and easily reached. Production of cucumbers on trellises, however, involves a greater investment than when grown on the ground. Some reasons for this are:

1. Cost of erecting trellises.
2. Labor for trellising and pruning.
3. Field clean up at end of the season.

Handling plants during trellising and pruning may also spread certain bacterial and viral diseases in the field.

Selection of Site. Choose a field which is readily accessible. This is important for good management, especially at harvest time when the crop is being hauled to market. A nearby source of irrigation water can mean the difference between an average crop and a superior one if irrigation is required at critical times. Good air circulation and air drainage is important in guarding against frost. These will also minimize certain disease problems. Select a southern exposure if earliness is important.

A sandy loam to clay loam soil, high in organic matter, is ideal. Soils that cake or crust result in poorer stands. The soil should have good drainage and be naturally fertile. An ideal soil pH is 6.0-6.5. A soil sample should be taken well in advance of planting to determine the need for lime and to obtain proper recommendations for fertilization. The soil should also be assayed for the presence of nematodes, and if present, should be fumigated. Contact your county extension agent for proper procedures for taking and submitting samples for nematode assay and fertility analysis. Avoid planting cucumbers in fields that

were planted to cucurbits (cucumbers, squash, pumpkins or melons) the previous year.

Varieties. The ideal variety must produce fruit with the size, shape and color desired by the market. It must have good yielding ability. It should also have resistance to certain diseases, particularly scab and mosaic in the mountain area. Several varieties having good disease resistance have performed very well in trials in the mountains. These include Sprint 440S, Marketmore 76, and Dasher II. Each of these has resistance to scab and mosaic. Take necessary precautions to insure obtaining and planting disease-free seed.

Field Preparation and Fertilization. Well prepared soil is important in obtaining uniform emergence of cucumber plants. Preplant fertilizers, applied based on soil test recommendations, should be worked into the seed bed during preparation. Lime, as required, should be plowed in as early as possible. Soil test results should recommend that phosphate and potash be raised to a high level. Sidedress with ammonium nitrate, beginning when plants start to run. At this time apply 35 pounds of nitrogen per acre (approximately 100 pounds of ammonium nitrate) as a sidedressing. A second application will be needed in 2-3 weeks after the first sidedressing to maintain good growth during the prolonged season for trellised cucumbers.

Planting. The cucumber is a warm season crop. Seed will not germinate at soil temperatures below 50oF with the ideal soil temperature being 70 F. The crop is killed by even light frosts. Ideal temperature for growth and development is 75-80 F.

Plant cucumber seed approximately 1/2 inch deep in well prepared soil. Space rows about 5 feet apart; plants within the row 8-10 inches apart. If seeding is done by hand, about 1 pound of seed per acre will be required. If machine planting is employed, 2 pounds may be needed. A slightly raised bed will aid in drainage and may help in control of certain diseases.

Trellises. The most satisfactory trellis is one approximately 6 feet high with a top (No. 8) and bottom (No. 12) wire and plastic twine tied between the two wires at each plant. Posts should be no more than 15 feet apart and the top wire should be very tight. A "stiff knee" (additional brace) between posts may be required in the season when the fruit load becomes heavy.

Training and Pruning. Cucumber plants will not climb the trellises satisfactorily by themselves. Training the main stem is required until it reaches and extends over the top wire. About 3 or 4 trips over the field are required to complete the vine training.

Pruning the lateral runners near the base of the plant will result in higher yields. The first 4-6 lateral runners that appear should be removed. Other runners above this point should be allowed to run where they will.

Pollination. Cucumber fruit are produced only when insects carry pollen to the female flower. Honeybees are essential for this purpose. Provide at least 1 strong hive per acre. Locate the hive near the edge of cucumber field and in a position that will protect it from direct contact with pesticides. Insecticides should be applied in late afternoon to minimize the number of

bees killed. The least toxic insecticide that will control the pests is preferable.

Harvesting. Harvest normally begins about 50 days after planting. Pick as frequently as necessary to avoid oversized fruit. Picking every other day will normally be sufficient. Late in the season, during cooler weather, this interval may be extended slightly. With proper care of vines, harvesting in the mountain area should continue until late September or early October.

Removal of the fruit by applying pressure to the stem with the thumb, sometimes results in damage to the stem end of the fruit. If this becomes serious, the stem should be cut off with a knife or small pruning shears.

The use of any form of mechanical aid, even simple hand carts, to hold picking containers and permit straight-through picking, from one end of the row to another, will greatly reduce harvesting labor. In long fields, provide cross alleys for pick up of filled containers to prevent unnecessary travel within the field.

Harvested fruit should be kept in the shade, prepared for and taken to market as soon as possible.

Pest Control. Crop rotation and the use of resistant varieties and disease-free seed are the most economical methods of pest control. Follow recommendations closely in controlling insects and diseases. (See Plant Pathology Information Note 144 and/or the current issue of the North Carolina Agricultural Chemicals Manual). The cucumber beetle is especially troublesome when plants are very young, and an effective insecticide program with

recommended material must be followed to control this and other insect pests. The use of chemicals to control weeds has not been consistently satisfactory. Mulching with straw or plastic will help greatly in controlling weeds and is very beneficial from the standpoint of moisture conservation and stability. Plastic also produces an earlier crop.

STEPS TO SUCCESSFUL TRELLIS CUCUMBER PRODUCTION

1. Select a site with good soil and air drainage.
2. Test soil for fertilizer, lime and nematodes.
3. Choose proper variety.
4. Prepare good seed bed.
5. Produce good stand by carefully planting proper amount of seed.
6. Use a strong trellis with only 15 feet between posts.
7. Train and prune frequently.
8. Have a hive of bees for each acre.
9. Control insects, diseases and weeds.
10. Harvest frequently and grade for quality pack.

* * * * *

CUCUMBERS AND PICKLES

Slicing cucumbers are long and must be sliced or quartered before pickling. Pickling cucumbers are short and blocky. Pickling varieties tend to produce a lot of fruit in a short time period.

Cucumbers are a warm-season crop planted from May 1 to August 1. Planting earlier is possible if hot caps or a plastic covering is used to protect young plants from the cold. No fruit is produced until the temperatures reach 60 degrees F.

Planting -- Plant a seed is planted every 3 inches in 5-foot

rows. Plants are thinned, leaving a plant each foot. Another method is to plant 4 to 5 seeds every 2 to 3 feet, out of which two plants are kept; vines are allowed to run anywhere. Plant seeds from 1/2 to 1 inch deep.

Cucumbers can be trained up a cage or trellis. They take up less room and produce straight fruit. Plant 2 to 3 plants per cage or plant 2 seeds every 6 inches, and thin one for the trellis. Since cucumber plants are heavy, it takes a sturdy trellis to support the weight. For the small garden or the patio, small cucumber varieties that can be grown in containers are available.

Lime and Fertilizer -- The pH should be between 6.0 and 6.5. Apply lime if necessary. Manure or commercial fertilizer can be used before planting. Broadcast 2 lbs of a 5-5-10 or 1 lb of 10-10-10 per 100 square feet before planting. When vines begin to run, sidedress with 1/2 lb of 5-5-10 per 10 ft of row or 1/2 lb of 10-10-10 per 20 feet of row. Repeat in three weeks.

Pest Control -- Insects are the major problem because they cause foliage damage and transmit disease organisms. The cucumber beetle eats holes in the leaves and carries bacterial wilt. Aphids distort the leaves and transmit viral agents.

Cucumbers must be pollinated by insects to produce fruit; don't spray insecticides until after 4 p.m. to avoid killing beneficial insects.

Harvest -- Slicing cucumbers are picked when they are 6 to 8 inches long, pickle cucumbers when they are 2-1/2 to 3 inches long, and cucumbers for gherkin pickles when they are very small. The European-type cucumbers are longer slicers and are usually picked when they reach 8 to 12 inches. Don't allow cucumbers to mature on the vine; they will cease to produce.

Cucumber_1993.txt

Varieties -- Cucumbers for small gardens or containers Patio Pik or Peppi. Patio Pik can be used for pickling or slicing, and Peppi for pickling. Slicers - Marketmore 76, Poinsett 76, Dasher II, Raider, Striker, and High Mark II. Burpless Types - Burpless 26 and Sweet Success Hybrid. Pickling - Calypso, Flurry

Compiled by: S. Derby Walker, Jr., County Agricultural Agent

```
=====
BBS: the Crystal Mountain BBS
Date: 05-19-92 (10:16)      Number: 6075
From: LAWRENCE LONDON      Refer#: NONE
To: ALL                    Recvd: NO
Subj: Cucumbers (from Usenet, r   Conf: (33) Sust.Ag.
-----
```

Article 7520 (116 more) in rec.gardens:
From: Beverly Erlebacher
Subject: Re: Two easy questions
Date: 19 May 92 23:18:19 GMT

```
> 1. strange cukes?
> I have several cuke plants (about 18) , that seem to
> be some kind of hybrid or something. It seems at least
> from my observation that the flowers are all female,
> and all are fertile! the plants have about 150 cukes
> and they all seem to be set on, I have not seen one
> male flower on any of these plants.
```

You have a variety that is gynoecious and parthenocarpic. Gynoecious means female flowers only, and parthenocarpic means they set fruit without pollination. These traits are very convenient for greenhouse growers, and lately have become available in outdoor cucumber varieties. The original parthenocarpic varieties could only be used in greenhouses because they became seedy and gourd-like if they got pollinated.

Cucumber_1993.txt

"They" have been doing a lot of strange things with cucumber sexuality in the plant breeding biz. The Ontario Ministry of Agriculture has a factsheet I've always wanted to get a copy of and frame, called "Sex Expression in Cucumbers".

* Origin: EARTH*Net*Host:SUSTAINABLE AGRICULTURE Echo*919-9323115 (1:151/502)

Here is the information for a 100 foot row of CUCUMBERS

Approximate yield is 120 lbs. at a spacing of 12-15 inches between plants.

You will need between 1/4 AND 1/2 ounces of seeds.

Fertilizer rates :

::Manure (approximate): 100 lbs.

::Chemical (10-10-10): 5 cups.

CUCUMBERS is a vine.

This crop will do OK in almost any soil and with a pH range of 5.5-7.0.

Pick a spot that provides full sun; will tolerate some shade.

Growing seasons: Spring: no
 Summer: yes
 Fall: no
 Winter: no

From seed to first harvest is nominally 9 weeks.

Seeds can be started indoors as early in the spring as 1

Cucumber_1993.txt

weeks before your growing areas last
spring frost and then transplanted into the garden in about 2 weeks.

From transplant time to the first harvest is usually about 7 weeks
with around 8 weeks of harvesting.

A fall planting is not recommended for CUCUMBERS.