myself to can at least.....quarts of Fruits and Vegetables, thereby saving perishable foods and relieving transportation.

Signature..... *Age* (if under 21).....

P. O. Address.....

Town.....

"The Food Administration is doing everything in its power to encourage home canning and gives assurance that no home canned products will be seized by the Government."

COMMITTEE OF FOOD SUPPLY CONNECTICUT STATE COUNCIL OF DEFENSE
CONNECTICUT AGRICULTURAL COLLEGE COUNTY FARM BUREAUS

PLANTING CHART FOR HOME GA[illegible]NS PLANT IN ABOUT ORDER OF CHART

Size of garden 40x60′	Distance of rows apart	Length of row for each product	Variety or type	Time of planting	Depth of planting	Quantity of seeds or plants	Space between plants	Cultural remarks
I Peas	36″	Double rows Two 40′	Wrinkled; early as Nott's excelsior. Late as Heroine	Early, as soon as frost is out and can be worked. Later, ten days or two weeks after first	Early, 2″. Late, 4″.	½ pt. of each variety	Two or three inches	Cultivate with hoe or rake to keep ground stirred and soft
II Onions from seeds	14″ to 16″	Two 40′ rows	Some yellow or red, as Yellow Danvers, Red Wethersfield	Soon after first peas	¾″ to 1″	Seed ½ oz.	One or two inches	Frequent raking, keeping land level, do not bank up to plant, keep free from weeds
III Beets	14″ to 16″	One 40′ row	Some early. Blood turnip type	⅓ soon after onions, ⅓ two weeks later, ⅓ four weeks from first	¾″ to 1″	Seed 1 oz.	Thin and use till three or four inches apart	Frequent and clean hoeing or raking
IV Carrots and Parsnips	14″ to 16″	One 40′ row	Danvers, Chantenay, or Oxhart, Hollow Crown Parsnip	Sow all soon after first beets	½″ to ¾″ ½″	Carrots ½ oz. Parsnip ¼ oz.	Two or three inches	Same as beets
V Cabbage	30″	One 40′ row	⅓ row early as Copenhagen. ⅔ row Succession	Put in plants of early as soon as hard freezing is over; succession late May	Set plant down to first leaves	Early, 10 plants. Succession 12 to 14 plants	Early, 15 inches. Late, 18 to 24 inches	Hoe frequently. Put on tar paper pads to keep off cabbage maggot. Hold all moisture possible
VI Sweet Corn	36″	Three 40′ rows	White cob cory, golden bantam, early evergreen	In succession as soon as danger of frost is past	1½″ to 2″	½ pt. or ¼ lb. of each	10 to 12″ and 1 plant in each place	Hoe frequently or rake ground with garden rake
VII Beans	30″	Two 40′ rows	Green pod stringless, golden eyed wax, bountiful improved dwarf horticultural	Soon after first sweet corn	Same as corn	1 pt. for each row.	10 to 12″ and 1 plant in each place	Frequent hoeing when foliage is dry. Do not hoe when dew is on. Keep clean
VIII Tomato	48″	One 40′ row	Earliana, John Baer, Bonny Best, Early Jewell, Matchless, Truckers' Favorite, Stone.	Put in plants when danger of frost is past	Set plants down well; 2 or 3″	12 plants	3 feet apart if not staked	Frequent hoeing and clean cultivation. Spray with Bordeaux for disease.
IX Turnips and Kohl Rabi	18″	½ 40′ row Kohl Rabi; ½ 40′ row winter turnip	Early Vienna Kohl Rabi. American purple top winter	Kohl Rabi at time of beets. Winter, about first of July	Sow ½″ to ¾″ deep	¼ oz. of each	2 to 4″ and pull as mature. Winter, 4 to 6″	Clean and shallow cultivation
X Potato	30″	Nine or ten 40′ rows	Cobbler, New Queen, Green Mt.	From early May until early June	From 4″ to 6″	From 18 to 25 lbs. of each	12 to 16″ one piece in a place	Hoe frequently, first fairly deep but later shallow. When 1′ high spray with Bordeaux and repeat in 10 days for four times
XI Squash		Summer, 2 hills on end of potato row. Winter, one hill in corn	Some bush form. Hubbard	When soil is well warmed	About 1½″	Summer, 8 seeds; Winter, 4 or 5 seeds	Hill of summer, 2″; Winter, 6 to 8′	Hoe and keep clean. Pick squash bugs

Prepared by A. T. Stevens of the Connecticut Agricultural College for the Home Gardens Departm[illegible] of the Committee of Food Supply Connecticut State Council of Defense

Form No. 39.

Recipes for Conserving Early Products

Prepared by Connecticut Agricultural College

FOR

STATE OF CONNECTICUT COMMITTEE ON FOOD SUPPLY.

I.

CANNING ASPARAGUS.

1. Wash and prepare as for cooking. Do not cut in pieces.
2. Bind in small bundles as they are sold in market.
3. Stand on butts in steamer or a kettle with two or three inches of boiling water. Cover kettle to confine the steam. Let cook two minutes. Lay asparagus down and cover as before. Cook two minutes.
4. Give the asparagus a quick plunge in cold water to chill it. It may be dipped two or three times but do not let it stay in cold water.
5. Pack it in the jar. It may be put in whole or cut in pieces. Do not crowd too much.
6. Add one level teaspoon of salt for one quart jar. This may be omitted if desired.
7. Fill jar with boiling water.
8. Put rubber in place and partially seal. If a Lightning jar is used, put on glass top and the spring over the top, but leave the clamp spring up.
9. Set the jars in a wash boiler or deep kettle. Have the water boiling and count time when it begins to boil again vigorously. Cook 1½ hours. Have water at least an inch over top of jar. Cover boiler while cooking. (If using a steam pressure outfit cook 50 minutes under 5 pounds of steam or 25 minutes under 15 pounds of steam.) When done remove jar and tighten seal at once.

II.

CANNING GREENS.

1. Sort, clean and wash.
2. Blanch in steam 15 or 20 minutes.
3. Plunge quickly into very cold water.
4. Cut in convenient length.
5. Pack in the jar.
6. Add 1 level teaspoon salt to a quart jar.
7. Fill jar with boiling water.
8. Place rubber and partially seal jar.
9. Place jar in cooker and follow the same directions for cooking that are given for asparagus.
10. When done remove jar and tighten seal at once.

SUGGESTIONS.

1. Sometimes a rubber springs out in cooking, if so, put on new rubber, fix seal as before and put back to cook ten minutes, then remove jar and seal.
2. Have a wire or wooden platform with holes in it under the cans in the kettle.
3. Be sure to use freshly cut product; carry the process through without delay.
4. Put rubbers in boiling water for 2 or 3 minutes and if there is an odor of tar or any adulterant it may be detected at once.
5. Mason jars are not as reliable for sealed vegetables as Lightning jars because the sharp edge may cut into the rubber which has been softened by long cooking.

III.

SALTING GREENS.

Because of the shortage of jars it is possible to conserve dandelions and other greens by using the following method, which is very satisfactory. Use a stone crock with a cover.

1. Sort, clean and thoroughly wash leaves.
2. Put a layer of salt about ¼" deep in the bottom of the stone crock.
3. Shake water from the leaves but do not dry them. Put in the crock a layer of leaves about 1½" deep, well packed.
4. Then add another layer of salt and greens until crock is well filled.
5. Put an earthern plate on top and weight it with a stone.
6. Place cover of crock on and keep in cool place. Do not add water.

The crock need not be filled at one time but additions may be made as the fresh product is gathered.

These greens will need to be soaked several hours before cooking. Because of their bitter flavor and also to remove surplus salt, dandelions may be blanched five minutes and cold dipped before the final cooking for serving.

IV.

CANNING RHUBARB.

1. Wash stalks clean.
2. Cut into pieces of ¾ of an inch in length. (Do not remove skin)
3. Blanch 2 minutes.
4. Plunge quickly into very cold water.
5. Pack in glass jars.
6. Pour on syrup boiling (1½ quarts of sugar to 1 quart water boiled to medium thickness)
7. Place rubber and partially seal jar.
8. Place jar in cooker and follow directions for cooking that are given for asparagus but cook only 20 minutes.

V.

CANNING STRAWBERRIES.

1. Can fresh sound berries the same day they are picked.
2. Hull and place in strainer.
3. Pour water over to cleanse.
4. Pack in jar without crushing.
5. Pour hot syrup (as for rhubarb) over berries to top.
6. Place rubber and partially seal jar.
7. Place jar in cooker and follow directions for cooking that are given for asparagus but cook only 8 minutes.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF CONNECTICUT

Connecticut Agricultural College
U. S. Department of Agriculture
Bureau of Entomology and Connecticut Committee of Food Supply
Cooperating

Extension Service
Home Gardens

Hartford, Conn., June 14, 1918.

PROTECT YOUR POTATO CROP FROM INJURY BY INSECTS AND DISEASES

TO POTATO GROWERS:

It is estimates by the United States Department of Agriculture that 100,000,000 bushels of potatoes are lost in the United States each year, as the result of injury by insects and diseases. Make Connecticut's percentage of this loss as small as possible. There are three main reasons why you should spray your potatoes.

1: The Colorado potato beetle (common potato bug) eats the leaves. Controlled by spraying with arsenate of lead, using one tablespoon powder (two tablespoons paste) to one gallon of water or for larger quantities, two pounds powder (four pounds paste) to 50 gallons of water. Spray when beetles appear. Repeat when necessary. Add Bordeaux mixture if flea beetles are present and after July 1st to control late blight.

2: Late blight. (Leaves spotted, dark brown in color, spots turn yellow and leaves die). Spray with Bordeaux using the regular mixture of about 4-4-50 strength. This disease is worst in hot, sultry weather.

3: The potato aphids, or plant lice (caused considerable damage last year to Connecticut crops). Green, soft bodied insects; suck sap from shoots and stems. Spray with nicotine sulphate solution, using 1 1/2 teaspoonfuls to one gallon of water and to this add a one inch cube of soap for a "sticker", or in larger quantities, use at the rate of 1/2 pint nicotine solution to 50 gallons of water. Only those lice that are hit by this spray are killed. Be sure and spray thoroughly. Spray the under side of the leaves where most of the lice will be found.

If aphids and potato bugs are present at the same time, combine the nicotine sulphate and arsenate of lead, using as one spray. (When this mixture is used, omit using any soap as a sticker).

By proper spraying, your potatoes will be protected to a great extent from injury by insect pests and fungus diseases. For further information write your County Agent, your State agricultural college, Experiment Station, or the U. S. Department of Agriculture.

Yours very truly,
G. M. CODDING,
Special Field Agent in Entomology.

APPROVED:
W. J. Baker
Director of Extension

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Division of Home Gardens
Connecticut Committee of
Food Supply Cooperating.

Hartford, Conn., June 26, 1918.

TO GARDEN SUPERVISORS AND LEADERS:-

Can you use additional copies of the enclosed letter and of those which will follow? To accomplish the result desired it is essential that the subject matter these letters contain be brought before as many people as possible.

Will you make it a part of your work each week to see that the letters are published by your local paper?

If you have bulletin boards where these letters can be displayed and will advise me how many extra copies you can use each week, I will see that you receive them.

Yours very truly,

G M Codding

Special Field Agent
in Entomology.

GMC-SK

D
St 2914 L

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Division of Home Gardens
Connecticut Committee of
Food Supply Cooperating.

Hartford, Conn. June 26, 1918.

TO GARDEN SUPERVISORS AND LEADERS:-

Spraying for both insect pests and fungus diseases should be made as simple and practical as possible. The majority of insects found on garden crops can be divided into two classes: first, those which eat, and second, those which suck the juices from the plants. For insects which eat their food; such as, potato bugs, spray with arsenate of lead. This gets them. For sucking insects spray with nicotine sulphate solution, which will kill all sucking insects it hits. The aphis is an example of a sucking insect. Spraying is usually used as a method of control where insects are concerned.

Spraying for fungus diseases, to be most effective, should be carried out as a preventative measure. Spray before the disease appears. There is just one material used for all fungus spraying; namely, Bordeaux mixture. See that it is used on plants subject to disease, like potatoes which are subject to blight.

Keep your crops insured. SPRAY.

Arsenate of lead and Bordeaux mixture can be and should be used together as one spray, thus saving time and labor. Prevent loss of potatoes from late blight and potato bugs by keeping plants covered from now on with this combined spray.

In several parts of this state, amateur potato growers are making the mistake of planting too near together, and plants should be thinned where this condition prevails. Remember that twelve inches is close enough where potatoes are planted in rows. Don't hill your potatoes too early or too high. If a long dry spell occurs where this has been done, loss will result from drying out.

Keep a sharp watch for aphis (plant lice) and see that plants on which they are found are sprayed with nicotine sulphate solution.

Yours very truly,

G M Codding

Special Field Agent
in Entomology.

GMC-SK

SOME UNUSUAL GARDEN PESTS PRESENT THIS SEASON.

BEAN LEAF BEETLE.

In some gardens bean leaves are being eaten by the bean leaf beetle. The adults are small beetles about one-fifth of an inch long, yellow or buff varying to red, marked with black spots. They eat round and irregular holes through the leaves in early summer and lay eggs on the stems of the food plants. The larvae feed at the base of the stem and on the roots in much the same way as striped cucumber beetles.

Spraying with lead arsenate when the beetles first appear will forestall any serious injury.

THREE-LINED POTATO BEETLE.

The three-lined or old-fashioned potato beetle is unusually abundant. The adults may now be found in nearly every potato field feeding upon the leaves, mating and laying eggs. This beetle somewhat resembles the striped cucumber beetle but is larger, darker in color, and has two black spots on the thorax. The eggs are about the same shape and color as those of the Colorado beetle, but are smaller and fewer in a cluster. A little later the larvae will devour the leaves: they are disgusting in appearance, their backs being covered with black excrement, which they carry about. The spray of lead arsenate commonly used to kill the Colorado potato beetle and its larvae will also kill the three-lined potato beetle in its feeding stages.

W. E. BRITTON
Connecticut State Entomologist.

United States Bureau of Entomology and Committee of Food Supply, Connecticut State Council of Defense cooperating.

POTATO APHIS.

The potato aphis, Macrosiphum solanifolii Ashmead, which caused such widespread damage to the potato crop last year, has just appeared in potato fields around New Haven. In most cases a few aphids are found here and there on the under side of the tender leaves near the tops of the plants. Usually there is the wingless mother, (sometimes green and sometimes pink) with her family of young. Instead of laying eggs this mother gives direct birth to living aphids which, though small at first, become mature in about ten days and in turn produce young. Hence several generations are possible during the summer breeding season.

It is not possible to foretell whether or not this aphid will prove destructive to potatoes during the present season. Lady beetles, lace-wings, syrphid flies and other natural enemies may be sufficiently abundant to keep them in check. On the other hand, last year's experience may be repeated; hence this warning.

Treatment: Spray both sides of the leaves thoroughly with nicotine solution in the following proportions: Nicotine solution, 1 pint; dissolved laundry soap, 2 pounds; water, 50 gallons. Nicotine solution is sold in nearly every town by dealers in insecticides, seeds, etc. Some of the best known brands are "Black Leaf No. 40", "Nikoteen" and "Pratt's Nicotine".

If desired the nicotine (without the soap) may be added to 50 gallons of a mixture of lead arsenate or Bordeaux, or both. The soap is not needed in the presence of these mixtures and may injure the foliage if used.

W. E. BRITTON, State Entomologist,
Agricultural Experiment Station,
New Haven, Conn.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Division of Home Gardens
Connecticut Committee of
Food Supply Cooperating.

Hartford, Conn. July 3, 1918.

D
St 2914

TO GARDEN SUPERVISORS AND LEADERS:-

Several inquiries have been received recently, regarding the squash borer and the striped cucumber beetle.

The squash borer usually lays its eggs the latter part of June, and not being particular where they are laid, may be found on most any portion of either squash or pumpkin vines. Upon hatching the larvae bores into the base of the stem and starts feeding, eventually causing the vine to wilt and die.

Keep a close watch of your vines during July and August. One of the surest signs of this pest is sawdust or droppings found near the base. Take a knife and slit the stem of the vine lengthways until the borer is found, then kill him. If the vine has not been wilted it will usually recover.

You will find it of great help to cover the joints of the vines with earth. New roots will develop thus strengthening the plant. Plant extra seed and destroy vines affected. Crops planted late are not often injured to any great extent.

The striped cucumber beetle is often confused with the three line potato beetle. Both are yellow with three black lines on their back, but the cucumber beetle is somewhat smaller and a brighter yellow with a black head.

The larvae are small white grubs which usually feed on the small roots of the cucumber or tunnel in the stems near the ground.

Young vines can be protected by nailing four boards together in the form of a square and covering the top with fine netting. Place this over the hill.

Spraying or dusting young plants with arsenate of lead will also be found quite effective.

For further information consult your county agent, your State Agricultural College, Experiment Station, or the United States Department of Agriculture, or address the undersigned direct at the Connecticut Committee of Food Supply, 48 Lewis St., Hartford, Conn.

Yours very truly,

G M Codding

GMC-IC

Special Field Agent in Entomology.

NOTE:- Spray your potatoes with Bordeaux mixture and arsenate of lead. You know why.

APPROVED:

W. J. Baker

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Division of Home Gardens
Connecticut Committee of
Food Supply Cooperating.

Hartford, Conn., July 3, 1918.

TO GARDEN SUPERVISORS AND LEADERS:-

I would appreciate receiving a personal letter from you regarding general garden conditions and your methods of handling the local situation.

Many of you have developed methods of handling your work that would be of tremendous value to your fellow workers throughout the State. An illustration is the use of bulletin boards on garden plots that are being made good use of in several cities. Noticies and items of interest are posted on these boards so that all garden workers are kept in touch with the situation. In Meriden a representative of each factory, some twenty-five in all, meet with the supervisor, each Wednesday, at 4 P.M. Matters of interest are discussed and plans laid for the coming week. This idea might well be used in other cities.

In several towns spray materials are mixed and sold, at cost, by the pump full to garden workers, thus saving them considerable money and assuring them of getting the best as well as the right materials.

The point is this. It is my endeavor to keep you posted on not only plant diseases and insect pests, but on all items of general garden interest as well. In return may I have your full cooperation so that I can pass your ideas along and help other garden supervisors make their gardens a success?

Yours very truly,

G M Codding

Special Field Agent in Entomology.

GMC-MC

P.S. If you need Trespassing Signs, write the Committee of Food Supply, #10 Lewis Street, Hartford, Connecticut. There are a number of these signs still available at the above address.

APPROVED:

W. J. Baker

D
St 2914 h

Com. State council of defense. Committee of food supply. Letters to garden supervisors & leaders

JUL 11 1918

Connecticut State Council of Defense

36 PEARL STREET

HARTFORD, CONNECTICUT

July 10, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

Connecticut's quota of canned products for this year is five million quarts; one million to be put up by the Junior Food Army and four million by the housewives of the State.

It is my opinion that garden leaders are in a position to greatly assist in this work. The canning of Connecticut crops is so closely allied with the growing of Connecticut crops that I believe you will see the great opportunity we all have for helping to make this campaign an "over the top" success. The canning campaign is going to cover the entire State and is a big factor in food conservation.

You can arrange for demonstrations in canning through your local Farm Bureau. There will be a canning leader in each city and town. Enrollment cards are to be filled out for this work. You can obtain these cards from your Farm Bureau or from this office direct. Write as soon as possible for the number you need. Do all you can to make this campaign succeed.

Remember, the garden supervisor who helps grow crops and then allows them to be wasted is falling down on the job.

Make every plant prove one hundred per cent. efficient.

Enclosed you will find a sample enrollment card and one of the canning bulletins put out by the Committee of Food Supply, Connecticut State Council of Defense. This bulletin has been written by the best authorities and the edition is limited. How many copies can you use to advantage? Place your order now.

Yours very truly,

G. M. Codding

GMC-FAS
Enc.

Special Field Agent in Entomology.
S.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Committee of Food
Supply Cooperating.

Hartford, Conn., July 10, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

CABBAGE WORM AND CABBAGE LOOPER. These two insects are both quite common here in Connecticut and are responsible for more or less damage.

The imported cabbage worm is a velvety green worm about an inch and a quarter in length. Eggs are deposited singly on the under side of the leaves. The worms upon hatching feed ravenously for about two weeks. The adult is a white butterfly with two or four black spots on its wings. There may be as many as three generations during a season.

The cabbage looper is light green in color and takes its name from its walk, which resembles the common measuring worm. Eggs are laid on the under side of leaves in much the same manner as those of the cabbage worm. The adult is a small gray moth.

Both the cabbage worm and cabbage looper can be controlled by spraying with arsenate of lead before the plants head up. After heading use insect powder or hellebore where this pest is found. Where there are only a few plants hand picking is advisable.

---oOo---

Don't forget to keep your potatoes covered with Bordeaux mixture during July and August. This prevents loss from late blight.

A thought for this week: Weeds in or near your garden harbor both insects and diseases, therefore destroy all weeds.

Clean cultivation pays.

Have a sanitary garden.

Yours very truly,

G. M. Codding
Special Field Agent in Entomology.

APPROVED:

Director of Extention.

D
St 29141

JUL 26 1918

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Committee of Food Supply
Cooperating.

Hartford, Conn., July 17, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

SECOND WARNING ON POTATO APHIS (Plant Lice). Aphis is increasing quite rapidly in all parts of the State. Specimens have not only been found on potato and tomato vines but on peas, squash, kale, beets, etc., as well. As a general thing the greatest amount of damage develops on potatoes and tomatoes. Potatoes particularly should be examined every few days. Examine the under side of the leaves and tops of the stems near the terminial buds. Both pink and green aphis will be found together on the same leaf.

When plant lice are found, spray immediately using 1 1/2 teaspoonfuls nicotine sulphate to one gallon of water and add a one inch cube of common soap dissolved. For large quantities use at the rate of one pint nicotine solution to 50 gallons of water with two pounds of dissolved soap added. Spray thoroughly.

Nicotine (without the soap) may be added to either Bordeaux mixture or Arsenic of lead, or both. The soap in this case is not needed and if used may injure the foliage.

This is the crucial time in regard to aphis, therefore this second warning.

In Meriden many of the garden workers are successfully keeping their potatoes from being damaged by aphis by jarring the lice from the vines into pans containing kerosene and then burning them. I have talked with several who are doing this and on small plots they say it is no more work than spraying and that they have obtained better results.

IMPORTANT WARNING: In New Haven County and also in Fairfield County potato crops are being destroyed by the plants wilting. From such observations as have been made this "wilt" which is something new is causing considerable damage to the potato crop. Up to the time of writing this letter no reason has been found why potatoes should wilt and no method devised for the prevention or overcoming of this condition. Sprayed and unsprayed vines appear to be damaged to the same extent. Do not confuse this injury to plants with the work of the aphis.

Yours very truly,

G. M. Codding

Special Field Agent in Entomology.

APPROVED:

Director of Extension.

D
ST2914L

JUL 26 1918

Connecticut State Council of Defense

36 PEARL STREET

HARTFORD, CONNECTICUT

July 24,1918

TO GARDEN SUPERVISORS AND LEADERS:

It is essential this year that definite figures be obtained regarding the amount of food produced in the war gardens of Connecticut. With this end in view you will be asked later on to fill out on a blank form a statement telling the number of gardens under your supervision, the total acreage, principle crops etc. In addition to this information, the Connecticut Committee of Food Supply also wishes to obtain the same information in regard to back yard gardens.

Your State Garden Committee w ants complete data on the kind and amount of all the food raised in war gardens in every town and city of the State, so that they will know how much Connecticut is doing to solve the food problems and help win the war. This is your advance notice so that those of you who have not already planned to do so will have plenty of time to get this information. Blank cards to be filled out will be mailed you about the first of August.

Yours very truly,

G. W. Coddington.

Special Field Agents in Entomology.

P.S. We can furnish "spades" like the enclosed in practically any quantity. How many can you use?

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
Division of Home Gardens and
Connecticut Committee of Food
Supply Cooperating

Hartford, Conn., July 24, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

We are now at the height of this year's battle against our insect enemies and it is essential that the enemy be attacked with all our forces. Follow the example of our boys "over there" and deliver your major offensive now. Show true Yankee grit and keep up the attack during the remainer of the season. This is the final drive and will result in glorious victory with the absolute route of the enemy, if you do your part and SPRAY.

Remember that all insects which obtain their food by sucking the juices from plants aphids can be destroyed by spraying with Nicotine Sulphate Solution. Insects that eat their food (potato bugs, etc.) are destroyed by a stomach poison such as Arsenate of Lead, while blights and fungus deseases are prevented by spraying with Bordeaux Mixture. If you spray properly, using the right materials, you cannot lose. Victory is a foregone conclusion the moment you spray. With this assurance, don't be a slacker or a quitter but get into the game. Go "over the top" and SPRAY.

For further information write direct to the Committee of Food Supply, 48 Lewis Street, Hartford, The Connecticut Agricultural College, Storrs, Conn., or the United States Department of Agriculture, Washington, D. C.

Yours very truly,

G. M. Codding.

Special Field Agent in Entomology.
S.

Form No. 62

PUBLICITY BUREAU

Connecticut State Council of Defense

COMMITTEE OF FOOD SUPPLY

HARTFORD, CONN.

For release when received

D
St2914 L

TO CONNECTICUT EDITORS: This story "Kerosene Emulsion will Kill Aphids," "Save the Crop" is for immediate release.

The aphids infesting potato and tomato fields throughout Connecticut have in many cases multiplied with great rapidity and up to this time show no signs of disappearing. Attempts to control this pest by spraying has not been entirely satisfactory. Nicotine solution, owing to the great demand, has become scarce in many localities. Moreover, it is expensive for large field operations, and the price has been raised recently by some local dealers.

These aphids can be killed with kerosene emulsion as is now being demonstrated at the Experiment Station Farm at Mount Carmel. The emulsion used is a little stronger than commonly recommended, and is made as follows:

Common laundry soap, 3 cakes, about	30 oz.
Kerosene	4 gals.
Water	2 gals.

After churning, dilute eight times to make one barrel (50 gals.)

The soap is cut in thin slices and dissolved in the water over a fire. It is then removed from the fire and added to the kerosene and the whole churned violently for a few minutes by passing through a bucket pump with a small nose directed back into the same container. This forms a uniform, creamy mass from which the oil does not separate.

Apply with a pump of strong pressure through a fine nozzle. All aphids hit by the s pray are killed.

By using an extension rod bent at an angle of about 45 degrees it is much easier to reach the under sides of the leaves. It is probably more important to kill those aphids on the tender growing shoots and new leaves than those on the older and lower leaves. Hence, if any must be skipped, let it be the latter.

The comparative cost of the materials per barrel of spray mixture is approximately as follows:

Kerosene Emulsion		
Soap, three cakes.....	.18	
Kerosene, four gallons.....	.56	.74
Nicotine Solution		
Soap, three cakes.....	.18	
Nicotine sulphate, 1 pint...	1.31	$1.49

Of course, it is somewhat more work to make the kerosene emulsion, but it will surely prove a saving in large area fields, especially if the owners do not have a supply of nicotine solution on hand. In the small garden it will not make so much difference.

Kerosene and soap can usually be obtained immediately from any grocer, if the owner does not already have them on his premises. If he waits to transport nicotine solution or some other material, it may be too late to save the crop before he can get and apply it.

W. E. Britton,

State Entomologist.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Committee of Food Supply
Cooperating.

Hartford, Conn., August 7, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

Blister beetles are common garden pests, and are found on many garden crops. They are ravenous feeders and often cause considerable damage to such plants as beets, beans, potatoes, peas, etc. The beetle itself is long and slender and varies greatly in color, ranging from black to gray and sometimes yellow.

Spray with lead arsenate as soon as the beetles appear. This treatment, however, should not be given where beet tops are to be used for "greens" or if string beans are to be gathered soon. Hand picking, while not very satisfactory owing to the agility of the beetle, is about the only other method of control unless plants can be protected by a cloth or net covering.

Don't blame the aphis or plant lice for all of your garden troubles. There have been several instances during the past two weeks where I have been called upon to examine potato crops "killed by aphis" which, upon examination, prove to be suffering from the new potato wilt which is causing considerable damage in many sections of the State. According to Dr. Clinton of the New Haven Agricultural Experiment Station, this wilt makes its appearance in three ways:

1: Prematuring of the vines in which the stem and leaves gradually turn yellow, the plant often remaining erect, the leaves dropping off or dying and finally the whole plant succumbing.

2: Plants wilting and flopping over as if the stem had not strength enough to support them. Plants normally green, and no particular spotting of the stem.

3: A bronzing more or less of the stem, and spotting. Plants lopping over somewhat. Frequent the stem is rather soft near the ground, so that it is easily pinched together, and giving somewhat the appearance as if some fungus or borer had been at work.

Yours very truly,

G. M. Codding

Special Field Agent in Entomology.

APPROVED:

S.

Director of Extension.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Committee of Food Supply,
Cooperating.

Hartford, Conn., August 14, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

Gardeners who have planted such crops as carrots, celery, etc., are sometimes troubled with a large green or yellowish caterpillar which eats the leaves. As a rule this caterpillar does not appear in very large quantities and can be picked off by hand. When found in quantities, spray with arsenate of lead.

Celery plants are often affected by leaf blight or spotting of the leaves. There are two forms; early and late. Where this condition occurs, spray with Bordeaux mixture every ten to twelve days until the crop matures.

Spray your cucumbers with Bordeaux mixture to prevent such diseases as anthracnose, mosaic, and downy mildew.

Hot, sultry weather is most favorable for the development of late blight on potatoes. Keep your potatoes well sprayed with Bordeaux mixture during August, thereby preventing loss from this disease. When properly applied, Bordeaux mixture is a positive preventative. For the best results you must spray before the blight appears.

Mix your own bordeaux. Take one-half pound copper sulphate and one-half pound of quicklime. Dissolve the copper sulphate and slake the lime in separate glass or wooden containers, using about one quart of water in each case. Then pour them at the same time into a larger container, adding enough water to make six gallons of spray. Your Bordeaux mixture is now ready for use.

CAUTION: After it is mixed, Bordeauz should be used the same day.

Avoid wounding or breaking plants when cultivating or harvesting. Each wound is an open door through which both insects and decay enter.

Destroy all weeds in the garden.

Practice clean cultivation.

Yours very truly,

E. M. Codding.

Special Field Agent in Entomology.

fas

APPROVED:

Director of Extension.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D.C.

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Committee of Food Supply
Cooperating.

Hartford, Conn., August 21, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

There are often found on tomatoes, large green worms which are known as tomato hornworms. These are the young of a very beautiful moth commonly called the sphinx moth, which is sometimes mistaken when flying for a humming bird. There are two broods and those growing tomatoes should be on the lookout continually for this insect, as they are apt to cause considerable damage by cutting leaves from the plants.

Owing to the fact that they are well camouflaged, it is almost impossible to see these hornworms when at rest. They are readily detected, however, when feeding and can be picked off by hand and destroyed. If abundant, spraying once with arsenate of lead is usually sufficient to kill them.

It is not advisable to leave potatoes in the ground after the vines are dead and the tubers have attained their growth. There is nothing to be gained by delayed digging and this is a poor method of storage, at best. Several reports have been received where potatoes left in the ground have been ruined by wire worms and white grubs. These insect pests are difficult to control, but loss can be prevented by prompt digging and not leaving the potatoes in the ground for these garden U-Boats to destroy. The same advice holds true for carrots and other root crops.

Yours very truly,

G M Coddington.

GMC-HBJ. Special Field Agent in Entomology

APPROVED:

Director of Extension.

D
ST 2914L

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Committee of Food Supply
Cooperating.

Hartford, Conn., Aug. 28, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

Every year there is a certain amount of damage and loss caused by the corn earworm. This insect pest is more or less of a general feeder and also attacks melons, squashes, pumpkins, peppers, tomatoes, and various other plants. This is the same insect as the tomato fruit worm which causes considerable damage to tomatoes in some localities by eating into the fruit.

When attacking corn, this pest bores into the ear and many of the kernels are destroyed by being eaten. The work of this pest also makes an opening through which other insects may enter, and a reservoir where rain is apt to collect and cause decay.

The worm itself varies considerably in color, various shades of pink and green predominating, with well defined longitudinal black stripes.

Dusting the "silk" with equal parts of sulpher and powdered arsenate of lead will do much to combat this pest, and reduce the injury.

---oOo---

Get after those weeds in the garden; destroy them, root and branch. Every weed in the garden at this time is just one more bullet aimed by the Kaiser at the United States. Weeds sap the vitality from the soil, harbor insects and plant diseases, and are among the most destructive allies of the H uns we have to fight in our gardens. Get busy and destroy every weed in or near your garden.

Yours very truly,

F. M. Codding

Special Field Agent in Entomology.

Fas

APPROVED:

W. J. Baker

Director of Extension.

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D.C.
Bureau of Entomology.

Conn. Agricultural College
and Division of Home Gardens,
Department of Food Supply
Cooperating

Hartford, Conn. September 5, 1918.

Those growing beans will often find upon harvesting that there are small holes about the size of a bird shot in some of them. When these holes are found, you can depend upon it, there are weevils present. If these insect pests are not destroyed, they soon render the bean unfit for food or for planting as seed next year. It will pay to examine your beans carefully when they are harvested, as the injury of this pest does not become apparent to the casual observer until considerable damage has been done.

While the adult weevil lays her eggs in the bean pods growing in the field, it is practically impossible to combat the weevil until the beans are harvested. There are several methods of destroying this pest. Those which follow are the most practical:

When you have a small quantity of beans which are attacked, the weevils can be destroyed by placing the beans in an oven for half an hour with a temperature of from 120 to 140 degrees fahrenheit. If they are not going to be used as seed, they may be kept in the oven longer and at a higher temperature but it has been found that a temperature of over 140 degrees destroys the germ and therefore makes the bean valueless as far as being used for seed is concerned.

If you are handling large quantities of beans, fumigating with carbon bisulphide will destroy the weevil. In fumigating use one pound of the carbon bisulphide to 40 bushels or 100 cubic feet of space. Remember that the carbon bisulphide is highly inflamable and must be kept away from all fire. Inasmuch as carbon bisulphide is heavier than air, it should be placed at the top of the fumigating room. Beans should be fumigated for at least 36 hours and at the end of this period, thoroughly aired.

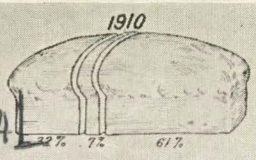
Remember that it is of the utmost importance that all weeds be destroyed. There is a general tendency at this time of the year to let weeds grow but you must remember that weeds are the natural feeding ground for insects and that if destroyed they not only benefit this year's garden but also do much to make next year's garden clean.

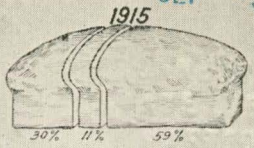
G. M. CODDING,

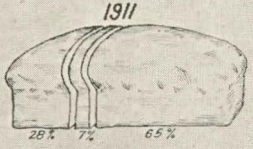
Special Field Agent in Entomology.

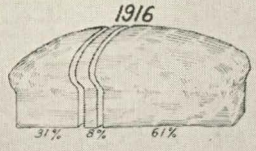
P. S.- The Questionnaire of the Connecticut War Garden will be sent you next week and it is expected that this questionnaire will be filled out and returned to this office as soon as possible. This survey is to be filed at the State Library and will prove of great value if we all cooperate. It is expected that every town and city in the state will respond to this request and make this part of our work a success. Remember everything we do along garden lines helps produce food and shorten the war.

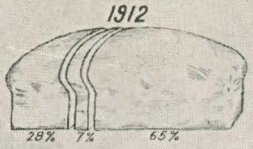
G. M. C.

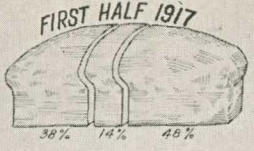


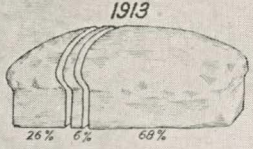


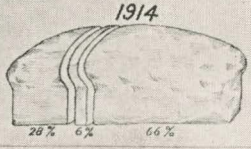


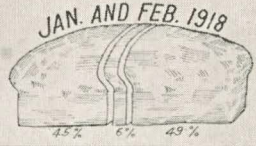




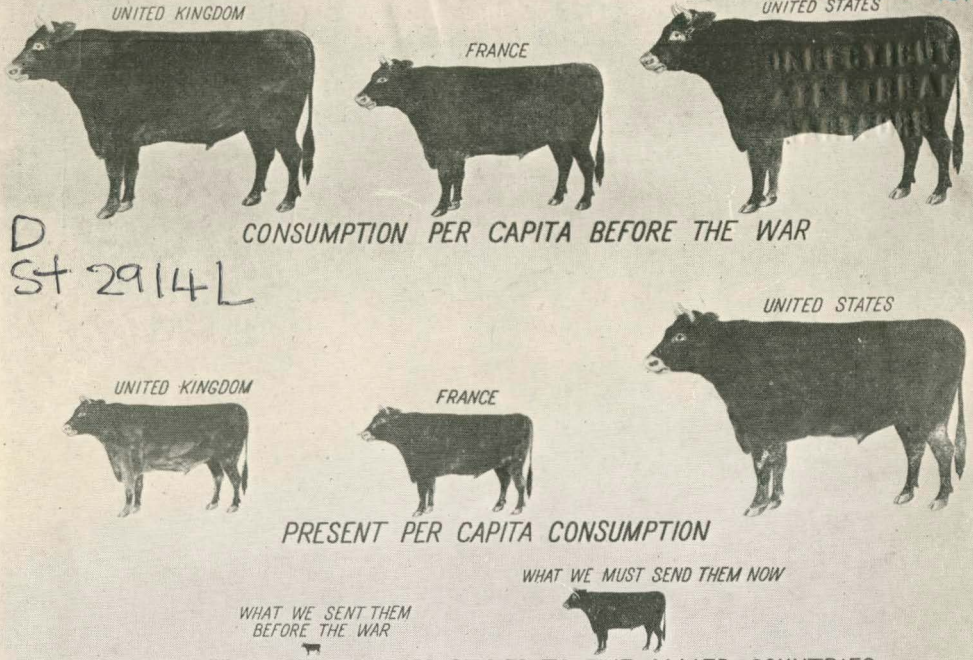


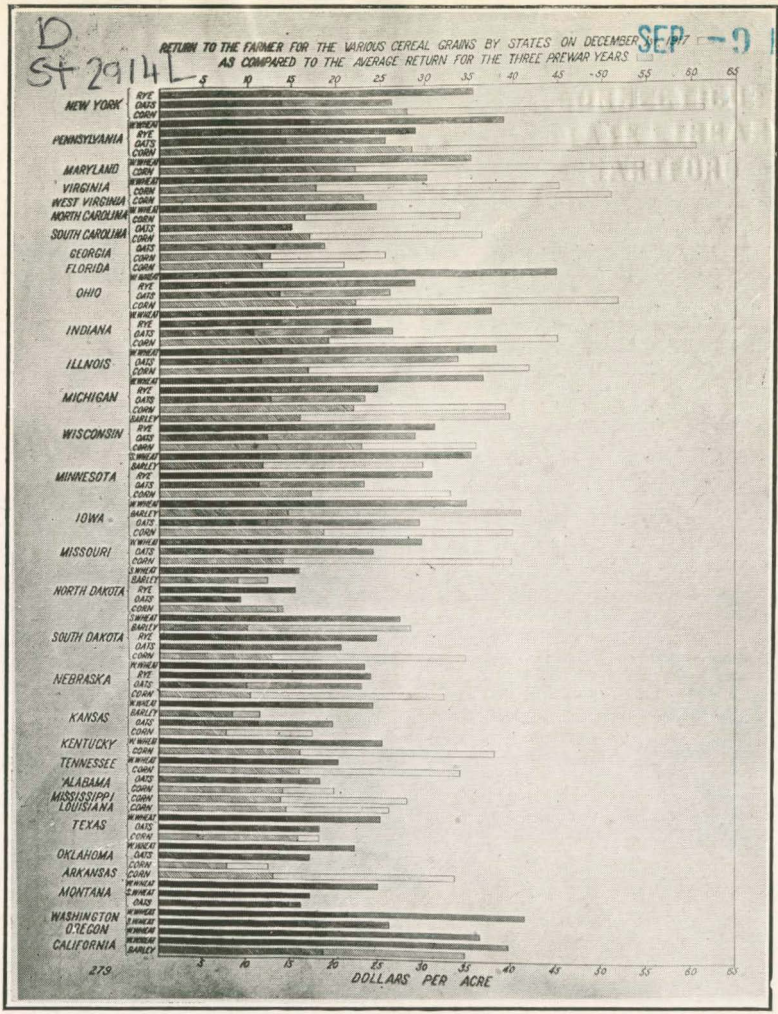






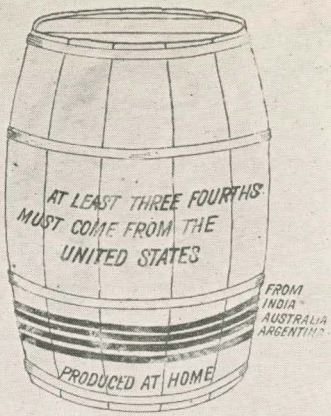
Left What the farmer got for his wheat
Middle What the miller added to the cost.
Right What was added to the cost between the flour at the mill door and the bread on the consumer's table.





HOW OUR ALLIES' FLOUR BARREL WAS FILLED BEFORE THE WAR

HOW OUR ALLIES' FLOUR BARREL MUST BE FILLED IN 1918



THE ALLIES' FLOUR BARREL.

Owing to the destruction of shipping, until the new American merchant fleet is constructed, but little wheat and flour from India, Australia, and Argentina can be transported

CONSUMPTION PER CAPITA BEFORE THE WAR

PRESENT PER CAPITA CONSUMPTION

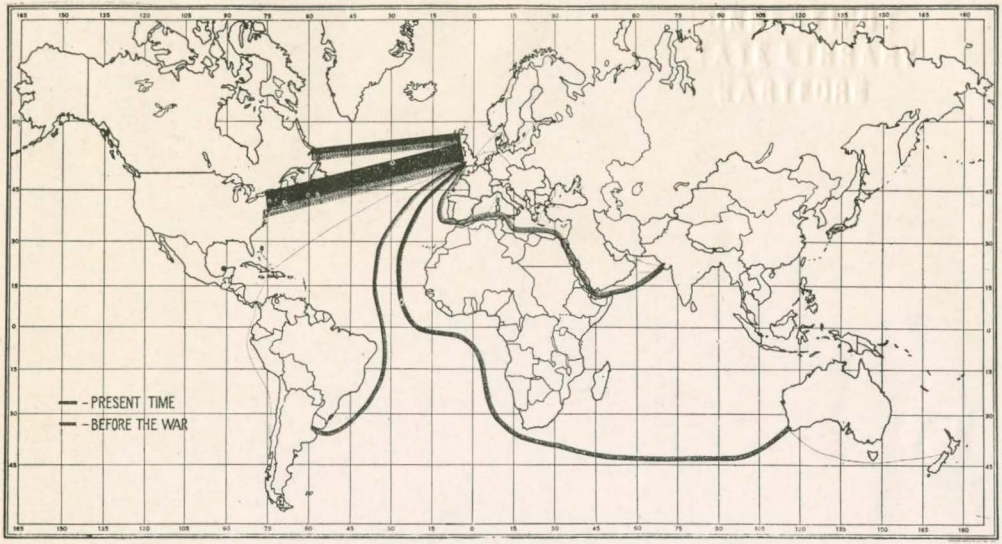
EXPORTS FROM THE UNITED STATES TO THE ALLIED COUNTRIES

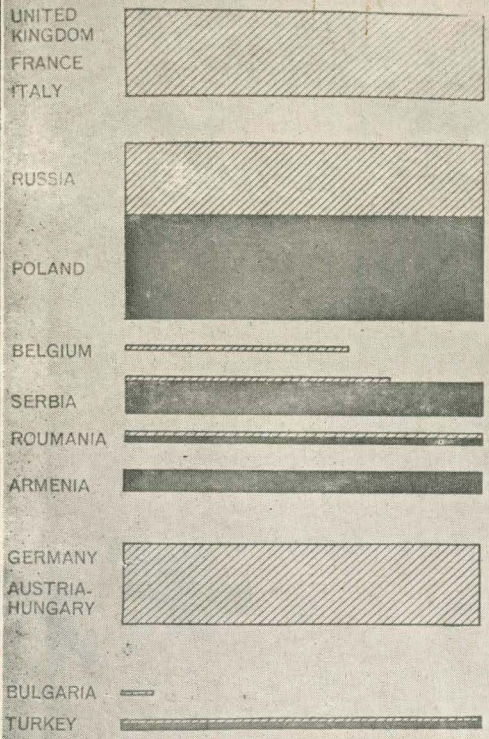
90-B

D

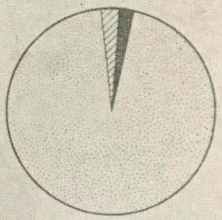
ST 2914 L

WHERE ENGLAND GETS HER WHEAT





The lined rectangles represent the deaths by fighting. The black rectangles represent the deaths by famine.



The circle represents the total population of the Central and Allied Powers (the United States excepted), also territory conquered by the Central Powers.

The black area within the circle represents deaths by famine. The lined area, deaths by fighting.

THE TOLL OF HUMAN LIVES EXACTED BY THE SWORD AND BY STARVATION SINCE THE WORLD WAR BEGAN

10—*Charles Livingston Bull*

I WIN FOOD FROM THE SEA THAT YOU MAY WIN VICTORY

D
St 2914 L

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Department of Food Supply cooperating.

Hartford, Conn., Sept. 11, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

At this time of the year, when our garden crops are reaching maturity, most gardeners are apt to consider it unnecessary to spend any time in fighting insect pests or plant diseases. This should not be the case, as often the greatest good can be accomplished by fighting garden pests at that time of the year when they are not visible.

Every gardener should remember that many of our insect pests and plant diseases exist in the garden the year round. During the summer months, they deliver their main offensive, while during the remaining months they are reorganizing their forces and marshalling their millions for next summer's great drive. If you are a wise garden general, you will destroy his rest billets and winter quarters (all weeds and refuse) and keep him so worried that he will have no opportunity to entrench or establish himself. By so doing you will find upon starting your garden next year that the insects will be greatly reduced in numbers and then while their morale is weakened by a hard winter, it will be good strategy for you to deliver your major attack (by a thorough spraying) thereby protecting your crops and winning the war against the Bugsheviki and the garlen Huns.

At the end of the growing season carefully select and pile all dead plants, rubbish, leaves and other debris promptly and burn.

MORAL: Clean up the garden. Destroy all refuse and weeds this fall, thus reducing your garden troubles next year.

Yours very truly,

G M Gadding

GMC-SK

Special Field Agent in Entomology.

APPROVED:
H. J. Baker
Director of Extension.
S.K.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Committee of Food Supply
Cooperating.

Hartford, Conn., Sept. 19, 1918

TO GARDEN SUPERVISORS AND LEADERS:

Why not have this fall a garden clean up week in every Connecticut town and city? Take for your slogans "A Weedless Garden", "A Weedless Farm" and "A Weedless Town." Do you realize how many insect pests spend the winter in or on weeds and garden refuse? Probably not, or you would get busy and destroy the weeds.

The potato stalk borer is an illustration. The eggs are laid singly at the base of the stem. The larva hatches in a few days and bores into the stalk. The pupa develops and is found in the stalk near the surface of the ground. The adults emerge in August and September and hibernate in the vines. By raking up and burning the vines as soon as the potatoes have been dug, many of these pests are destroyed.

What about our old enemy, the potato aphid which has caused so much trouble during the past tow seasons? Spraying with nicotine sulphate during the summer kills those aphis hit by the spray, but did you hit all of them? The chances are you didn't. In the fall you can do much toward eliminating this ally of the Kaiser by burning your old potato stalks and weeds. Fall plowing also helps.

Many insect pests are to be found on weeds in garden refuse and too much cannot be said on the importance of destroying them by burning all garden litter in the fall. If you allowed weeds to grow in or near your garden this year, they were probably affected with plant lice and other pests. You sprayed your potatoes and other crops, but gave no thought to the weeds growing nearby. The season for spraying is over, but remember, there are still some insects left and that millions of them can be killed by burning all weeds and refuse.

Make yours "A Weedless Town."

Yours very truly,

S. M. Corbett
Special Field Agent in Entomology.

APPROVED:
W. J. Baker
[illegible] of Extension

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Department of Food Supply
Cooperating.

Hartford, Conn., Sept. 25, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

The Harlequin Cabbage-bug which causes considerable damage each year to our cabbage, cauliflower, etc., is another of our insect pests which can be destroyed in large quantities at this season of the year by the gardener who "knows how".

This pest lays its eggs on the under side of the leaves in two rows. The eggs hatch in a few days and the Nymphs mature two weeks later. They can be destroyed by hand picking in the spring. The treatment that should be given in the spring, however, does not particularly interest us at the present time, but where does the cabbage bug spend the winter? In the north, the bug in adult form hibernates in rubbish. This means that those who leave rubbish of any kind, such as dead vines, weeds, etc., lying around, are making it comfortable for, and inviting the "1919 class" of garden Huns to spend the winter with them.

When you are dealing with a mad dog, you can't argue with him, and at present it might well be said that the only good Germans are the dead ones. Do your part here at home to help our boys in France make all Germans "good ones" by getting 100 per cent. returns from your gardens.

Help solve the food problem by raising A-1 crops free from insects and disease. Many insect pests, in addition to the Harlequin Cabbage-bug, can be killed and thereby become "good bugs" by the removal of all rubbish in the fall. Don't be a 50 per cent. gardener; be 100 per cent. efficient. Destroy garden pests without mercy and have that satisfied feeling which comes from a duty well done.

Yours very truly,

George M. Codding.
Special Field Agent in Entomology.
Fas

APPROVED:
C. J. Baker
Director of Extension.

D
ST 2914 L

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

Connecticut Agricultural College
and Division of Home Gardens,
Department of Food Supply
Cooperating.

Hartford, Conn., October 2, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

The European Corn Borer.

The European Corn Borer, which has made its appearance in the vicinity of Boston, has become during the past few years, one of the most serious problems that those growing crops in Eastern Massachusetts have had to contend with. A number of inquiries have been received from growers in Connecticut, particularly from the eastern part of the State, and while to the best of my knowledge this pest has not been found in Connecticut, I believe all truck growers and the public at large should keep a constant watch for this destructive insect.

The European Corn Borer should not be confused with the more common "stalk borers" and if there is any doubt regarding the borer you find in your corn, send a specimen to the Connecticut Agricultural Experiment Station at New Haven for positive identification.

Sweet corn, dahlias, grasses, weeds, hops, etc., are all subject to attack by the European Corn Borer, There are two broods each year, eggs being laid on corn stalks in the spring and again in the fall. The larva or worm, tunnels in the main stalk of corn, feeding on the unopened buds and stems, making a burrow with silken partitions at both ends. The adult moths emerge in late May and in August.

The best method to eliminate this pest is to shred the stalks and feed as ensilage. If this is not done, stalks should be burned or buried in the fall or winter. The spread of this pest apparently is in a northerly direction, but there is always danger that it will be brought into Connecticut in sweet corn or seed corn on the cob, and in corn stalks used as packing material for heavy pottery and other articles. Therefore, Governor Holcomb has issued a proclamation prohibiting shipments of ear corn and corn stover from Massachusetts into Connecticut.

Yours very truly,

F. M. Codding

Special Field Agent in Entomology.
F.A.S.

APPROVED:

W. L. Baker

Director of Extension.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology
Washington, D. C.

NOV -7 1918

Connecticut Agricultural College
and Division of Home Gardens,
Connecticut Department of Food Supply
Cooperating.

D
St 2914 L

Hartford, Conn., Nov. 6, 1918.

TO GARDEN SUPERVISORS AND LEADERS:

The outdoor growing season is now practically over and the majority of the crops planted have been harvested. There is just one word of advice which will help in next year's work and that is - see that your pumps which were used for spraying are thoroughly washed out, wiped dry, oiled and put away in a safe place. If this is done, much time and trouble will be saved next spring when you start planting and when time is at a premium. The above may well apply to all garden tools and will prove a big step toward keeping next year's expenses down.

If there are weeds or other garden refuse still to be found in the garden, burn them at once, thus killing those insects that hibernate in them and preventing such insects causing damage next year.

If possible, plow your garden this fall. Fall plowing is worth while.

Save all wood ashes and see that they are put on that part of the garden where they will do the most good.

Remember this fact: No matter what happens "over there", the war so far as food production and gardening is concerned will not be over next year.

Yours very truly,

S. W. Goldring.
Special Field Agent in Entomology.

APPROVED:
W. J. Baker
Director of Extension.