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Montana Boys' and Girls' Clubs

The Garden Project

By

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The Canning Project

By

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Time for Sterilizing Some Fruits and Vegetables

The time is counted from the time the water begins to bubble vigorously, or "jump" over the entire surface. It must be kept bubbling hard during the entire period given in the table.

For altitudes of 1,000 feet or more, add, for each 1,000 feet, 10 per cent to the time given in this table.

Products	Time to scald or blanch (minutes)	Time to boil (minutes)
Vegetables		
Asparagus	5-8	120
Beans	5-10	120
Beets	5-7	90
Carrots	5-6	90
Cauliflower	3	60
Corn	5-10	180
Greens	15 in steam	120
Peas	5-10	180
Peppers	5-10	120
Spinach	15 in steam	120
Tomatoes	1½	22
Fruits		
Hard		
Apples	1½	20
Pears	1½	20
Soft		
Berries (all kinds)	.....	16
Cherries	.....	16
Peaches	1-2	16
Plums	.....	16

Note: This time schedule is for pint and quart packs. If half-gallon jars are used, some additional time should be allowed.

Garden Project

OBJECT

To acquire knowledge and skill in growing a garden, to learn to do something which is both pleasurable and profitable, and to demonstrate the value of a garden in reducing the cost of living.

GARDEN CLUB REGULATIONS

1. Age, 10-18 inclusive

2. Requirements

(a) Secure a garden plot of at least two square rods (16½x33 ft.). It is hoped that each boy or girl will cultivate a larger garden.

(b) Keep an accurate account of all transactions; estimate your time as worth 15 cents per hour; hired help, with or without team, at actual cost; the cost of seeds, plants, fertilizers, vegetables, shall be charged at actual cost at the home markets. All vegetables used in the home shall be credited at the price the owner would have paid in the local market—as radishes by the bunch, spinach by the pound.

(c) Exhibit vegetables with record at local, county and any other fairs.

(d) Write a story on "How I made and used my garden crop."

(e) Mail a summary of the record and copy of the story to the State Club Leader, Bozeman, Montana.

3. Enrollment

Each member must enroll on or before June 1st with club leader, county agent, or superintendent of schools.

4. Full Membership Card

Full membership cards when filled out and returned make one a full-fledged club member. Two cards will be mailed each member, one to be returned to the State Club Leader, the other to the county club leader, county agent or county superintendent. These will be self-addressed and will need no stamp.

5. Final Summary and Story to be sent to the State Club Leader, Bozeman, Montana, by November 1st.

6. Basis of Awards

(a) Best kept garden		10
(b) Best exhibit of fresh vegetables		40
(c) Record of garden work as shown by		30
1. Garden plan	5	
2. Profit	10	
3. Financial record	15	
(d) Story, "How I Made and Used My Garden Crop		20

AWARDS

The greatest reward that can come to any boy or girl is the satisfaction of having achieved something worth while. To have helped in making the problem of living easier in the home is no small reward. The boy or girl in each county who exhibits at the county fair the best display of fresh vegetables, together with a complete record of his or her garden, will be declared the county winner. If a county fair is not held in the county, the county agent or three disinterested persons, one of whom shall be the county superintendent of schools, shall determine, upon the advice of the State Club Leader, the methods of judging the gardens and produce.

The county winner should exhibit his vegetables and record at the State and Midland Empire fairs, where cash and other prizes are offered.

No person will be permitted to compete in any of the club contests who has not signed and returned the full membership card and submitted a full report of his club work.

SCHOLARSHIPS

The State Board of Education will give a free scholarship at either the State University, the College of Agriculture and Mechanic Arts, the State Normal School, or the State School of Mines to each county winner. This scholarship is good for one year and may be used at any time in the future when the winner is prepared for college or for work in the secondary schools. Scholarships are also offered for periods of four, three and two years, respectively, for those winning first, second and third places in the State Contest.

Every club member should strive to win one of these scholarships and plan to attend one of the above institutions.

CLUB MEETINGS

The importance of club meetings can scarcely be overestimated. If the club leader is the teacher in the local school, one or two periods each week should be devoted to the study of this circular and to the bulletin "The Home Vegetable Garden," which has been sent to each club member. Local leaders should make certain that each club member thoroughly understands the fundamental facts of growing a garden. If more than one club is organized in the community, have a joint meeting. Provide music, recitations, invite the parents to be present. If you have a county agent in the county, ask him to be present and give a talk on garden growing.

STANDARD CLUB

A Standard Club Charter, signed by the Secretary of the Department of Agriculture, the State Director of Extension, and the State Club Leader, will be awarded to those clubs meeting the first four requirements. When all of the requirements have been met, a national seal of Achievement will be awarded. A copy of these requirements will be sent to each local leader.

Local leaders are urged to aid their club members in qualifying for this charter.

SUPERVISION

The success of club work depends to a great extent upon local supervision during the summer months. At the early part of the season there is always a greater enthusiasm than at the cultivation time. Leaders who are not in the community during the summer months should appoint some one to look after the clubs during their absence. Select a person who is interested in club work and is willing to take the responsibility. Parents should be urged to give direction and assistance during the critical period of a club project. About May 15th is an opportune time to call the first club meeting. Later in the summer arrange for a picnic, join with farmers' organizations in their summer outings, arrange with the State Leader to send a representative from the college to give a canning demonstration, serve lunch, have a play time, talk over what each club member has done in his club work. Remember if you have a county agent to call upon him frequently for assistance. Before the summer vacation, send him the names of your club members. Whenever a member needs encouragement or special help, write us at once.

MOTHER-DAUGHTER AND FATHER-SON RELATION

Mothers and fathers should thoroughly understand the purpose of club work. They should become so much interested that they will use every effort to encourage and assist their boys and girls. Every boy likes to work with Dad and every girl likes to work with mother. Let us have their co-operation. To every father and mother who may read this bulletin, this is a direct message to you. We desire to be of more service to your boys and girls, and in this service we need your co-operation. Disappointment must not come to a single boy or girl who takes up this work. It will not come if you will co-operate with us and the people in your community to make club work a success.

THE GARDEN

Select a sandy loam or clay loam soil as near the house as possible. Be sure that the plot is so located that you will have access to a supply of water. It should also be well drained. Well rotted manure may be applied just before plowing or spading. Chicken, hog or sheep manure should be used in smaller quantities than stable manure. The soil should be plowed or spaded as deeply as possible and then harrowed or raked until you have a perfect seed bed. Buy the best seed possible. Select the earliest varieties to insure maturity. Sow the seeds in perfectly straight rows. As soon as the rows can be seen, the garden should be cultivated to keep down the weeds and to conserve the moisture. Keep the top soil fine and dust-like. Don't let the weeds get a start. Give a little time each day to the care of the garden. There are a variety of crops to be grown. Every garden should have beans, carrots, cabbage, corn, cucumbers, lettuce, radishes, onions, parsnips, pumpkins, spinach, squash, tomatoes, chard, peas, and beets. One of the big lessons to be learned from the garden is that of thrift. Your big profit will come when you can all the produce not used. Read the directions in this circular and in others which will be sent you on canning your surplus. By the cold-pack process you will be able to successfully can almost everything that grows in your garden.

KEEP A RECORD

Read (b) under "Requirements" in the front of this circular and you will understand what it required in your record. In a small note book keep an accurate record of all your transactions. Select

a page for each of the following: Date the Garden was Planted or Spaded; How I Prepared the Soil; Cost of Preparing the Soil; Cost of Seeds and Plants; Hours of Labor; Vegetables Used in Home and Value; Vegetables Sold and Price. At the end of the season you will be able to make your final report and show a net profit. It may encourage you to know that one Montana sixth grade girl made a net profit of $77.50 on her garden last year. You can do as well.

DIRECTIONS FOR PLANTING DIFFERENT SEEDS

In general the directions which are given on the seed packages may be followed. Frequently it is advisable to purchase seeds in bulk.

Beans. The best varieties are Stringless, Early Mohawk, Early Valentine, Black Wax, Golden Wax, Kidney Wax, Davis White Wax, Extra Early Refuge, and Early Red Valentine. Plant in rows two feet apart, two and a half inches deep, seed four inches apart.

Beets. Select the smaller round or half-round forms. Best varieties are Early Blood Turnip, Edmand, Egyptian Turnip, Bastian, and Eclipse. Plant in rows eighteen inches apart, one and one-half inches deep. Scatter the seeds rather thickly and thin young plants until they stand two inches apart. Pour warm water on seed and let stand eight hours before planting. Young beets make excellent greens.

Cabbage. Start seeds in boxes indoors at least five weeks before the plants are set in the garden. Plant seeds in rows three-fourths of an inch apart, with five seeds to an inch. Cover with one-fourth inch of dirt firmly packed about the seed. Transplant to rows thirty inches apart, with the plants twenty-four inches apart in the rows. Early Jersey Wakefield, Early Winningstadt, and Danish Ballhead are among the best varieties.

Carrot. Sow in rows twelve inches apart. Cover with an inch of dirt. Thin plants to three inches apart in the row. The seeds germinate so slowly that it is advisable to mix in a few radish seeds to locate the rows. Weeds will grow long before the carrot plant appears. Danvers, Oxheart, Half-long Scarlet, and Long Orange are excellent varieties.

Swiss Chard. A form of garden beet in which the midrib of the leaves is cooked and eaten as a pot herb. Sow in rows sixteen inches

apart. Often the whole top is used for greens. Grow much the same as beets. Lucullus, a good variety.

Cucumber. Plant late in the spring, when the ground is warm and there is no danger of frost. Plant in hills five feet apart each way. Ten to twelve seeds in a hill. Cover with one inch of dirt, pressing the soil firmly about the seeds. If the soil is poor, place manure in each hill. Keep the soil loose about the hills. The striped cucumber beetle is the worst enemy of the cucumber. Of all the remedies suggested Bordeaux Mixture is the most effective. Davis Perfect, a general purpose cucumber.

Endive. Used as a salad plant and also for greens. Plant the same as lettuce.

Kohlrabi. Sow in rows two feet apart. Same cultivation as is given turnips.

Lettuce. Sow in rows sixteen inches apart. Cover with one-half inch of dirt. Sow thickly. Hanson, Tennis Ball, Grand Rapids, and Boston Market are good varieties. Matures in five weeks. Crisp lettuce may be had all summer if it is cut off frequently at the top of the ground.

Onion. Onions require a rich soil. Use a liberal amount of fertilizers. Sow in rows fourteen inches apart. Sow about twenty-five seeds to the foot and cover with one inch of dirt. Thin the plants to three inches apart. Most of the varieties sold in the local markets will grow well in this climate. Varieties are the White Portugal, Yellow Globe Danvers, Red Wethersfield, and Australian Brown.

Parsley. Sow early in the season in rows twelve inches apart. A few plants will supply a family. Roots may be taken in the house over winter and cuttings may be made frequently.

Parsnips. Sow and cultivate the same as carrots. They may be left in the ground over winter or gathered late in the fall and stored in a cool cellar.

Peas. Plant as early in the spring as the soil will admit. Plant in rows eighteen inches apart. One quart of seed is needed to one hundred feet of row. Cover with two inches of soil. Plant at intervals of two weeks. Early and medium varieties are the Advance, Admiral, Yorkshire Hero, and Queen.

Peppers. Raise the young plants as you raise tomato plants and eggplants. Set plants in rows two feet apart and two feet apart in the row. Long Red Cayenne, Chile, and Neapolitan are among

the best varieties. For making stuffed pickles, Sweet Mountain and Large Bell are excellent.

Radish. Sow in rows twelve inches apart and cover with one-half inch dirt. Three seeds to an inch in the row. One ounce of seed is sufficient for a row one hundred feet long. Sow every ten days during the season. Either the long or round varieties are suitable, according to the preference of the grower.

Spinach. It is used for greens. Quick, rapid growth is desirable. Rows sixteen inches apart. Sow about forty seeds to each foot of row and cover with one inch of dirt. Leaves will be large enough to use at the end of six weeks.

Squash. A warm, fertile soil of a sandy nature. Summer squash should be planted in hills about four feet apart. If insects are few, it will be necessary to hand pollinate. This is done by dusting the pollen of the male flower on the stigmas of the female flowers.

Sweet corn. Plant in hills three feet each way with five kernels in a hill. Plant as soon as danger of frost is past. Cory is an early variety, maturing in sixty days. Shallow cultivation is necessary to conserve the moisture and not disturb the roots.

Tomato. Start plants early in the window box. Sow in rows two inches apart, with about four seeds to an inch. Cover with one-half inch of soil. Give the young plants plenty of light and keep them constantly growing. When the plants are about fifteen inches high they are ready to be transplanted. Set in rows three feet apart each way. Stone, Paragon, Livingston, Favorite, and Beauty are early varieties.

REPORT BLANK

Garden

You will be required to submit to the State Club Leader, Bozeman, Montana, a complete record of your work. This report will include the following:

1. Name..... Address..... County.....
2. Age.....Size of garden.....Where located.....
3. What did you raise?.....
4. How much did your seeds and plants cost? $.....
5. Figure your labor at 15 cents per hour. How much did it

cost to grow your garden?.....

6. Add the figures given under 4 and 5 and you will have the cost of your garden. $.....
7. How much were the vegetables used in the home worth? $.....
8. Value of those sold or kept for winter use. $.....
9. Value of those canned. $.....
10. Add 7, 8, and 9 and you will have the total value of your vegetables. $.....
11. Subtract the figure given under 6 from the figure given under 10 and you will have your net profit. $.....
12. Write a short story on "How I Made and Used My Garden." You can make it a letter to the State Club Leader.

Canning Project

OBJECT

To learn to save surplus produce by proper methods of canning, thus reducing the cost of living and furnishing a varied and healthful supply of food at all times of the year.

CANNING CLUB REGULATIONS

1. Age, 10-18 inclusive.
2. Requirements

(a) Can no less than fifteen quarts of fruits and vegetables (at least six different kinds) which may be home grown or purchased.

(b) Keep a simple record which should show the amount and value of fruits and vegetables canned. Also the cost of canning, counting your work at 15 cents per hour; cost of jars, rubbers, etc.

(c) Exhibit six to ten jars of canned products with record at local, county or any other fairs.

(d) Write a story on "How I Did My Canning."

(e) Mail a summary of the record and copy of the story to the State Club Leader, Bozeman, Montana.

3. **Enrollment**

Each member must enroll before June 1st with club leader, county agent or superintendent of schools.

4. **Full Membership cards**

No full membership card will be required in the Canning Club. The enrollment card will give full membership in this club.

5. **Final summary and story** to be sent to State Club Leader by November 1st.

6. **Basis of Awards**

(a) Best exhibit of canned products.....60
   1. Quality 35
   2. Quantity 15
   3. Variety 10

(b) Record of work and canned products.....20

(c) Story "How I Did My Canning.....20

CANNING TEAMS

Members of the Canning Club are urged to organize themselves into teams of three to learn to do teamwork in canning and for competition between teams. These teams will give public canning demonstrations locally and contests will be held between the various teams at the local and county fairs. No one may be a member of such a team who is not a regularly enrolled canning club member and doing the canning project work. For those who are interested in learning to do team work, full instructions have been prepared which will be gladly sent on request to the State Club Leader. Local leaders are urged to encourage the organization of canning teams in their community.

REASONS FOR CANNING VEGETABLES IN THE HOME

1. To enable the family to have vegetables in the diet the year around. Many families lack these foods, especially in the late winter and early spring. The body needs those things which vegetables supply, especially the mineral matter which they contain and which is hard to supply in sufficient quantities and at a low cost unless vegetables are freely used in the diet. Vegetables also contain a good deal of fiber and this gives the bulk which is necessary in our diet. If there were plenty of vegetables in the diet through the whole year fewer people would need a "spring tonic." **It is cheaper to can vegetables than to pay doctors' bills.**

2. Vegetables help to give the variety which we want in our diet and give it at a low cost. If there is a good supply of home canned vegetables in the cellar, your mother will not so frequently ask in despair, What shall I have for dinner?" She will also appreciate your store of canned vegetables when unexpetced company arrives just before dinner.

3. Canning the vegetables that go to waste in the garden in the summer will mean a real saving in money. Many club members have saved fifty, seventy-five, or a hundred dollars in this way. Isn't this worth while? Probably it will not pay to can vegetables unless you have them in your own garden, but it is certainly poor economy, if you have a garden with more vegetables than you need during the summer, to let those vegetables go to waste and then either go without in the winter or buy commercially canned goods in the winter and spring to replace them.

TERMS USED IN CANNING WORK

Blanching

This is done by placing the products into boiling water for a certain length of time as stated in the time table. (See page two.)

Three reasons for blanching are:

1. To loosen the skin.
2. To eliminate objectionable acids and acrid flavors.
3. To reduce bulk.

Cold dipping

The material taken from the blanching kettle should be plunged immediately into a vessel containing enough cold water to thoroughly immerse and stop the cooking process started by the blanching. Care should be taken that the water comes quickly into contact with every part. In the case of small products or those that pack tightly, this may be facilitated by gentle shaking of the wire basket or other container. Do not allow material to soak in the water.

Three reasons for using the cold dip are:

1. To harden the pulp under the skin and thus permit the removal of the skin without injury to the pulp.
2. To coagulate the coloring matter and make it harder to dissolve during the sterilization period.
3. To make it easier to handle the products in packing.

TYPES OF EQUIPMENT USED IN CANNING

1. **Steam Pressure Canners.** These lessen the time required for canning and are splendid where a large amount of food is canned. Directions for using such canners are furnished by the company whenever a canner is purchased.

2. **Water-Seal Outfits.** This outfit consists of three parts so made that when the cover is adjusted the steam cannot escape and so the food is processed under slight pressure.

3. **Aluminum Pressure Cooker.** This is a combination outfit which can be used for general cooking processes as well as for canning work. It is a real labor-saving device when used for cooking meats, soups, etc.

4. **Hot-Water Bath Outfit.** These outfits can be purchased in the market or can be made from utensils usually found in the home. This type is the one used in the directions for canning given below.

METHODS OF CANNING

1. **Open Kettle or Hot-Pack Method.** This is the old way of canning. Food canned by this method is cooked in an open kettle, packed in sterilized cans, and sealed at once. The open kettle method can only be used for fruits.

2. **Cold Pack Method.** When food is canned by this method, it is first scalded or blanched, then dipped into cold water, packed into hot jars and covered with a hot liquid. The rubber is then adjusted, the cover put on lightly and the jars put into the container and surrounded by water. The container is then covered and the food is processed or sterilized. This is the method recommended for the members of the canning club.

Note: This is **not** the "cold water" method sometimes used with rhubarb and gooseberries.

Three Advantages of the Cold-Pack Method:

1. Enables one to complete the canning of any product in a single period of cooking.
2. Products retain better form.
3. Products retain more natural color.

UTENSILS NEEDED FOR THE COLD-PACK METHOD OF CANNING

1. Any clean flat-bottomed utensil as much as four inches higher than the jars may be used for a container. Cover top with a heavy cloth, then an ordinary lid, weighted with a flatiron, may be used

(A discarded five-gallon, square kerosene can makes an excellent and inexpensive container when only a few jars are to be canned at one time. The family wash boiler may be used when a greater quantity is being canned.)

2. A rack or false bottom is necessary to hold jars one inch from the bottom and to aid in circulation of the water under as well as around the jars. A good rack is made by nailing lath to two narrow boards, leaving spaces one-half inch wide between the lath. Place the rack in container.

3. Wire basket for blanching. (Cheesecloth may be used.)

4. Three pans—one each for blanching, cold dip, and sterilizing ars and rubbers.

5. Spoons—table, tea, wooden.

6. Paring knives.

7. Paddle, made of flexible wood, as bamboo or reed.

8. Cans or jars.

9. Measuring cup.

10. Covers.

11. New rubbers.

Most of this equipment you will find already in the kitchen at home. The paddle and the rack for the boiler or kettle you can make yourself.

MATERIAL NEEDED FOR WORK

1. Fresh fruits or vegetables.
2. Water.
3. Salt.
4. Sugar (for fruits and a little for some vegetables).

GENERAL DIRECTIONS FOR CANNING

1. See that water, heat and all equipment are ready before starting.

2. Clean, test and sterilize tops and rubbers.

Select only firm, sound products that are ripe, but not overripe. They should be perfectly fresh— "an hour from garden to can."

4. Grade products, i. e., select those uniform in size, color and ripeness.

5. Prepare product by washing, peeling, coring, or slicing.

6. Blanch product. No soft fruits are blanched.

7. Dip quickly into cold water.

8. Pack at once in clean, hot containers. The vegetables can be handled more easily if a paddle is used. The jars should be well filled.

9. Fill the jars to overflowing with hot water, adding one level teaspoonful of salt to each quart jar of vegetables. For fruits, fill jar with hot, thin syrup.

10. Wipe around top of jars with clean cloth before placing rubber.

11. Adjust scalded, wet rubber.

12. Screw on cover—not too tight. If jars with glass covers and spring clamps are used, adjust the wire over the cover but leave the other wire loose. If jars of the "Economy" type are used, put on the clamp only lightly enough to hold the cover in place.

13. Place jars on rack in container. Be sure that the jars do not touch each other. The water in the container should come at least one inch above the top of jar or there will be a loss of liquid from the jars. There is also less danger of breaking the jars.

14. Put the cover on the container.

15. Heat water to the boiling point and continue to boil the length of time indicated in the table. Start counting time when water begins to jump.

16. Remove the jars from the container and tighten the covers at once.

17. Never remove lid after taking jars from the water until ready for the table. If necessary to change rubbers, put jar back in water and let boil for at least ten minutes.

18. Invert jars and cool as quickly as possible. Test joint.

19. Avoid drafts while the jars are hot as they are apt to break.

20. Label, wrap and store for winter use.

SOME FAILURES AND THEIR CAUSES

(Note: From the U. S. Department of Agriculture, Washington, D. C.)

"Flat Sour" of Corn, Peas, and Beans

1. If corn, peas, beans, and, very often, asparagus, are allowed to stand too long before canning, a sour taste may develop. They should be canned within two or three hours after picking, to avoid the development of this taste, known as "flat sour." It may also occur from cooling too slowly, between temperatures of 70°-100° F. and 140°-160° F.

Corn Turning Dark

A dark color in canned corn is due to some of the following causes:

1. Using water that contains too much iron. 2. Using corn that has reached the dough stage. 3. Blanching for too long a period. (Three to five minutes is sufficient for white corn.)

Water-Logged or Soaked Corn

When canned corn becomes 'water-logged" or "soaked," it is due to such causes as the following:

1. Allowing the product to stand in the cold water too long after the hot dip.
2. Allowing the jars to stand after they have been packed and filled with hot water. The jars should be immediately placed in the sterilizer after being packed.
3. Allowing ear corn to stand in water after opening.
4. Heating corn in warm water over a slow fire.

Beets: Their Loss of Color

The loss of color in canned beets is due to faulty methods of preparation before packing them into the jars. To secure good results, an inch of the top and all of the tail should be left while blanching. Beets should be blanched for five minutes and the skin should be scraped but not peeled. Beets should be packed whole if possible.

Cloudy Peas

The condition known as "cloudy" is due to such causes as the following:

1. Cracking the skin of the pea. 2. Blanching for too long a period. 3. Use of water which is too hard or has too much mineral content.

Shrinkage of Product During Canning

Such shrinkage may be due to one or more of the following:

1. Improper blanching and cold dipping. 2. Careless packing and using variety of sizes. 3. Sterilizing for too long a period. 4. Lack of sizing whole products for the container.

Shrinkage of Greens

Shrinkage of greens or pot herbs during the canning process is usually due to insufficient blanching. The proper way to blanch all greens or pot herbs is in a steamer or in a vessel improvised to

do the blanching in live steam above the water line. If this is not done, much of the mineral salts and volatile oil contents will be extracted by the water and lost. After greens have been put in the jar, it aids in packing and in the distribution of the liquid to cut with a sharp knife crosswise through the contents of the jar.

Loss of Liquid During Canning

A loss of liquid in canning with a hot-water-bath outfit may be caused by one or more of the following:

1. Not having the water in the container over the tops of the jars by at least one inch.
2. Not providing a suitable platform to hold the jars off the bottom of the sterilizing vat, permitting circulation of water under as well as around the jars.
3. Not tightening the cover sufficiently.

Mold on Canned Products

Mold may result from one or more of the following:

1. Leaky rubbers or defective joints.
2. Removing tops from jars at the end of the sterilizing period and substituting new rubbers, without returning the jars to the canning outfit for at least ten minutes.
3. Keeping jars in a damp place where the rubbers may decompose.

Breakage of Jars

When breakage of jars occurs it is due to such causes as the following:

1. Overpacking jars. Corn, pumpkin, and sweet potatoes swell or expand in processing. Do not quite fill jars with the products.
2. Placing cold jars in hot water or vice versa. As soon as jars are filled with hot syrup or hot water place immediately in the canner.
3. Having wire bail of glass top jars too tight.
4. In steam canner, having too much water in canner. The water should not come above the tray.
5. Cold draft striking the jars when they are removed from the canner.
6. Wire spring too tight, thus breaking the jar when contents expands.

TESTS FOR RUBBERS

1. When stretched considerably, ring should return to place quickly without breaking or changing inside diameter.

2. When bent both ways between fingers, rings should not break, crack nor show a crease where bent.

3. Rings should stand the test of boiling four hours in a hot water bath.

4. Rings should not be too thick. Rings for average pint and quart jars should be five-sixteenths of an inch wide, have an inside diameter of two and one-fourth inches and measure twelve to the inch.

TESTS FOR JARS

The following test is suitable for any kind of jar using rubbers:

1. Fill the jar with water, put on rubber and cover, and invert for ten minutes.

Two tests for screw top jars are:

1. Screw top on jar without the rubber. If the thumb nail can be inserted between top and glass, the top is usually defective.

2. Place rubber on jar and screw top down tightly. Pull rubber out under one edge and release. If the rubber slips back into position, the top is defective.

Two tests for glass top jars are:

1. Place glass top on jar without rubber. Tap with finger around the outer edge of top. If the top rocks, it is defective.

2. Wire bail passed over the top of cover should go in with a snap, even when tightening lever or clamp spring is up. If it does not, remove bail from tightening lever and bend to make tight. This tightening of bail should be done every year.

SOME VALUABLE SUGGESTIONS

1. Follow only one set of instructions.

2. Never use canning compounds.

3. Have plenty of boiling water on hand.

4. Put fruits such as apples into cold, salted water (1 tsp. salt to 1 qt. water) after paring to keep from turning black (oxidizing).

5. A tag tied to each jar with a string long enough to hang over edge of container saying "Take out at 3:40" will aid in timing.

SCORE CARD FOR CANNED FRUITS AND VEGETABLES

Single Jars

I. Jar 5

Jar neat. Label neatly written and pasted on carefully.

II. Fruit and Vegetables

1. Selection 5

Uniform in size and ripeness.

Fruit and vegetables perfect in quality.

2. Color 5

Natural color preserved as far as possible. No coloring matter other than the product itself gives.

3. Texture 15

Firm but tender. Not mushy.

4. Flavor 30

For fruits—natural flavor of fruit evident. Agreeable to taste—fruit flavor not hidden by sugar.

For vegetables—natural taste of vegetables.

III. Pack 40

1. Fullness of can 10

Full to the top.

2. Arrangement 10

Attractive.

3. Liquid 20

(a) Amount 10

Can full to the top of fruit or vegetables, liquid in spaces.

(b) Quality 10

For fruit—Not cloudy, no flecks nor sediment. Neither watery nor too thin.

For vegetables—not cloudy, no flecks nor sediment.

SCORE CARDS FOR EXHIBITS OF CANNED PRODUCTS

I. General Appearance and Arrangement of Exhibit

1. Arrangement of exhibit 5

Attractive and well grouped.

2. Uniformity of jars 5

Size. Shape. Color.

3. Neatness 5

Jars and labels.

II. Fruits and Vegetables 45

1. Selection 20
   Uniform in size and ripeness.
   Fruit and vegetables perfect in quality.
2. Color 15
   Natural color preserved as far as possible. No coloring matter other than the product itself gives.
3. Texture 10
   Firm but tender. Not mushy.

III. Pack 40

1. Fullness of can 10
   Full to the top.
2. Arrangement 10
   Attractive.
3. Liquid 20
   (a) Amount 10
   Can full to the top of fruit or vegetables, liquid in spaces.
   (b) Quality 10
   For fruit—Not cloudy, no flecks nor sediment. Neither watery nor too thin.
   For vegetables—not cloudy, no flecks nor sediment.