



B-1210.3

July 2011

Preserving Food in Wyoming

WILD BERRIES AND OTHER WILD FRUIT



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UNIVERSITY
OF WYOMING

COOPERATIVE EXTENSION SERVICE

University of Wyoming
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College of Agriculture and Natural Resources

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B-1210.3

Revised July 2011

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Layout: Tana Stith, Graphic Designer

Recommendations follow U.S. Department of Agriculture (USDA) Canning Guidelines (1994 and 2009)

A downloadable version of this publication is available at:

<http://www.wyomingextension.org/agpubs/pubs/B1210-3.pdf>

Issued in furtherance of cooperative extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Glen Whipple, director, Cooperative Extension Service, University of Wyoming, Laramie, Wyoming 82071.

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SPECIAL CONSIDERATIONS FOR CANNING IN WYOMING

Altitude

Canning food in Wyoming differs from canning in many other locations because of the high altitudes found in our state. There is lower atmospheric pressure at high altitudes, which causes water to boil at a lower temperature. Consequently, altitude adjustments must be made when home canning.

The following guidelines have been established by the University of Wyoming Cooperative Extension (UW CES) and are recommended for all home canning in Wyoming.

Adjustments

Canning processes must be adjusted for **all** locations in Wyoming. For boiling-water canning, the processing time must be increased. For pressure canning, the pressure must be increased. Processing times for many foods were changed in 1988 when the U.S. Department of Agriculture (USDA) published ***Complete Guide to Home Canning***. Additional revisions have since been made in 1994 and 2009 (see www.uga.edu/nchfp/publications/publications_usda.html). To ensure safe home canning, follow recipes with the most current processing times established by the USDA.

Jars

Only standard canning jars made of tempered glass are recommended. Commercial jars such as mayonnaise jars are not recommended for use in home canning. These jars may break more easily, and they have a narrower sealing surface that can prevent a good seal.

Botulism

To prevent the risk of botulism, low-acid home canned foods such as meats and vegetables should be boiled before eating. At altitudes below 1,000 feet, boil foods for 10 minutes. Add an additional minute of boiling time for each additional 1,000 feet.

Ingredients

Do not add or change the ingredients or proportions in home-canning recipes. Doing so could compromise the safety of the product.

Gathering Wild Berries and Other Wild Fruit

Safety Tips

Wearing proper clothing is important when gathering wild fruit. You may walk through weeds and brush so wear slacks or jeans, a long-sleeved shirt, and sturdy shoes. Wear gloves because berries and other fruit can stain your hands and some bushes have thorns. Wear a wide-brimmed hat to protect your face from the sun and your hair from the bushes. Be careful where you walk, watching out for anthills, sharp sticks, and poison ivy. Refer to the photo below to help you identify poison ivy, which is characterized by its branched three leaves. The oil contained in practically all parts of the plant is poisonous to most people when it comes in contact with their skin.

Equipment Needed

A small pail with a handle is useful when picking berries and other wild fruit. Attach the handle to your belt or tie a string through the handle and then tie the string around your waist. This leaves both hands free for gathering fruit; it also keeps you from needing to bend over as much.

What to Pick

Pick only firm berries and fruit, which are naturally high in pectin. Select a mixture of $\frac{3}{4}$ ripe and $\frac{1}{4}$ under-ripe fruits. The under-ripe fruit will increase the pectin content, making for better jelly. Be gentle on the bushes when you pick so there will be fruit to harvest next year. If unable to identify plants, berries, or fruit from the illustrations in this booklet, check with your local University of Wyoming Cooperative Extension Service office or a wild plant expert before using.

When to Harvest

Optimal times for picking berries and fruit vary with several factors, including temperatures during spring and summer months, amount of moisture during the growing season, and location of the bushes. At lower elevations, berries and other fruit may ripen one to two weeks earlier than those growing a few hundred feet higher in elevation. Late summer (from early August until frost) is usually the best time to harvest. One exception, however, is buffaloberries, which are best picked after the majority of berries are ripe and after a frost.

Care of Fruit

To avoid crushing berries and other fruit during transport, put no more than a couple quarts in any single container. Refrigerate berries and other fruit until you preserve them and, for optimal quality, preserve them as soon as possible after harvest.

Poison Ivy



General Canning Procedures

Prepare products as described in the following pages.

Wash jars. **For products processed only 10 minutes, use sterilized jars. To sterilize empty jars**, put them open side up on a rack in a boiling-water canner. Fill the canner and jars with hot (not boiling) water to 1 inch above the top of jars. Boil jars for 15 minutes.

Using a jar lifter or plastic-covered tongs, carefully remove and drain hot jars or, for products processed only 10 minutes, hot sterilized jars one at a time and fill immediately with food. With canned whole fruit and fruit syrups and butters (but not jellies or jams), remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Food residue should be removed from the jar sealing edge with a clean, damp paper towel. New two-piece canning lids prepared according to manufacturer's directions should be used. After screw bands are tightened, jars should be processed in a boiling-water canner. *Do not seal jars with paraffin.* Jars sealed with paraffin cannot be processed in a boiling water canner and processing in a boiling water bath is necessary to destroy molds and yeasts, which can cause spoilage.

**Do not seal
jars with
paraffin.**

To process in a boiling-water canner, fill canner halfway with water and preheat to 180° Fahrenheit. Load filled jars into canner rack and lower with handles or load one jar at a time with a jar lifter onto rack in canner.

Add boiling water, if needed, to a level of 1 inch above jars. Cover the canner. When water boils vigorously, lower heat to maintain a gentle boil and process jars for the appropriate time described in Table 1 (page 5) or Table 2 (page 7).

After Processing

After processing is completed, remove jars from canner with a jar lifter and place on a towel or rack. Do not retighten bands. Air cool jars 12 to 24 hours. Remove screw bands and check lid seals. If the center of the lid is indented, wash, dry, label, and store jar in a clean, cool, dark place without ring. If the lid is unsealed, refrigerate and use within four weeks. Alternatively, examine and replace jar if defective; use new lid and reprocess as before. Wash screw bands and store separately. Jellies, jams, and other wild berry and wild fruit products are best if used within one year.



Preparing Wild Berry and Other Wild Fruit Juices

1. Pick over the fruit and discard any that are overripe, damaged, or spoiled.
2. Wash the fruit quickly but thoroughly and lift out of water. Do not let the fruit soak in water. Because the juice is strained from the pulp, you do not need to remove stems and pits.
3. Place fruit in a large saucepan and barely cover with water. Heat the fruit at a high temperature until it boils and then reduce the heat so the fruit gently boils.
4. Cook for 10 minutes or until a deep-colored liquid forms. The fruit can be crushed as it cooks or the first juice can be drained into another saucepan and the fruit cooked a second time. Then crush the fruit as it cooks the second time to release more juice.
5. Strain all cooked fruit juice through a jelly bag or three layers of cheese cloth. If you do not have a jelly bag, you can make one out of a clean old sheet or pillowcase using two pieces of material, 8 inches by 12 inches sewn together on three sides. Wash sheets or pillowcases before using. Do not use fabric softener. Dampen the jelly bag before adding fruit juice. This encourages the juice to start dripping through the bag. Squeezing the jelly bag forces through bits of pulp that will cloud the jelly. Leftover pulp can be used to make jams and butters along with the cooked fruit still in the saucepan.
Note: If the fruit does not yield enough juice, you can add other fruit juice to the wild fruit juice. If the shortage is ½ cup or less, you can add water.
6. The juice can be used immediately to make jelly or syrup, and the pulp can be used to make jam. Alternatively, the juice can be canned and made into jelly at a later time. To preserve the juice by canning, pour the hot juice into hot pint or quart jars or hot sterilized pint or quart jars leaving ¼-inch headspace. (**For products processed only 10 minutes, use sterilized jars. To sterilize empty jars,** see procedure on page 4.) Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 1 (below).

Table 1. Recommended processing times for wild berry and other wild fruit juices in a boiling-water canner at designated altitudes

Style of pack	Jar Size	3,001-6,000 feet (minutes)	6,001-8,000 (minutes)
Hot	Pints or quarts	10	15

Information about Pectin

Proper amounts of fruit, pectin, acid, and sugar are needed to make a jellied fruit product. Some kinds of fruit have enough natural pectin to gel. Others require added pectin particularly when they are used for making jellies because jelly should be firm enough to hold its shape. All fruits have more pectin when they are under-ripe.

Commercial fruit pectin made from apples or citrus fruits are available in either liquid or powdered form. Follow manufacturer's instructions when using added pectin. Many home canners prefer the added pectin method for making jellied fruit products because fully ripe fruit can be used, cooking time is shorter, there is no need to test for doneness, and the yield from a given amount of fruit is greater. Store commercial fruit pectin in a cool, dry place so it will keep its gel strength and do not hold it from one year to the next. You can use added pectin with any fruit.

Making Jelly

Whether you are a first-time jelly maker or a seasoned expert, be sure to review these steps before starting.

1. Wash empty jars in hot water with detergent and rinse well by hand or wash in a dishwasher. Keep clean jars in warm water (if washed by hand) or in hot dishwasher until ready to use.
For products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4.
2. Review process for preparing juice on page 5. For a clear jelly, strain the juice through a jelly bag or several layers of cheese cloth for several minutes. (To make a jelly bag, see directions on page 5.) Do not squeeze the bag because pulp may be forced through, resulting in a cloudy jelly. The juice may be refrigerated overnight. By morning, the sediment will settle to the bottom. Carefully pour off the juice to avoid disturbing the sediment. Measure the juice accurately into a large (4-quart) saucepan. **Caution: Be aware when jelly boils, it increases two or three times in volume.**
 - ◆ If commercial pectin is used, the volume will be larger. The order of combining ingredients depends on the type of pectin used. Complete directions for using pectin are included in the packages. Bring strained fruit juice to a quick, hard boil over high heat stirring occasionally. Add pre-measured sugar all at once. Bring to a full rolling boil (a boil that cannot be stirred down). Boil hard for 1 minute stirring constantly.
 - ◆ If commercial pectin is not used, you must boil the juice until a natural gel forms. Use one of the following tests to see if the juice has cooked long enough to form a gel:
 - **Temperature test** – Use a jelly or candy thermometer, and boil until mixture reaches the correct temperature for your altitude (9° Fahrenheit above the boiling point of water):

3,000 ft. – approximately 214°F	6,000 ft. – approximately 209°F
4,000 ft. – approximately 212°F	7,000 ft. – approximately 207°F
5,000 ft. – approximately 211°F	8,000 ft. – approximately 205°F
 - **Sheet or spoon test** – Dip a cool metal spoon in the boiling jelly mixture. Raise the spoon about 12 inches above the pan (out of steam). Turn the spoon so the liquid runs off the side. The jelly is done when the syrup forms two drops that flow together and sheet or hang off the edge of the spoon.
3. Remove from heat and quickly skim off foam.
4. Pour hot jelly mixture immediately into hot jars or hot sterilized jars leaving ¼-inch headspace. Wipe rim clean with damp cloth or paper towel. Adjust lids and tighten screw bands. Process in a boiling-water canner as described in Table 2 (page 7).

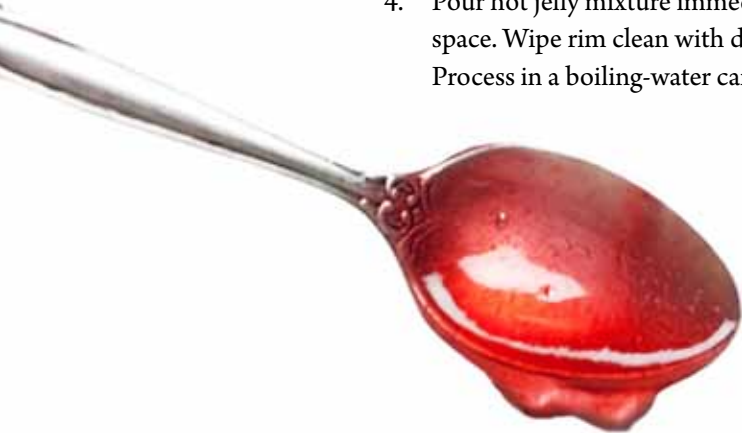




Table 2. Recommended processing times for wild berry and other wild fruit jellies, jams, syrups, and butters in a boiling-water canner at designated altitudes

Style of pack	Jar Size	3,001-6,000 feet (minutes)	6,001-8,000 (minutes)
Hot	Half-pints or pints	10	15

Soft Jelly: Possible Causes and Tips to Use or Improve

Causes

Because some jellies such as chokecherry do not set up right away, let the jars remain undisturbed for 24 hours before checking for gel.

Soft jellies may be caused by one or more of the following: too much juice in the mixture, too little sugar added, mixture not acidic enough, too much jelly made at one time, not cooking mixture long enough, and/or cooking commercial pectin too long.

Tips to Use or Improve

If the jelly does not gel, use it as syrup for pancakes.

Soft jellies can sometimes be improved by recooking according to the directions given below. It is best to recook only 4 to 6 cups of jelly at one time:

- To remake jelly with powdered pectin, for each quart (4 cups) of jelly, mix $\frac{1}{4}$ cup sugar, $\frac{1}{2}$ cup water, 2 tablespoons bottled lemon juice, and 4 teaspoons powdered pectin. Bring mixture to a boil stirring constantly. Boil hard for 30 seconds. Remove from heat, quickly skim off foam, and fill hot jars or hot sterilized jars leaving $\frac{1}{4}$ -inch headspace. Adjust new lids and process jars as described in Table 2 (above).
- To remake jelly with liquid pectin, for each quart (4 cups) of jelly, measure $\frac{3}{4}$ cup sugar, 2 tablespoons bottled lemon juice, and 2 tablespoons liquid pectin. Bring jelly to a boil over high heat, stirring constantly. Remove from heat and quickly add the sugar, lemon juice, and pectin. Bring to a full rolling boil stirring constantly. Boil hard for 1 minute. Remove from heat, quickly skim off foam, and fill hot jars or hot sterilized jars leaving $\frac{1}{4}$ -inch headspace. Adjust new lids and process jars as described in Table 2 (above).
- To remake jelly without added pectin, for each quart (4 cups) of jelly, add 2 tablespoons bottled lemon juice. Heat to boiling and boil for 3 to 4 minutes. Use one of the gel tests described on page 6 to determine doneness. Remove from heat, quickly skim off the foam, and fill hot jars or hot sterilized jars leaving $\frac{1}{4}$ -inch headspace. Adjust new lids and process jars as described in Table 2 (above).

Photo courtesy of Sheri Hagwood @ USDA-NRCS PLANTS Database

USDA-NRCS PLANTS Database / USDA NRCS Wetland Flora: Field office illustrated guide to plant species.
USDA Natural Resources Conservation Service.

Chokecherries

A fruit found coast-to-coast

The main species of chokecherry is *Prunus virginiana*, with three subspecies found in almost every state of the continental U.S. including Alaska. Only one of these subspecies, the black chokecherry (*Prunus virginiana* var. *melanocarpa*), is found throughout Wyoming. Two other subspecies, common chokecherry (*P. virginiana* var. *virginiana*) and western chokecherry (*P. virginiana* var. *demissa*), occur in Nebraska, but they have not yet been reported in either Wyoming or Colorado. Chokecherries are found along stream banks and roadside rights-of-way where extra runoff from paved surfaces increases available moisture.

Chokecherries are in the rose family, and, by definition, the white flowers have five petals and five sepals. The chokecherry bloom is easily recognized as a large cluster of white flowers in a long cylindrical shape, referred to as a raceme. Anyone gathering chokecherries should do their scouting for good chokecherry stands in May because this tall shrub can be easily spotted and identified when in bloom. In contrast, when the fruit appears in August, the plants are not as easy to spot, even though they may be covered with dense clusters of dark purplish-black berries. Although chokecherries can be pruned to form a small single-stemmed tree, they sucker so readily that this is unlikely to occur in the wild and the plant is best described as a tall, multi-stemmed shrub, usually not exceeding 15 feet in height.

Young chokecherry leaves look very similar to wild plum leaves, but the older leaves have a distinct oval shape with an abruptly pointed tip. The entire leaf edge has very fine tooth-like indentations, like the blade of a saw, called serrations. The stems are reddish brown and covered with distinct, white, raised bumps. These are lenticels, which function to cool the plant. Older stems are gray but still show the scars of the lenticels. The stems, leaves, and fruit pits of chokecherry are poisonous because they contain hydrocyanic acid (cyanide). Only the soft fruit should be used for human consumption, and the pits should be discarded. Additionally, the recipes provided in this bulletin would also work for the native Wyoming sand cherry (*Prunus pumila*), pincherry (*Prunus pensylvanica*), and the domesticated Nanking cherry (*Prunus tomentosa*).

Chokecherry fruit is popular with wild berry jelly makers. Mixtures of half chokecherry juice and half apple juice make a tasty product. If you prefer a jelly without an apple flavor, add red currant juice with the chokecherry juice to make a jelly with a true wild berry flavor.

For all chokecherry products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4.

Chokecherry Jelly

5 cups chokecherry juice
7 cups sugar
1 package powdered pectin

Follow steps for preparing juice on page 5. Then follow steps for making jelly on page 6.

Chokecherry Syrup with Added Pectin

4 cups chokecherry juice
4 cups sugar
1 package powdered pectin

Follow steps for preparing juice on page 5. Combine juice, sugar, and pectin in a large saucepan. Bring to a boil and cook until mixture coats a metal spoon (similar to the way gravy coats a spoon). Pour into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

Chokecherry Syrup without Added Pectin

4 cups chokecherry juice
2 cups sugar
1 cup light corn syrup

Follow steps for preparing juice on page 5. Combine ingredients in saucepan and boil for 3 minutes. Pour into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Wipe sealing edge of jars with a clean, damp paper towel. Add lids and process in a boiling-water canner as described in Table 2 (page 7).

Pioneer Chokecherry Syrup

4 cups chokecherry juice
4 cups sugar
1 tsp cream of tartar

Follow instructions for making juice on page 5. Combine all ingredients and cook in a saucepan over medium heat until mixture coats a metal spoon (similar to the way gravy coats a spoon). Refrigerate small quantity for immediate use. Pour remaining syrup into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

Photo courtesy of USDA-NRCS PLANTS Database © Larry Allain



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's sons, New York, Vol. 2: 577.

Wild Plums

More American than apple pie!

The American plum (*Prunus americana*) is native to the United States. Although not found in as many states as chokecherry, it is native to Wyoming. In contrast, apples, which are also in the rose family, are not native to the U.S., although there are a few species of native crabapples found in isolated and scattered locations. Plums and chokecherries are in the same genus so they are very similar in appearance. Because plum bushes do not sucker as readily as chokecherry shrubs, plums are more accurately described as a small tree up to 15 feet in height. The serrated leaves are very similar to chokecherry leaves; in fact, the young leaves of chokecherries are almost identical to a plum leaf. Older plum leaves, however, taper more gradually toward the tip than older chokecherry leaves. Luckily, the woody stems of plums are distinctly different from the reddish chokecherry stems. Young plum stems are brown, turning gray as they mature, and the raised white markings (lenticels) are not as distinct as those found on chokecherry. Flowering plum trees have individual flowers, usually white or slightly pinkish, scattered throughout the tree, in contrast to the large flower clusters on chokecherry shrubs. Fruiting plum trees are easy to tell from chokecherry shrubs because plums are larger (up to $\frac{3}{4}$ inch in diameter) and are individually scattered. The green fruit gets an orange to reddish blush as it ripens, turning dark red at maturity. Plums also are much sweeter than chokecherries.

General Procedures

Wash plums. Boil for 15 to 20 minutes or until the skins are tender. Tart wild plums are high in pectin. The fruit can be boiled a second time for extra juice. To make jam or butter, squeeze out the pits. Some recipes call for whole seeded plums. Other recipes recommend pressing plums through a sieve to remove skins and pits.

For all wild plum products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4.

Wild Plum Jelly

5½ cups juice
1 box powdered pectin
7½ cups sugar

Follow steps for preparing juice on page 5. Then follow steps for making jelly on page 6.

Pioneer Wild Plum Jam

Wash plums. For every cup of pulp (with skins), add ¾ cup sugar. Cook over low heat until the consistency is desirable for spreading. Stir often to prevent scorching. The mixture will thicken as it cools. Fill hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

Wild Plum Butter

Prepare plums as described above under General Procedures. Pour off juice and use for jelly. Squeeze pits out of the remaining fruit. Press through sieve to remove skins. If you prefer, puree pitted fruit in a blender instead of sieving it. Measure sieved or pureed fruit and add one-half as much sugar, if desired, for each pint of fruit. If you prefer a tart flavor rather than a sweet one, sugar can be decreased or eliminated. For each two cups of fruit, add the following: ¼ teaspoon cinnamon and ⅛ teaspoon cloves. Bring to a boil and simmer uncovered, stirring frequently until desired spreading consistency. Plum butter will thicken as it cools. Spoon mixture into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

Canned Wild Plums

Whole plums can be canned and served as a whole fruit during the winter months. Wash plums and discard any that are damaged or spoiled.

- To can in syrup, heat plums to boiling in syrup made of 2 cups sugar and 4 cups water.
- To can in water, heat plums in water only. Although plums canned in water have fewer calories than those canned in syrup, canning in water results in less firm fruit.

Place hot fruit to ½ inch from top of hot pint or quart jars. Cover with either boiling syrup or boiling water leaving ½-inch headspace. Remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 3 (below).

Table 3. Recommended processing times for canned wild plums in a boiling-water canner at designated altitudes

Style of pack	Jar Size	3,001-6,000 feet (minutes)	6,001-8,000 (minutes)
Hot	Pints	30	35
	Quarts	35	40

Photo courtesy of USDA-NRCS PLANTS Database © Jeff McMillan



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's sons, New York, Vol. 2: 577.

Serviceberries

“Sarviceberries” if you prefer the Bostonian pronunciation

Serviceberries are yet another native species from the rose family. Three species of serviceberry are found in Wyoming: Saskatoon serviceberry (*Amelanchier alnifolia*), Utah serviceberry (*Amelanchier utahensis*), and dwarf serviceberry (*Amelanchier pumila*). Serviceberries produce prolific clusters of attractive white star-shaped blooms. The leaves are oval to nearly round, from $\frac{3}{4}$ to 2 inches in length and serrated on the upper half toward the leaf tip. Stems are alternately arranged with relatively short internodes. The fruit is a small berry-like pome (or small apple). The immature red fruit turns a dark purple to black when it ripens. Found on open hillsides, serviceberry bushes frequently grow among mountain mahogany shrubs. Serviceberries can grow up to 15 feet tall but seldom attain this height because they are heavily browsed by deer. Four to 5 feet is a more typical height for this shrub.

Serviceberry Jelly

3½ cups juice
1 package powdered pectin
5 cups sugar

For products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4. Follow steps for preparing juice on page 5. Then follow steps for making jelly on page 6.

Variation: To add a little tartness to the jelly, add $\frac{1}{4}$ cup lemon juice to the serviceberry juice before cooking.

Photo courtesy of USDA-NRCS PLANTS Database © J.S. Peterson



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's Sons, New York, Vol. 2: 577.

Rose Hips

The mountain man's anti-scurvy medicine

The Woods' rose (*Rosa woodsii*) is the most common native rose shrub found in Wyoming. Other species found in Wyoming include the prickly rose (*Rosa acicularis*), prairie rose (*Rosa arkansana*), and Nootka rose (*Rosa nutkana*). The fruits of all these species are edible throughout the year and were an important source of vitamin C for the native people and early explorers of the Rocky Mountains. Dried rose hips persist on plants and remain edible throughout the winter. Rose hips are bright red in color and range in flavor from tasteless to sweet. Although never bitter, they are very seedy. The blooms of wild roses are usually light to dark pink or even red, and they have five petals with five sepals. Each leaf is composed of multiple oppositely arranged leaflets forming a pinnate compound leaf up to 6 inches in length. The leaflets are more deeply serrated at the tip and are from ½ to 1 inch in length, half as wide as they are long. Stems are dark brown and covered with light-colored thorns shaped like a cat's claw. Shrubs are 3 to 4 feet in height and found in open to wooded habitats.

Dried Rose Hips

Rose hips should be gathered after the first frost. Cut rose hips in half and remove the seeds with the point of a knife. Dry as quickly as possible in a slightly warm oven. Use as potpourri to add a light rose fragrance to a room.

Rose Hip Jelly

4 cups rose hips
2 pounds sugar

For products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4. Wash rose hips and remove outside covering. Add just enough water to cover and bring to a boil. Add sugar and simmer until the fruit is soft. Strain and return juice to kettle. Bring juice to boil again and test for gel following the procedure on page 6. Pour into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

Candied Rose Hips

1½ cups rose hips
½ cup water
¼ cup sugar

Wash rose hips and remove seeds. Combine sugar and water to make a syrup. Add rose hips and boil 10 minutes. Lift rose hips from syrup with a skimmer or slotted spoon and drain on waxed paper. Dust with sugar and dry in a very warm oven (150-175° Fahrenheit). If the rose hips seem sticky, add more sugar. After rose hips have dried, remove from oven and cool. Store rose hips between sheets of waxed paper in a covered metal container. Candied rose hips can be added to your favorite cookie recipes (oatmeal cookies, bar cookies, sugar cookies, etc.). They can also be added to puddings or used in place of nuts or fruits in other baked products; for extra flavor, you can add grated lemon rind.



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USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's sons, New York. Vol. 2: 577.

Buffaloberries

Anything called buffalo is so Wyoming!

Two species of buffaloberry are found in Wyoming: silver buffaloberry (*Shepherdia argentea*) and russet buffaloberry (*Shepherdia canadensis*). A closely related species called silverberry or wolfwillow (*Elaeagnus commutata*) is also found in Wyoming. All three species are in the same plant family of the Russian olive (*Elaeagnus angustifolia*), a common invasive species. Buffaloberry shrubs grow up to 8 feet in height and are similar in appearance to Russian olive, having narrow, blunt-shaped leaves.

- Silver buffaloberry leaves have a distinct sage coloration similar to Russian olive.
- Russet buffaloberry leaves are dark green on the upper surface and fuzzy underneath with star-shaped hairs. Stems are light brown with alternately arranged lateral branches sometimes forming a spine at the tip.

Buffaloberry is a dioecious species, which means plants have either imperfect male or female flowers on separate plants. The imperfect flowers are yellowish to pale green. The fruit, which is found only on plants that bear female flowers, is pale orange to bright red in color. Silver buffaloberries make the best jams and jellies. Although suitable for jams and jellies, raw russet buffaloberries have a soapy taste and can cause diarrhea if consumed in large quantities. When eaten raw, the dry, mealy berries of silverberry or wolfberry shrubs are less palatable than either of the buffaloberries, but they can still be used to make jam.

Buffaloberry Jelly

This jelly is clear with a color of golden honey, and the taste is similar to currant jelly. Follow steps for preparing juice on page 5. Buffaloberry juice will be pale in color (a peachy-pink) and will look soapy. For every cup of buffaloberry juice, use $\frac{3}{4}$ cup of sugar. Follow steps for making jelly on page 6. If made with pectin, follow proportions given for currant jelly on page 18. Because buffaloberries make a tart jelly, you can add some apple juice if you desire a milder flavor. If so, use one cup of apple juice for every cup of buffaloberry juice.

Dried Buffaloberries

Wash berries and remove stems and leaves. Put berries in a food grinder and grind to a mushy consistency. Form crushed berries into patties. Dry patties in a food dehydrator. When they are brittle and break when bent, they are dry. Store in an airtight jar in a cool dry place.

Dried Buffaloberry Syrup

3 cups dried berries

2 cups water

2 cups sugar

Soak berries in water until tender. Bring berries to a boil and strain to remove seeds. Add sugar and stir until sugar is dissolved. Refrigerate and use within one month.

Berry Gravy

Make buffaloberry syrup using recipe above. In a separate container, use a wire whip to thoroughly mix 5 to 6 tablespoons all-purpose flour with one cup water. If you prefer more translucent gravy, use corn starch instead of flour. Stir until lumps are dissolved. Slowly pour flour (or cornstarch) and water mixture into boiling berry syrup. Boil until thick, stirring constantly. Remove from heat and store in refrigerator in a clean, covered container, and use within one week. Berry gravy can be used like jam on toast or like syrup on pancakes or waffles. Berry gravy can also be used as a glaze for pork loin roast.



Photo courtesy of David Wayne Wilson



Black currant

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's Sons, New York, Vol. 2: 577.

Wild Currants

Even in the Equality State, not all currants are created equal

Three main species of wild currants are found in Wyoming. All three are small shrubs growing to a maximum height of 5 feet.

- Black currant shrubs (*Ribes hudsonianum*) are found in moist, shady locations in stands of timber or along streams. Their leaves have three to five lobes and look like a small maple leaf. The leaves also have tooth-like indentations (serrations) around the entire edge of the leaf. The white flowers are funnel shaped, and the black berries are very sweet.
- Golden currant shrubs (*Ribes aureum*) are found in open, sunny areas. The leaves have three to five blunt or rounded lobes, without serrations around the lower portion of the leaf. The flowers are bright yellow, and the berries can be yellow, orange, red, or purple. Because golden currant berries range in flavor from sweet to bitter, you should sample the berries of each shrub to test the flavor. Darker berries are usually sweeter.
- The berries from wax currant shrubs (*Ribes cereum*), the third species of wild currants found in Wyoming, are not recommended for making jams and jellies. This species grows in the same location and even frequently alongside golden currant bushes. Leaves are smaller and not as deeply lobed as either of the other two species. The leaves and buds are sticky. Flowers are trumpet shaped and usually pink in color, and the berries are orange to red. Wax currants are usually very bitter.

Currant Ice Cream Sauce

1 cup currants, washed and stemmed

½ cup water

½ cup sugar or honey (or use ¼ cup sugar and ¼ cup honey)

Cook currants in water for 10 minutes. Add sugar and/or honey and boil gently 5 more minutes. Serve hot or chilled over vanilla ice cream.

Photo courtesy of Gary A. Monroe @ USDA-NRCS PLANTS Database



Golden currant

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's Sons, New York, Vol. 2: 577.

Photo courtesy of Al Schneider @ USDA-NRCS PLANTS Database



Wax currant

Currant Jelly

6½ cups currant juice
1 package powdered pectin
7 cups sugar

For products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4. Wash currants. To prepare the juice, crush the fully ripe fruit before cooking and then follow steps for preparing juice on page 5. Then follow the steps for making jelly on page 6. **Variation:** Mix currant juice with equal parts of apple juice.

Currant Punch

Follow steps for preparing juice on page 5. Sweeten hot currant juice to taste, stirring to dissolve sugar. Cool. Add club soda or ginger ale at serving time. Other fruit juices may be combined with the currant juice for a flavorful variation. For a special touch, add a small scoop of ice cream at serving time.

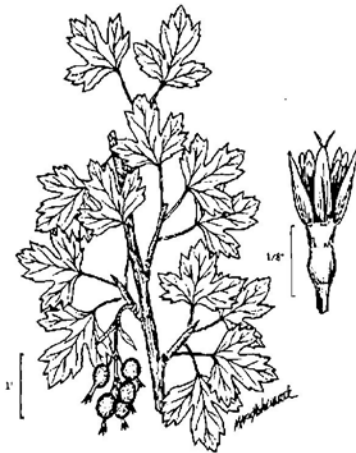
Photo courtesy of USDA-NRCS PLANTS Database



Canadian gooseberry

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's Sons, New York, Vol. 2: 577.

Photo courtesy of David Wayne Wilson



Whitestem gooseberry

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's Sons, New York, Vol. 2: 577.

Gooseberries

A currant by any other name is a gooseberry

Gooseberries are closely related to currants and differ mainly by the presence of prickles or thorns on the stem of the gooseberry. In contrast, currant shrubs lack thorns. Gooseberry shrubs usually produce a larger fruit than currant shrubs. Gooseberries are sour when green but very flavorful as they ripen to a reddish purple color. Most people prefer gooseberries over currants for making pies and jams. There are two main species of gooseberry in Wyoming; both are small shrubs that generally do not exceed 3 feet in height.

- Canadian gooseberry or redshoot gooseberry (*Ribes oxycanthoides*, formerly *Ribes setosum*) has rust-colored younger shoots covered with fine spines while the older grayish stems have one to three large spines at the base of the leaves.
- Whitestem gooseberry (*Ribes inerme*) has very few thorns at the base of the leaves of the older white stems; however, young shoots are covered with fine spines.

Gooseberry leaves are similar to those of golden currant and are deeply lobed with blunt tips. Whitestem gooseberry tends to produce slightly larger fruit (up to $\frac{1}{2}$ to $\frac{3}{4}$ inch in diameter) than

that of Canadian gooseberry (an average diameter of $\frac{1}{4}$ to $\frac{3}{8}$ inch). Gooseberry flowers are small and bell shaped, usually white with a pale greenish-yellow tint.

For all gooseberry products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4.

Gooseberry Jelly

3½ cups gooseberry juice
¼ cup lemon juice
1 package powdered pectin
5 cups sugar

Prepare the juice by grinding stemmed fruit through a food grinder or follow directions for preparing juice on page 5. It will take between 5 to 6 cups of berries to make 3½ cups of juice. Add ½ cup of water to the ground berries and boil for 5 minutes. Follow steps for making jelly on page 6.

Gooseberry Jam

5½ cups ground fruit
7 cups sugar
1 package powdered pectin

Add sugar and pectin to fruit and stir well. Then cook jam according to the directions on pectin package. Pour into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

Canned Gooseberries

Canned gooseberries can be eaten as a sauce or used in pies. Wash and stem berries. Put ½ cup water for each quart of fruit in a large saucepan and bring to a boil. Add berries, boil for 30 seconds, and drain. Fill hot pint or quart jars and cover with hot juice leaving ½-inch headspace. Remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in boiling-water canner as described in Table 4 (below).

Table 4. Recommended processing times for canned gooseberries in a boiling-water canner at designated altitudes

Style of pack	Jar Size	3,001-6,000 feet (minutes)	6,001-8,000 (minutes)
Hot	Pints or quarts	20	25

Gooseberry Pie

2 cups fresh or canned gooseberries
¾ to 1 cup sugar
2 tablespoons quick-cooking tapioca
1 tbsp butter
Grated rind of 1 lemon
1 unbaked pie shell and top

If using fresh gooseberries, first wash and stem the fruit. Add sugar and tapioca to gooseberries and let stand while preparing the pastry shell and top. Pour gooseberry mixture into pastry-lined pie pan. Dot mixture with butter and add the top of the pastry to form a two-crust pie. Bake at 450° Fahrenheit for 10 minutes. Reduce temperature to 350° Fahrenheit and continue baking 30 minutes longer.

Photo courtesy of USDA-NRCS PLANTS Database



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's Sons, New York, Vol. 2: 577.

Wild Grapes

Not a grape of wrath but a native grape of Wyoming

Only one species of wild grape, riverside grape (*Vitis riparia*), is found throughout Wyoming. Six other species, however, occur along the southern and eastern borders of the state. These six species are mapleleaf grape (*Vitis acerifolia*), summer grape (*Vitis aestivalis*), canyon grape (*Vitis arizonica*), graybark grape (*Vitis cinerea*), fox grape (*Vitis labrusca*), and frost grape (*Vitis vulpina*). The domesticated vineyard or wine grape (*Vitis vinifera*) is cultured in Wyoming.

Riverside grape is a vining plant with opposite leaf arrangement and a unique leaf shape. The leaf lacks the typical deep-lobed characteristic common to most grapes, but it still has three distinct and prominent leaf tips. The base of the leaf is concave, with large rounded ears to each side of the petiole. The leaves are deeply serrated. The white flowers occur in clusters forming into a dark blue fruit.

For all wild grape products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4.

Wild Grape Jelly

To make wild grape jelly, follow the directions for making cultivated grape jelly as provided with commercial pectin packages.

Wild Grape Butter

6 quarts grapes, washed and stemmed

Water to cover

4 quarts apples, washed and quartered but not peeled

4 cups sugar

Jelly bag or three layers of cheesecloth (to make a jelly bag, see directions on page 5)

Cover the grapes with water and simmer for 20 minutes. Strain off juice and make into jelly as described on page 6. Put the grape pulp into the jelly bag or cheesecloth layers. Return to the kettle, keeping the pulp in the bag. Add apples. The bag keeps grape seeds out of the apples but allows the seeds to impart a richer grape flavor to the butter. Cover apples and bag of grapes with water. Bring to a boil and simmer 20 minutes. Drain. Juice can be used for Grape-apple Jelly (see next recipe). Put apples through a sieve and measure out 5 cups. Place in kettle, add sugar, and heat to boiling, stirring constantly. Cook to desired consistency. Spoon butter into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Remove air bubbles by pressing a rubber spatula between food and side of jar at several locations. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

Grape-apple Jelly

5 cups of grape/apple juice (from previous recipe)

7 cups sugar

1 package powdered pectin

Follow steps for making jelly on page 6.

Grape Juice

Wash and stem fresh, firm, ripe grapes. Put 1 cup grapes in a hot quart jar or hot sterilized quart jar. Add ½ to 1 cup sugar depending on sweetness desired. Fill hot pint or quart jars or hot sterilized pint or quart jars leaving ¼-inch headspace. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 1 (page 5).



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown, 1913. An illustrated flora of the northern United States, Canada and the British Possessions, 3 vols. Charles Scribner's sons, New York, Vol. 2: 577.

Prickly Pear Cactus

Nasty to look at but tasty to eat!

This is one of the easiest plants to identify because almost everyone knows what these cactuses look like. The most common species found in Wyoming is the plains prickly pear (*Opuntia polyacanthus*). Cactuses are desert-dwelling succulents found in the drier sections of every state and province of North America. The leaves of plains prickly pear are large fleshy lobes covered with two types of spines. The large woody spines are intimidating, but it is the smaller hair-like spines, which are barbed, that can be far more problematic. They are difficult to see and remove after they become imbedded in the skin. The large yellow cactus flower occurs at the top of a fleshy leaf. The fruit is a reddish purple and covered with fine spines. Because of the spines on the leaves and fruit, use tongs and gloves to gather and handle the fruit.

Prickly Pear Jelly

3 cups of cactus juice (made from approximately 12 cups ripe cactus fruit)

½ cup lemon juice

1 package of powdered pectin

4½ cups of sugar

Jelly bag or three layers of cheesecloth (to make a jelly bag, see directions on page 5)

For products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4. **Caution: Use tongs and gloves to gather and handle cactus fruit.** To prepare cactus juice, rinse and scald the fleshy fruits. If possible, remove any damaged spots but you do not need to remove the small spines or prickles. Cut into halves, barely cover with water, and simmer 15 minutes. Pour into jelly bag or cheesecloth layers and squeeze out cactus juice. Discard pulp. Mix cactus juice and lemon juice with powdered pectin. Place over high heat and stir until the mixture comes to a rolling boil. Add sugar, bring to a vigorous boil again, and boil for 1½ minutes stirring constantly. Remove from heat, skim off any foam, and pour quickly into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).



Dandelions

Even weeds can be used to make jelly

Common dandelion (*Taraxacum officinale* var. *officinale*) is one of the most common introduced and native weeds in North America, and Wyoming is no exception. A closely related native species of common dandelion (*Taraxacum officinale* var. *ceratophorum*) also is native to North America. Dandelions are in the sunflower family (*Asteraceae*) and by definition have a composite bloom with many bright yellow petals radiating from the center. All the leaves of a dandelion originate from the base and have jagged or wavy edges. Dandelions have a strong taproot (like a carrot) that may extend several feet below the soil surface. Many cities in Wyoming have ordinances requiring homeowners to control dandelions in their yards, and violators may be fined.

Dandelions are very common, however, and they can easily be collected along roadsides, from vacant lots, or in country pastures.

Caution: Take care not to gather dandelions for jelly that have been sprayed with herbicides or pesticides or exposed to other toxic substances.



Dandelion is not considered a wild fruit but is included in this publication because it grows wild and the recipe for dandelion jelly can be difficult to obtain.

Dandelion Jelly

This jelly is clear like apple jelly and has a unique flavor.

1 quart dandelion blossoms

1 quart water

½ tsp orange or lemon flavoring

4½ cups sugar

1 package powdered pectin

For products processed only 10 minutes, use sterilized jars. To sterilize empty jars, see procedure on page 4. To make dandelion jelly, gather the familiar yellow blossoms early in the morning when their nectar content is highest. Wash blossoms, combine with water in a saucepan, and bring to a boil. Boil 3 minutes and then drain well; save juice and discard blossoms. Measure out 3 cups juice and place in saucepan. Add orange or lemon flavoring, powdered pectin, and sugar. Boil 3 minutes. Pour into hot half-pint or pint jars or hot sterilized half-pint or pint jars leaving ¼-inch headspace. Wipe sealing edge of jars with a clean, damp paper towel. Adjust lids and process in a boiling-water canner as described in Table 2 (page 7).

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- David Wayne Wilson (senior lecturer, agroecology and horticulture, University of Wyoming) updated plant descriptions and identified sources for or provided images of plants, berries, and fruit.

