

What Can You Do?

- ✓ **Harvest manoomin** – wild rice needs those who use and care for it
- ✓ **Be aware** – recognize and appreciate this valuable resource
- ✓ **Pay attention** – avoid impacting manoomin beds when boating and do not carelessly remove aquatic vegetation
- ✓ **Purchase “wild” rice** – know the difference between paddy rice and hand-parched manoomin

More information can be found at:

www.1854treatyauthority.org

www.glifwc.org

www.dnr.state.mn.us



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...from lake
to table...

Manoomin

Cultural Significance

Epiitendaagwak “that which is greatly valued”

Wild rice is known to the Anishinaabeg or Chippewa people as *manoomin* (pronounced Ma-nō-min), the “good berry” or “good seed” in the Ojibwe language. As the migration story is told a prophecy instructed the Anishinaabeg to travel from the East to seek a destination “where the food grows on water”. Like most grains, manoomin can be stored for long periods of time and is therefore an important food staple of the traditional subsistence lifestyle. Manoomin is a sacred gift where the Anishinaabeg are considered protectors and stewards of the resource.

Management

Ganawenjigaade Manoomin “wild rice is taken care of”

Manoomin is less abundant today than it was in the past. Because manoomin success varies from year to year, long-term studies are needed to determine if the abundance is continuing to decline. Management organizations assess abundance on a group of lakes and rivers to track the change in manoomin growth across years. Monitoring activities typically include surveys of rice bed density (the number of stalks in an area) that are conducted on the water, plus aerial photography. Additional surveys are completed on waters historically known to have manoomin to update databases on the current distribution and locations of manoomin.

Tribal, federal, and state resource managers, conservation organizations, and others work collaboratively to manage and restore manoomin across the region. Managing water levels is an important factor during the growing season and for the long-term health of manoomin. If the habitat is suitable, manoomin can be seeded to restore or increase abundance.

Other activities for the long-term preservation of manoomin include legal protections, research, and public education. It is imperative that regulators have protective water quality standards in effect, as well as sound management guiding the removal of aquatic plants. Managers and researchers cooperate in studies that increase knowledge about the growth and health of manoomin. Also, education and outreach activities spread the word about the importance of manoomin, actions to protect and manage it, and opportunities to harvest using proper, non-damaging techniques.



Monitoring



Seeding

Biology

Manoomin Gikendaasowin “wild rice knowledge”



floating-leaf stage



standing manoomin

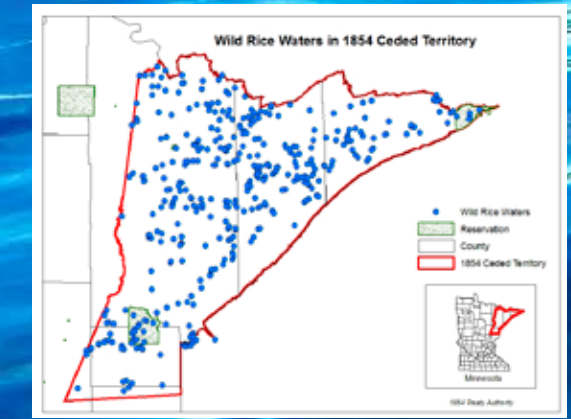
Manoomin is an annual grass growing in the western Great Lakes region in parts of Minnesota, Wisconsin, Michigan, and into Canada. The most common species present is *Zizania palustris* (northern wild rice), with *Zizania aquatica* (southern wild rice) thought to be present in some locations in the region.

Manoomin grows best in shallow lakes and rivers (1-3 feet deep) with soft, mucky bottoms. Each year it grows from seed, beginning after ice-out in the spring. It reaches the water's surface in June in what is called its floating-leaf stage. During July, the plant stands out of the water, usually up to about 4 feet tall. In late August to early September, the seeds of the plant ripen and fall into the water to grow future plants. This is when seeds can be collected by harvesters.

Manoomin productivity varies over time, even within a single body of water. A general guideline is that a lake will have one year with a “bumper crop”, two fair years, and one poor year over a four-year period. Environmental conditions such as water level changes or weather events, and perhaps changes in available nutrients, contribute to this variability. However, manoomin adapts well to changing conditions, and its seeds can stay dormant until favorable conditions for growth are present. Therefore, a good crop can be present even the year after a complete failure.

Manoomin is an important component of a healthy ecosystem. It is a valuable food source and provides habitat, as well as a variety of services for waterfowl, fish species, muskrat, and other animals.

A variety of conditions can have negative effects on manoomin. Increased water levels from storm events or changes to water body outlets (dams, culverts, beaver activity) can reduce germination in the spring or uproot, even drown out an entire manoomin bed during the floating-leaf stage. Wind, heavy rain, or hail can damage manoomin. Wildlife such as geese (grazing on plants), carp and other fish (stirring lake bottoms and uprooting plants), or insects like rice worms (moth larva that consume rice



Around 500 manoomin waters are in the 1854 Ceded Territory.

seed) are detrimental to the health of a manoomin bed and crop productivity. Competing vegetation, including both native and non-native species, has the potential to take over preferred habitat and reduce manoomin growth. Fungal diseases like brown spot can also be present and reduce the health of manoomin plants. Climate change also magnifies many of the issues mentioned above and may ultimately be a factor in the long-term success of manoomin. Finally, human impacts such as industrial discharges, lakeshore development, and recreational activities result in additional pressures on this important resource.



Manoomin over a four-year period on Round Island Lake.

Harvest

Manoominikewin
gathering wild rice”



Manoomin ripens at variable times. Plants on different lakes and rivers, in areas within a single water body, and even seeds on a single stalk of manoomin all can ripen at different times. This gradual and uneven ripening means that different waters can be harvested at different times. The same bed can be harvested repeatedly during the season. Harvest season can last several weeks if things like storms or strong winds don’t knock ripe seeds off stalks before harvesting.

Harvesting should occur only when the rice is fully ripe, and usually occurs in late August or early September. Plants can be damaged if harvesting is attempted before manoomin is ripe. Likewise, harvesters do not maximize benefits from their efforts if rice seed is not firm and does not easily fall from stalks. Although it is generally up to harvesters to determine whether the crop is ripe enough for harvest, the appropriate authorities, or “rice chiefs,” may wait to open the harvesting season on some lakes until the manoomin is ripe.

Knowing where manoomin is found is the first step to harvesting. Tribal or state resource managers can be a good source of information on where manoomin is found in a particular area. For example, the 1854 Treaty Authority has developed a Wild Rice Resource Guide to help point harvesters in the right direction; it contains a list of manoomin waters and locations in the 1854 Ceded Territory. Late summer is the perfect time to do some scouting to see how the rice crop is looking at various locations.

Public waters in the 1854 Ceded Territory are generally open for all harvesters. Manoomin condition updates, including photos of rice waters, are available to the public on the 1854 Treaty

Authority website. Reservations generally have restrictions on rice waters within reservation boundaries and may only be open to constituent tribal members.

A state permit or tribal identification card is required to harvest manoomin. State permits can be purchased at any license outlet, whereas each tribal authority conducts its own ID issuing process. Other regulations to promote traditional harvest techniques and protect the resource might also be in place. Examples include regulations on season dates, hours of harvest, length and weight of ricing sticks, sizes of push pole components, and canoe dimensions. Be sure to consult the appropriate rules and regulations, like state or tribal conservation codes, for details before harvesting.

Essential harvest gear includes a canoe, paddles, knockers (also called ricing sticks or flails), and a push pole. A long push pole with a forked end is used to move the canoe through manoomin beds. Push poles are usually made of tamarack or other light and straight wood, but some harvesters use aluminum poles.



A wooden fork or aluminum “duck bill” is attached at one end of a push pole. Care must be taken to keep all edges smooth on forked ends of push poles to avoid snagging or uprooting plants.

Knockers are a pair of wooden sticks crafted out of light weight wood such as cedar. Because you cannot purchase knockers from a store, they are usually handmade. Knockers are smooth

and tapered from the handle to the tip. Finally, remember to throw in bags such as grain sacks for your harvested manoomin.

Two people in a canoe cooperate to harvest manoomin. No motors are used while harvesting. Instead, the “poler” stands at one end of the canoe and guides it with the push pole, propelling it slowly through the manoomin bed. The “knocker” sits, and gently brushes seeds from the stalks into the canoe. Harvesters use a variety of configurations in the canoe based on where they are from and from whom they learned (poler in rear with knocker sitting in rear facing forward, knocker sitting in front facing rearward, poler in the front, using paddles instead of a pole, etc).



The knocker generally works on both sides as the canoe moves through the rice and a rhythm is developed. Care is taken not to break or damage the plants.

Like most things, harvesting manoomin is an acquired skill and art, and harvest tends to increase with experience. Ripe manoomin will easily fall from the stalks when a light brushing stroke is used. If seeds do not drop off easily, it isn’t ready, and damage to plants may occur if they are knocked too hard. Rice ripens gradually, and proper harvesting protects the beds for subsequent harvest trips that season.

Depending on conditions and harvesting experience, manoomin gathered can total 100 pounds or more on a good day.

Preparation

Ogii’-kiizhitoon Manoomin
finishing and cooking wild rice”

Freshly harvested manoomin is not ready to eat but first must be finished. The finishing process includes drying, parching (roasting the green rice), jigging/dancing (threshing, or removing the hull), and winnowing (separating the chaff from the seeds).

After harvesting, manoomin should quickly be spread out on a tarp, canvas, or blanket. The green manoomin needs to be turned every so often to dry out evenly. It is also cleaned during this time by removing leaves, stalks, or other debris.

Dried manoomin is then parched or roasted by placing it in a cast iron kettle or washtub over a fire. It must be stirred constantly with a paddle to prevent it from burning.

Then manoomin is hulled to remove the husk from the seed. This can be done in a variety of ways. Small pits can be dug or barrels can be lined with wood or hide for jigging, or “dancing” on the rice. Wearing leather moccasins or very clean shoes, “dancers” tread upon manoomin in a circular motion, and use a pole for balance/stability as well as to control how much pressure is applied. In an effort not to break the grains, “dancing” is generally the role of the youngest and smallest participants at manoomin camp.

Finally, the chaff is removed by winnowing. The rice is placed in a birch bark winnowing tray and tossed into the air or allowed to fall to the ground. The wind is used to blow away the chaff from the grains. Now the manoomin is ready for storage, or ready to cook and eat.

Finishing manoomin is both a process and an art, so many harvesters choose to take their green manoomin to an experienced processor. Professional finishers may mechanize some or all the traditional steps described above, and charge a fee or keep a portion of the finished product as payment. It can be difficult to find available finishers and the best option is to get suggestions from other harvesters.



100 pounds of harvested or green manoomin produces about 35-50 pounds of finished rice.

Manoomin has a distinct aroma and nutty flavor. Not only is it delicious, but it is a healthy and natural food high in protein, low in fat, gluten free, and a good source of vitamins and minerals. It should be rinsed in cold water before cooking to remove any impurities, and cooking time can vary depending on finishing process and desired texture (15-45 minutes). One cup of uncooked manoomin yields about three to four cups cooked. It can be used in a variety of ways and dishes, from muffins and pancakes, to soups and casseroles, to snacks and treats. A variety of recipes and ideas are available in cookbooks and online.

Cultivated (or paddy) rice is commonly found for sale in stores and roadside stands. Paddy rice is cultivated in artificially created fields and is mechanically harvested and finished. Paddy rice is darker in color (usually black), requires a longer cooking time, and lacks the flavor of natural manoomin. Although paddy rice is sold at a lower price than natural hand-harvested product, natural manoomin is thought to be a superior product. If you are unsure, read the label closely – under Minnesota law, cultivated wild rice requires labelling that states it was commercially produced.

Finished manoomin can be a variety of colors (green, tan, brown, grey, black) depending on the technique used. Background photo, traditional hand parched manoomin from Nett Lake, Minnesota.