

More information about garlic, and about this project, is available on our web site [www.canadiangarlic.ca](http://www.canadiangarlic.ca)



Seeds of Diversity thanks:

- the Agricultural Adaptation Council Small Projects Initiative for its financial assistance in the research and development that began this project.
- Seeds of Diversity's members and donors for their support and enthusiasm for great Canadian garlic.
- the George Cedric Metcalf Charitable foundation for its financial support
- the Ontario Trillium Foundation for its financial support

Malheureusement, ce livret n'est pas disponible en français

Second edition

Copyright © 2007 Seeds of Diversity Canada

Seeds of Diversity's Great Canadian Garlic Collection

**Seeds of Diversity's Great Canadian Garlic Collection** is a national project that explores and documents the many varieties of garlic grown in Canada.

There are well over 100 varieties of garlic that are suited to Canadian growing conditions. Our goal is to grow as many varieties as possible in all of Canada's major agricultural areas and to record their success and characteristics. The collected information will be posted to our web site for use by all.

Garlic grows differently in different climates. Some varieties have particular colours, shapes or other characteristics in certain areas of the country, but not in others. For instance, some varieties grow scapes in the east but not in the west. Some have a purple or red colour when grown in certain climates, but are white elsewhere. More importantly, some varieties grow better than others in different regions.

We want to find out which kinds of garlic grow best in your area, and this is how you can help.

### **How the Project Works**

Seeds of Diversity member-volunteers throughout Canada receive free samples of diverse varieties of garlic each year. They grow each variety for at least two years and fill out a simple standardized form that records their garlics' characteristics.

[www.canadiangarlic.ca](http://www.canadiangarlic.ca)

## Your Role as a Garlic Grower

Any member of Seeds of Diversity can volunteer to be a Garlic Grower in this project. The number of volunteers is limited by the supply of garlic each year, but we are doing our best to expand the project to include as many volunteers as possible.

- 1) You will receive your first garlic samples in September or October. Each sample contains three to five bulbs (about one pound) depending on the size of the bulbs. Plant your garlic right away, following the instructions in this booklet.
- 2) During the next summer, observe your garlic carefully as it grows and fill in a Garlic Observation Form for each variety as characteristics appear. Extra forms can be downloaded from our web site.
- 3) Harvest your garlic when it reaches maturity. See the instructions in this booklet. Allow the garlic to cure for a few weeks. Again, make careful observations and complete the Garlic Observation Form for each of your varieties.
- 4) A project coordinator will contact you during the summer to help you with any difficulties that you might have.
- 5) Send the completed Garlic Observation Forms to Seeds of Diversity's office.
- 6) If you wish to grow additional varieties in your second and subsequent years, you can choose from a list of varieties that will be available in late summer.
- 7) Repeat the process for a second year, with each variety. This is very important, since garlic characteristics can be affected by a range of factors, including unusual weather.

until you can feel the stem softening just above the bulb, but the bulb wrappers remain firm. If you leave the harvest too late, the cloves will burst the bulb wrappers and this will reduce the storage life of the garlic. Dig up the bulbs gently with a shovel or fork, shake off excess soil, and lay the whole plants to dry, out of the sun. At this stage, the bulbs are very tender and should be treated gently to prevent bruising.

**Curing:** The best way to prepare garlic for storage is to allow the bulb wrappers to "cure" by drying while still attached to the whole plant. Since the bulb wrappers are the bottoms of the leaves, they can dry out more slowly when the leaves are still present. Lay the plants on a raised surface like a table, or hang in bunches, with good ventilation and out of direct sunlight. Remember that the cloves have never been exposed to direct sun, and they can be damaged by excessive heat just after harvest. A shed or shady side of a building is a good place to dry garlic.

**Cleaning:** Bulbs usually come fairly clean during the drying process, but you should brush off any excess soil with your hands once it has become dry and flaky. Only wash soil off if it will not brush away (this usually only happens if you have clay soil). Cut the stems about an inch above the bulbs using pruning shears or a sharp knife. Cut the dry roots off the bottoms to produce neat, clean bulbs.

**Storing:** The best storage conditions for garlic are cool, dark, well ventilated and fairly dry. Avoid storing in plastic bags since this will collect condensation. about 10°C-12°C is ideal.

**Mailing:** If you send samples of garlic in the mail (for instance through Seeds of Diversity's annual Seed Exchange), send clean, well-cured, good quality bulbs. They must be sent in a box or padded envelope to prevent damage. Canada Post charges more for a square parcel than for a flat padded envelope. You can carefully break up the bulbs so the cloves will fit in a flatter envelope, but include a note explaining this, so the recipient will not think that their garlic was smashed in transit!

## Growing Garlic

Garlic is a very easy plant to grow, even in a small garden. Here are some useful tips for growing Great Canadian Garlic.

**Planting:** Garlic is best planted three to five weeks before the ground freezes hard. In most areas of Canada plant in October or early November. Garlic likes a rich, soft soil so prepare your garlic bed by digging in plenty of compost. Select the best looking bulbs to plant, avoiding any that are mouldy or damaged since these will more likely rot than grow. Peel each bulb and break the cloves apart gently. Garlic can bruise and spoil, like apples, if handled too roughly. Leave the clove wrappers on and plant each clove separately about four to six inches apart, and about two inches deep (from tip to surface). The bottom of the cloves is the tough flat part that was attached to the bottom of the bulb.

**Mulching:** Since your garlic must endure the freezes and thaws of winter, it may help to insulate the ground with a layer of straw, leaves or other material. Leaves should be removed in early spring to allow the garlic shoots to grow, but straw is a good all-season mulch because it does not form a mat like leaves do. Mulch during summer helps to reduce weeds and retain moisture, both essential for the best garlic bulbs.

**Fertilizing:** When planting garlic in the fall, it is good to plant in soil that has been amended with compost (as fertilizer). Top dressing with compost or an organic fertilizer (such as fish with kelp) is helpful in spring when the tops of the garlic are very actively growing. But don't feed any later than the end of May, when bulb maturation is beginning underground as excess nitrogen at this time may delay bulbing, reduce the quality of the harvested bulbs, and decrease the storage life of bulbs.

**Harvesting:** Garlic is ready to harvest when half to three-quarters of the leaves turn yellow. Depending on the weather, this can be any time from mid-July to early August. Check a few bulbs each week

## What if Your Garlic Doesn't Grow?

No problem. Even the best gardeners have poor harvests from time to time. Maybe the winter was too cold, or you had a personal problem that prevented you from getting to your garden.

Whatever the reason, as long as you want to keep volunteering with the project, we want you back! Just contact Seeds of Diversity's office. Our friendly coordinators can help you with any difficulties and restore any samples that you need.

### Interesting Fact:

You might expect garlic to keep well in the fridge, or at low temperatures, but this just encourages it to sprout. Remember that you plant garlic cloves in October; cold temperatures tell them it's time to grow!

## About Garlic

Garlic is a bulb that multiplies by dividing underground. In Canada, we normally plant garlic in the fall and harvest it in mid to late summer. It is one of the few crops that is planted in the fall to over-winter!

When we talk about a garlic "bulb", we mean the whole underground part that is harvested. When you cook with garlic, you peel the papery bulb skins (which we also call "bulb wrappers") to reveal many small pieces of garlic inside. The pieces are called "cloves", and each of them has its own skin or "clove wrapper".

When you plant garlic in the fall, you peel the bulb, break apart the cloves, and plant the cloves separately with their clove wrappers intact. Each clove sprouts into a new plant and divides underground to make a whole new bulb with many cloves.

### Interesting Fact:

The bulb wrappers are actually the lower ends of the leaves. If you count the leaves you'll find the same number of wrappers.

Inside a garlic bulb you sometimes find a stiff round part in the center. This is the bottom of a flower stem, called a "scape". Garlic scapes are tall stems that sometimes curl or twist into interesting shapes. They also carry an unusual flower structure at the top that normally doesn't bear flowers.

Although garlic once had flowers like other plants, after thousands of years of cultivation it has lost the natural ability to

make flowers and seeds. Instead, the scape bears a cluster of "bulbils". Each of these little round parts is like a tiny clove, and they can be planted separately to make garlic bulbs (although it takes a few more years).

Normally, growers remove the scapes when they have made one-and-a half turns. The tender stems and tops are edible and delicately flavoured. Also, removing the scape allows the bulb to grow bigger!

Note that some varieties do not grow a stem. These are called "softneck" varieties, and scape-producing varieties are called "hardnecks". Softnecks are usually imported from warmer parts of the world, and these are the only kinds that are easily braided.

### Interesting Fact:

Stem growth is climate dependent. A "hardneck" variety that grows a stem in one part of the country might be a "softneck" in another (usually milder) growing area.