**SEED SAVING IN SCHOOL GARDENS**

Seed saving is a rewarding and educational activity that allows children to witness and play an active role in the complete lifecycle of a plant from seed to plant to seed. Children can select the seeds that they would like to see perpetuated in the garden and decide how many seeds to save for future years or share with friends and family.

Seeds such as lettuce, radish, pea, bean or sunflower offer beginner seed savers an excellent chance for successful saving since they are easy to save and showcase an incredible diversity of sizes, shapes and colours.

**WHAT IS A SEED?**

A seed is a plant’s ‘baby’, the product of reproduction that, if given the right conditions, will grow up into an adult plant. A seed is alive but in a dormant state, much like a ‘sleeping’ state. All of the nutrients it needs to start out in life are stored inside an amazing little package containing everything needed for the seed to start growing. Seeds can stay dormant for years in dark, cold and dry conditions but when exposed to moisture, warmth, air and (sometimes) light will begin the process of germination and growth.

**WILL SEEDS LIVE FOREVER?**

No. Some seeds can live a very long time (thousands of years) but most do not. Most seeds won’t stay alive for more than a few years under normal storage conditions (in an envelope or jar) so it’s important to keep planting, collecting and saving the seeds we need so that we always have a fresh, healthy seed supply ready for planting. For example: the average life expectancy of a bean seed is 3 years and a lettuce seed is 6 years.

**SEED SAVING BASICS**

Seed saving shouldn’t be complicated; nature does most of the work for us! For most crops and certainly the easy ‘dry seed’ crops named above (lettuce, radish, pea, bean and sunflower), the simplest way to save seed is to let the seeds mature and dry on the plant, then pick them off. For most garden plants this happens naturally at the end of the summer or early fall.

Plants gone to seed are sometimes unrecognizable from their edible life stage. Refer to the colour photos in the document, *How Will We Know When to Harvest Our Seeds,* and the PowerPoint presentation on *Seed Saving and Banking* to help you collect your seeds. An Internet search of your crops at different life stages can also help.

Allow the seed structures to remain on the plant until the seed pod or head begins to dry and turn brown. At this stage, harvest the seed pods or heads and place them into a paper bag that is labeled with the type of seed. Bring them indoors and allow them to dry further.

Once the seeds are completely dry, collect and store them under the three magic seed saving conditions: DRY, DARK and COOL. These are the most important points to remember:

* **DRY**: The seed must be completely dry. If you can put a dent in a bean seed with your fingernail, it is too soft, let it dry further. Storing seeds with a desiccant pack or small amount of dry rice can help keep them dry.
* **DARK**: This is why seeds are often stored in opaque envelopes. A container that will not allow light in like an envelope or jar in a dark cupboard is good.
* **COOL**: Seeds should be kept cool. A cool basement or cellar is ideal but a cupboard or drawer is also fine.

**SEED PROCESSING EQUIPMENT**

Seed saving and processing on a small scale requires very little equipment. Children can use their hands to do most of the collecting. Most seeds can be picked out with fingers, rubbed between hands, shaken in a bag or swirled in a bowl to release them from the dried plant.

**RECORD KEEPING**

One of the most important things to do after you have collected your seeds is to store them in a safe, secure and labelled container indoors. Paper envelopes or jars are perfect for this. Label the container with the following:

* Name of the plant species and variety (ex. Dragon Tongue Bean)
* The year the seed was collected
* Location collected (Main St. school garden)
* Any notes you wish to add about the plant (taste, colour, size, resistance to garden problems, or a picture of the plant or seed etc.)

**WHICH SEEDS SHOULD I SAVE?**

Some plants, like lettuce, produce thousands of seeds every year and you don’t need to collect them all! The beauty of saving seeds is that it allows humans to select the plant traits they would most like to see carried forward into the future. Selecting seeds from the strongest and most productive plants in your garden each year means that you are selecting traits that allow plants to thrive in your particular garden, which is different from a garden in another province or country, allowing you to save and develop the most suitable seed supply for your garden. Collect seeds from a variety of healthy plants to maintain the best genetic diversity.

Explain to your students that when you select seeds from your school garden, you can select for traits that you value. Did you prefer the look and taste of the fattest pods produced on your bean plants or did you prefer the earlier ripening, longer ones? Did you like the orange stripes that showed up on a few of your plain red tomato? Try saving seeds from those. Seed saving is based on experimentation and fun. Chose seeds from the plants you liked the most in order to help carry those traits into the future. Allowing children to explore and experiment with their food allows them to develop a taste for variety and gives them an appreciation of the important work undertaken by farmers and plant breeders. The notion of saving, rather than eating, the best garden specimens is also an exercise in self-control!

**SEED VIABILITY**

A seed’s viability is its ability to germinate and grow a new plant. This varies between one to several years. Seed viability naturally declines over time and it is important to plant your seeds regularly and save new seed to keep a fresh and healthy seed supply. If you would like to know whether your seeds are still viable you can perform a simple germination test:

Fold a paper towel in half and carefully put 10 seeds in a row. Moisten the paper towel and keep it moistened until the seeds germinate. Out of 10 seeds determine how many germinated and multiply by 100. This is your percentage viability. If you have 50% viability then you can expect that only half of the seeds you plant will successfully grow. If that’s the case, you will want to start saving more seeds from next year’s garden to ensure continued seed viability.

**BANK YOUR SEEDS**

Seal envelopes, jars or other materials used for saving seeds and place a selection of seeds for next year’s school garden planting in your classroom seed bank. Store the seed bank in a cool, dark and dry location until next spring.