



Welcome to AITC-SK Winter newsletter. We hope you find it interesting and informative. Please contact our office for suggestions, comments and questions!

Agriculture and Environmental Issues

Young people need help in learning how to evaluate benefits and risk factors. Often judgments are not based on facts and credible information but emotion. Students should consider the following when examining information:

Validity—was the study properly conducted? Is the information disclosed true? Has the study been replicated?

Context—Scientific studies are little snapshots of data. How is this data used?

Trade-offs—Even the safest solutions are not totally safe, be aware that sometimes the solution can be worse than the problem.

Did you know?

- ◆ An estimated 9 out of every 10 bites of food available to people around the world begins with the planting of seeds.
- ◆ Brazil is the country with the most renewable fresh water. Canada is third after Russia.
- ◆ World irrigated agriculture accounts for 85% of all fresh water consumed. Without this irrigation water, the food produced by natural precipitation would be insufficient to feed the world's current population.

Many students have questions about agricultural and environmental issues concerning pesticide use, food safety, water quality and endangered species. The following is an example activity from "Agriculture and the Environment" form the American Farm Bureau Foundation for Agriculture.

Activity—Should it be Banned?

Ask students to work in small groups to identify the product in question and to do a risk/benefit analysis to reach a reasonable conclusion about whether or not the product should be banned.

- ◆ Contains a chemical that causes cancer in lab animals
- ◆ Causes serious injury to millions of people
- ◆ Kills 40,000 people per year
- ◆ Causes fires when ignited
- ◆ Requires tremendous resources for production
- ◆ Produces toxic gases
- ◆ Causes billions of dollars in property damage each year
- ◆ Destroys millions of acres of land for roads to facilitate it

Ask each group to discuss its analytical process and conclusion and share it with the class.

The product referred to is an automobile and its risks are an acceptable part of North American life because individuals believe they have control over risks and because there is often no good alternative to the automobile.

www.farmissues.com

This website is your gateway to information on the web about Canadian farming and food. Play games, find farming facts or search for pictures or videos of your favourite farm animals.

2007 Agriculture Roadshow

Food — Blending Science and Passion

JULY 9—12, 2007

This year's tour focuses on Saskatchewan food. Join us as we visit big farms and little farms, farmer-owned enterprises and multi-national food corporations. Learn about the innovation, science and technology that allows Saskatchewan producers to compete in a global market. Meet the producers who are successful because of their hard work, perseverance and love of the land.

- ◆ Must be willing to learn, have fun and get your hands dirty
- ◆ Open to teachers of all grade levels
- ◆ Tour starts in Saskatoon
- ◆ Teachers are responsible for transport to and from Saskatoon.
- ◆ All other costs are covered by AITC and sponsors.

Register early as space is limited! Call 933-5224 or e-mail programs@aitc.sk.ca

Agriculture in the Classroom

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Saskatoon Pie

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Curriculum Fit: Grade 8 Science: Plant Growth

Activity: Students will develop a strategy for domesticating a wild plant that produces edible fruit.

Time Required: One 40 minute period

Background for the Teacher:

Agricultural research covers a variety of topics, most of which aim at improving an existing crop, developing uses for a crop or finding better ways to process a crop. Another important type of research is the search for a completely new crop. The Saskatoon (*Amelanchier alnifolia*) or service-berry is a common wild plant in Saskatchewan. Because its fruit is widely popular it has become the subject of research aimed at developing it into a bush fruit orchard crop. Early research focused on selective breeding from wild stock to develop domestic varieties with particular characteristics. Several varieties are now available. A new stage of research, still in progress, is the to use cloning and propagation techniques to develop bushes that are so similar genetically that an entire orchard could be expected to ripen at once. This short harvest season is essential to an economically sensible orchard. In this lesson, your students are asked to design a scientific program to domesticate the Saskatoon. Using selective breeding and cross-breeding techniques, or propagation techniques, they will recommend a strategy for attaching this problem.

Procedure

1. Explain to the class how selective breeding can exaggerate certain characteristics.
2. Review propagation techniques.
3. Divide the class into working groups of four or five
4. Tell the groups you have a wild fruit plant, the Saskatoon, which you want to domesticate so that the farmers can grow it in orchards.
5. Ask each group the steps they would take to:
 - Produce dependable bushes form wild plants
 - Develop cloned bushes for regular cropping
6. Conclusion—Each group is to present their research program to the rest of the class.

Discussion Questions

- Based on the information on the Saskatoon Berry Facts Sheet, how many years will your program take to complete?
- Are there any ways we can speed up this process?
- What are some ways to use saskatoons?
- How do you feel about this type of biotechnology?

Ag Ambassador Network

Please help us strengthen the network. If you have had a recent address change or your Ag Ambassador has moved to a new school just fill out the form and send it back to us so your school can continue to receive the benefits of the network..

Address Change

New Ambassador

Original Ambassador

Name: _____

Phone: _____

School Name: _____

Fax: _____ : _____

Address: _____

E-mail: _____

Town/Prov: _____

Preferred method of contact: _____

Postal Code: _____

Grade and subjects taught: _____

Division: _____

Saskatoon Berry Facts

A native shrub, 4—5 m tall

Most successfully grown from seed. Seeds must be separated from the fruit, scratched with sandpaper and stored in damp peat moss at 2—7°C for 90 days to ensure germination

Vegetative propagation has shown limited success by means of suckers, root cuttings and soft wood cuttings. These are all more difficult than growing from seed.

The shrub has as long juvenile phase; it takes 6 years to produce any fruit and 8 years to reach full potential.

Orchard plants must be irrigated in case of drought and have well draining soil during wet years.