Alabama 4-H Grows

Alabama Cooperative Extension System

Reading a Seed Packet

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Objectives

Participants will (1) interpret information written on garden seed packets and incorporate it into planning a garden, (2) interpret information shown on the USDA Plant Hardiness Zone Map and relate it to the area of the United States in which they live, (3) examine seed packets as they look for US customary units of length and how they are used when planting, and (4) use information printed on the packet to estimate the approximate date of harvest if the planting date is known,

Content Area

Science (Biology and Botany), Mathematics, Health and Nutrition, and Environmental Education

Background

Approximately 96 percent of land plants produce seeds. Therefore, if you want to grow most plants, including most of our fruits, flowers, and vegetables, seeds are a necessity. Even if you purchase young plants in containers, most were started from seeds in a greenhouse. The following are some benefits to using seeds to grow a garden.
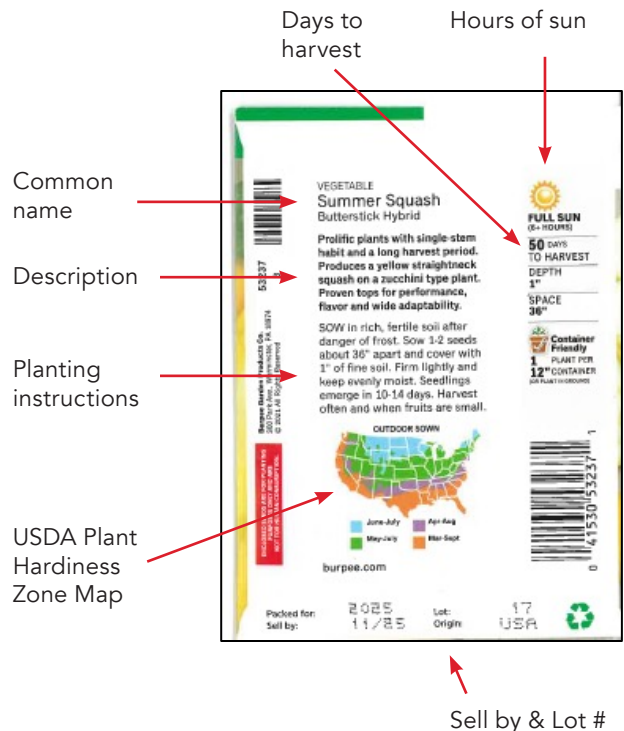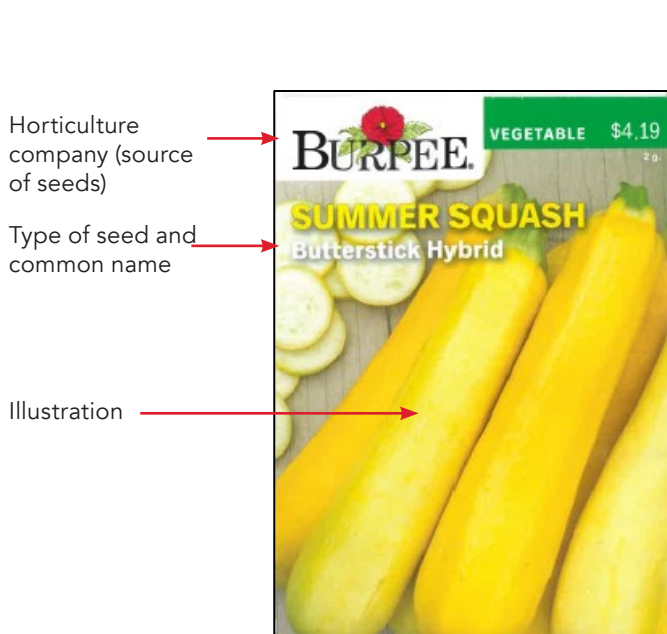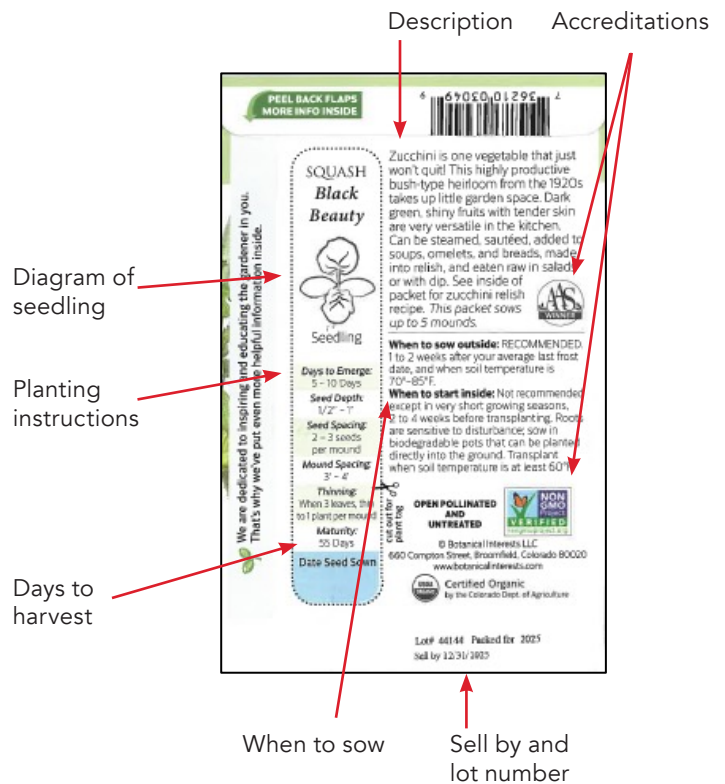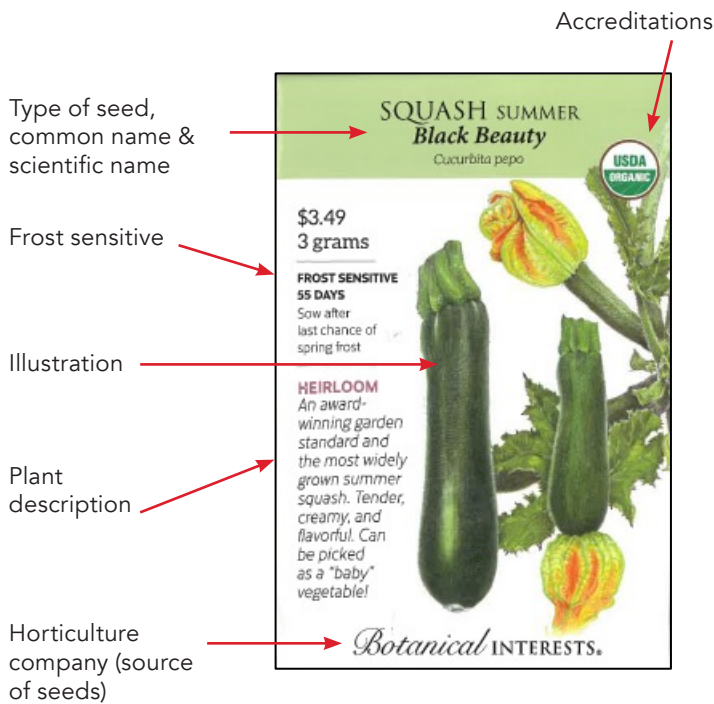
- **Cost-effectiveness:** Seeds are cheaper than starter plants, especially if you think of each seed as a potential plant.

- **Variety:** You have a wider selection of plant seed choices.

- **Organic gardening:** You can raise them yourself and, therefore, know what chemicals they have been exposed to.

A seed packet gives the gardener a lot of important information that will help ensure the success of your garden. The following are some important details that you can learn from the information printed on the packet:

- How to start, grow, and harvest your plants.

- Essential information about the specific seeds and plants you are growing.

- Identification of the seedling so you will know which ones are weeds and which are your planted seedlings.

- When seeds were packaged (freshness) lets you know if you may need new seeds.

- How to care for seeds and plants, which will lead to success.

- Whether the plant is an annual, biennial, or perennial.

Understanding Seed Packet Information

Accreditations

Type of seed, common name & scientific name

Frost sensitive

Illustration

Plant description

Horticulture company (source of seeds)

Description   Accreditations

Diagram of seedling

Planting instructions

Days to harvest

When to sow   Sell by and lot number

Days to harvest   Hours of sun

Horticulture company (source of seeds)

Type of seed and common name

Illustration

Common name

Description

Planting instructions

USDA Plant Hardiness Zone Map

Sell by & Lot #

The information listed on each packet will vary from company to company.

General Plant Vocabulary

Annual—A plant that completes its life cycle in a single growing season. In other words, it germinates, grows, flowers, produces seeds, and dies all in one year.

Biennial—A plant that completes its life cycle in two growing seasons. During the first year, the plant produces roots, stems, and leaves. During the second year, the plant produces flowers, fruits, and seeds and then dies.

Perennial—A plant that lives for more than 2 years. It may produce flowers, fruits, and seeds each year.

Germination—The number of days it takes from placing the seed in the ground until you see the plant emerge. This information is usually given as a day range, such as 7 to 10 days.

Planting Depth—How deep of a dent or hole you make in the soil before placing a seed and covering it with soil.

Seedling—A young plant that has just emerged from a seed. It consists of a root, shoot, and seed leaves.

Weed—A plant growing where it is not wanted and in competition with desired plants.

Spacing—Plant spacing is the distance you should have between the seeds in a row. Final spacing is the distance you want between plants after they start growing. The final spacing is accomplished by thinning.

Thinning—When seeds are first planted, they are placed closer together than you would grow them. Some seeds may not germinate. Once seedlings begin to grow, thinning is done to remove some plants to ensure that the remaining plants have enough space to grow and reach maturity.

Maturity/Harvest—This gives you the number of growing days it will take for your plant to grow and reach maturity when it can be harvested. Some plants can be harvested over and over again, meaning they keep growing or fruiting (summer squash), while others produce only one harvest (corn).

Activity: Reading a Seed Packet

Materials

A variety of fruit and vegetable seed packets or copies of seed packets (one packet for one to two youths), a pencil or pen, and one copy of the handout per individual or pair of youths.

Procedure

1. Begin by asking, **"What do you need to know when planting seeds?"** (This could include type of plant, how deep to plant seeds, plant spacing, when to plant, sunlight needs, days to germination, days to harvest, etc.)

2. Distribute seed packets or copies of seed packets to individuals or pairs of youth. Instruct the youth to **"Read all the information written on the seed packet. Are there any words that you need to be defined?"** Discuss and define any words brought up by the youths and introduce the vocabulary words listed under General Plant Vocabulary.

3. Once the youths have read through the information listed on the seed packets and discussed the vocabulary, give them the Seed Packet Scavenger Hunt handout. (The questions for the scavenger hunt are general, so they will apply to many different seed packets.)

4. Instruct the youth to **"Read through the questions while reading the information written on the packet for a second time. Write the answers to the questions on the handout."**

5. Important! Some information requested by the questions may not appear on every seed packet. If this should happen, write N/A (Not Available) for the answer to the corresponding question.

6. Once the youths have located the information on the seed packets and written the answers on the handout, have them discuss and compare the information. For example, ask **"Why don't we plant all seeds, regardless of species, exactly alike?"**

Extensions

- **Mathematics:** Introduce youths to percentages such as what percentage of seeds germinate? The following shows how to mathematically figure germination rate/percentage. This is a great time to introduce the youths to percentages.

  Example: A packet of Kentucky Wonder beans contains 75 seeds. If we plant the seeds and 70 germinate, what percentage germinate? To figure percentage of germination, divide the number of seeds (70) that sprouted by total seeds (75). Multiply this number by 100 to get the germination rate. The germination percentage is 93.33

  Another example, A packet of Cherry Belle radish seeds contains 400 seeds. We had 360 seeds germinate. What is the percentage of germination? 360/400 = 0.9, 0.9 x 100 = 90 or 90 percent germination. You can also apply mathematics to other areas of the garden.

- **Planning:** Using grid paper, plan out your garden area using the information found on the seed packets. Include at least three different vegetable plants in the plan.

Activity: Seed Packet Scavenger Hunt

Worksheet

Names of participant(s): _____

Read the information located on the front and back of your seed packet and answer the following questions. If information is unavailable, write N/A for the answer.

1. What type of plant seeds are in your packet? _____

2. What is the plant's variety? _____

3. What is the scientific name for this plant? _____

4. At what depth should the seeds be planted? _____

5. Once the seeds are planted, how long until germination should take place? _____

6. How many days before the plant is mature and ready for harvest? _____

7. What is the recommended spacing for the seeds at the time of planting? _____

8. What is the recommended distance between plants when it is time to thin? _____

9. When were these seeds packaged by the company? _____

10. During what time of the year should these seeds be planted in Alabama? _____

11. What is the recommended sunlight requirement? _____

12. Does your packet of seeds have a USDA Plant Zone Hardiness Map? _____

    If yes, what color is shown for your location on the map? _____

13. Does your seed packet display any special awards, accreditations, or recognitions? _____

     What are they? _____

14. Referring to a "plant's life cycle," which of the following goes with the plant listed on your seed packet? (Circle the correct answer.)   Annual   Biennial   Perennial

15. Is there any information on the seed packet not already covered by the above questions that we need to know if we are going to grow this plant in our garden?
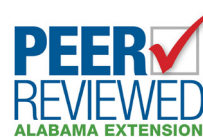
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