**2. A Slice of Root Vegetable History:**

* Root vegetables were an essential part of the diet throughout history.
* **Turnip** **fossils** were found in caves in **China** dating back thousands of years.
* **Rutabagas** are believed to have originated in **Bohemia in the 1700s** as a cross between the turnip and wild cabbage.
* **Jicama** was brought **from Mexico to the Philippines and Malaysia by the Spanish** in the **1600s**.
* **American colonists** relied heavily on root vegetables because they could be **stored for long periods of time**.

**3. What are Root Vegetables?**

* Root vegetables are the roots of plants that are eaten as vegetables. These roots grow into the ground from the base of the plant stem. They anchor the plant, absorb water and nutrients, and store energy. Root vegetables are divided into six subgroups:

**Tap Roots** Tuberous Roots Corms

Rhizomes **Tubers** Bulbs

* **Both turnips and rutabaga are taproots**. The **taproot system contrasts with the fibrous root system** with many branched roots. A **taproot** is an enlarged, somewhat straight to tapering plant root that grows downward. It forms a center from which other roots sprout laterally. Plants with taproots are difficult to transplant. The presence of a taproot is why dandelions are hard to uproot—the top is pulled, but the long taproot stays in the ground, and resprouts. In general, **taproot vegetables need to be thinned** so they have enough room to develop properly.
* **Jicama is a tuberous root**. **Tubers** differ from other root types in that they are **swollen underground stems**, capable of producing new plants and storing energy for the parent plant. If the parent plant dies, the underground tubers can create new plants. Other roots can take nutrients from the ground, but cannot store energy or use it for reproduction. So while every tuber is a root vegetable, not all roots are tubers. In general**, tubers do not require thinning**.

**4. What season do we pick Root Vegetables?**

* **In South Dakota, we can grow turnips and rutabaga in our gardens. In general, root vegetables are cool-weather crops.** Roots such as beets, carrots, radishes, rutabagas, and turnips **can be planted in early spring** (to be harvested in late spring) **and late summer** (to be harvested in the fall) for two crops.
* **Root vegetables generally are in peak season in fall.**
* Tubers are a single-crop vegetable that can take up to one year to harvest.

**5. Why should we eat Root Vegetables?**

* A ½ cup of sliced jicama, turnips, or rutabagas is about one cupped handful.
* A ½ cup of most root vegetables provides an excellent source of **vitamin C.**
  + Kinesthetic action: while saying “vitamin C, no fever” have students shake their finger no and then touch their forehead
* A ½ cup of sliced jicama is a good source of **fiber**.
* Kinesthetic action: while saying “fiber helps healthy digestion” have students point at their digestive system, or pretend to sweep an imaginary broom
* Complex carbohydrates (commonly referred to as “**starches**”) are a key nutrient in root vegetables.

**What Are Complex Carbohydrates?**

* “Starchy vegetables” provide calories in the form of complex carbohydrates. They also provide vitamins, minerals, and fiber.
* The primary function of carbohydrates is to **provide energy for the body**, especially the **brain and nervous system**.
* Most people should get 55-60%, or over half, of their total calories from carbohydrates, preferably starches and naturally occurring sugars (fruits, vegetables, and whole grains.)
* Complex carbohydrates are made of polysaccharides (long chains of sugar units) that come from plant-based foods.
* The body uses enzymes to break down complex carbohydrates like starch into glucose, which the body then uses for energy.
* In plants, starch is produced by photosynthesis. Tubers store the highest quantities of starch of all vegetables. Champion Sources of Complex Carbohydrates include corn, dry beans, peas and sweet potatoes

**6. How do you pick a good Root Vegetable?**

* Select firm **jicama** that are smooth with no bruises or spots. Store in a cool, dry place for up to four months. Keep sliced jicama in a sealed plastic bag in the refrigerator for up to one week, or store it in a container with water to keep fresh.
* Choose small- to medium-sized **turnips** that are smooth, round, and firm. Store in a cool, dry place for up to two months or in a plastic bag in the refrigerator for up to two weeks.
* Look for **rutabagas** that are heavy, smooth, round, and firm. Store in a cold, dry place for up to four months or in the refrigerator for one month.

**Healthy Serving Ideas**

* Peel and slice crisp **jicama.** Sprinkle with lime juice, or chili powder for a quick snack.
* Sauté sliced **turnips**, turnip greens, and chopped onions for a flavorful dish.
* Serve mashed **rutabagas** instead of mashed potatoes.

**Just the Facts**

* Only the **jicama** tuber root is edible, the rest of the plant is not.
* **Turnips** are produced mainly as a small (approximately 400 acres) commercial crop in Kern County and Imperial County in California.