Globe Artichoke

*Cynara scolymus*
Basic Facts

- **Family:** Asteraceae (Sunflower Family)
- **Name derived from Arabic** ardischauki
- **Italy** = main producer
- **Heterozygous**
Domestication

- There are many early references to artichokes in Classical literature—Theophrastus mentioned the artichoke as early as 300 B.C.E.
- The location and date of domestication is still debated, but it is speculated to be in the Mediterranean sometime in the 1st millennium C.E.
But what is an artichoke?

- What we eat in an artichoke is the immature flower bud. If allowed to mature completely, the artichoke would resemble a thistle.
Uses of Artichokes

- Delicious treats
- INULIN!
  - health benefits
  - alternative energy source
Inulin

• “Inulin is a plant-derived carbohydrate with the benefits of soluble dietary fiber. It is not digested or absorbed in the small intestine, but fermented by the colon” -Molina et al 2005

• It is a polysaccharide that falls into the fiber categorization of fructan

• It is thought to have many benefits for human health and could be a good source for cellulosic ethanol.
Health Benefits

• Prebiotic
  - The fermentation of inulin feeds good bacteria in the gut flora
  - This prohibits the growth of bad bacteria
  - It has also been shown to stimulate the immune system

• Weight loss
  - The texture of inulin is unique—when mixed with milk or water it creates a fat-like sensation
  - It is also tasteless so has the potential to be a calorie-free additive that could help with weight loss
Health Benefits (cont’d)

• General Benefits
  - Inulin has been shown to help with calcium absorption and therefore could help people with osteoporosis.
  - It has also been shown to help lower cholesterol.

• Because traditional medicine associated artichokes with liver health, studies have even been done to see if it can reduce a hangover—unfortunately these studies did not turn out to be successful.
Cellulosic Ethanol

- Because of the large amounts of waste in the canning industry, the alternative energy potential of artichokes has also been explored.
- It has been shown that inulin can produce high concentrations of ethanol.
- But like many cellulosic ethanols the process is very involved, and not as beneficial as desired for more steady production.