

Sesame (*Sesamum indicum*)

Samuel Olson



Introduction

- *Sesamum indicum* (common name: sesame)
- Family : Pedaliaceae
 - 14 genera and 70 species
 - Exclusively old world
 - Herbs or shrubs with spurred flowers and ovaries with axile placentation that often develop hooks or prickles as the fruit wall begins to decompose (britannica.com)

Geography

- Very old plant, records of cultivation 4000 BCE in Mesopotamia (modern day Iraq).
- Originated in India wild.
- Drought resistant, due to extensive root system.
- Will grow on the edge of or in deserts, nicknamed the “survivor crop”



Morphology

- Annual plant
- Leaves opposite with three well defined
- Can grow up to 1.5 meters
- Flowers are tubular with a 4 lobed mouth (white or purple)
- Fruits is a capsule with 15-20 seeds in each fruit
 - Seeds are a flattened oval and can be white, black, or yellow
 - Seeds are very oily and sticky





Cultivation

- Needs highly wet soil to germinate but excess water late in season will kill them.
- Requires 90-120 frost free days and likes higher temperatures, 23 °C or higher
- Largest Producers of seeds are Myanmar, India, China, and Ethiopia.
- Over a billion dollars worth of sesame seeds are sold every year. Largest importer of sesame seed is Japan

Plant Usage

- Has been used as an oil source since ancient times
 - Great source of omega-3 fatty acids
 - Great source of protein
- In 2008, 65% of sesame crop was made into oil
- Used in cuisines across Asia, Africa, the Mediterranean, Central America, and the Caribbean.
- When made into paste it is called tahini, used in hummus (with chickpeas) and baba ganoush (with eggplant)
- Often used on bread products such as bagels and hamburger buns



Historical Facts

- “open sesame” used as a magic phrase in Ali Baba and the Forty Thieves
- Origin of this phrase
 - Old Hebrew used a word similar to sesame that means ‘name of heaven’
 - Sesame was connected to Babylonian magical practices using sesame oil
- Allergies
 - 1 out of 200 people have an allergic reactions to sesame
 - Hard to determine with traditional tests (blood, skin)

Native American Uses

- Old world crop exclusively
 - No uses

Fun Facts

- In India the seeds are considered a sign of immortality and are used in sacred rituals.
- 75% of Mexico's sesame seed production is bough by McDonalds.
- Brought to America by African slaves.
- Contains high levels of Zinc, Magnesium, Iron, Phosphorus, Selenium, Manganese, and Calcium.

Medicinal Uses

- Health Skin, digestive health, arthritis relief, asthma relief (Folk)
- Helps prevent Diabetes (American Journal of Clinical Nutrition, AJCN)
- Promotes healthy heart (GreenMedinfo)
- Protect against DNA damage (presence of sesamol) (PubMed)
- Prevent Cancer (AJCN)
- Improved Bone Health (AJCN)

Any Questions?