

Helianthus annuus

[Synonyms : *Chrysanthemum peruvianum*, *Helianthus annuus* subsp. *jaegeri*, *Helianthus annuus* var. *lenticularis*, *Helianthus annuus* var. *macrocarpus*, *Helianthus annuus* var. *texanus*, *Helianthus aridus*, *Helianthus lenticularis*]

SUNFLOWER is an annual or perennial. Native to Middle America (particularly Mexico), and to western North America, it has a large flower head(s) of a wide flattish, brown or purple central disc encircled by chrome-yellow petals.

It is also known as *Adityabhaktichettu* (Telugu), Annual sunflower, *Auringonkukka* (Finnish), *Ayçiç* (Turkish), *Blodau'r Haul* (Welsh), *Bunga matahari* (Malay), *Chimalati* (Mexican), Comb flower, Common sunflower, *Coppadisole* (Italian), *Corona del sole* (Italian), *Elianto* (Italian), *Floarea soarelui* (Rumanian), *Gewöhnliche Sonnenblume* (German), *Girasol* (Spanish), *Girasole* (Italian), *Girassol* (Portuguese), Gold, Golden, Golden flower of Peru, *Grand soleil* (French), *Gunbakan* (Turkish), *Hélianthe* (French), *Helianthus*, *Helianto* (Spanish), *Helianto unujara* (Esperanto), *Herba del Sol* (Spanish), *Kirik-tara-kata* (Pawnee North American Indian tribe), *Larea bell*, Marigold of Peru, *Mirasole* (Italian), *Omatsapa* (Zuni North American Indian), St. Bartholomew's star, *Slnečnica ročná* (Slovak), *Slunečnice roční* (Czech), *Sole* (Italian), *Soleil* (French), *Solros* (Swedish), *Sonnenblume* (German), *Suraja-mukhi* (Bengali), *Surjamukhi* (Hindi), *Surya-mukhi* (Sanskrit), *Tazza regia* (Italian), *Tournesol* (French), *Tourne-soleil* (Channel Islander-Guernsey), *Wahcha-zizi* (Dakota North American Indian tribe), *Ward-ash-shams* (Arabic), *Zha-zi* (Omaha and Ponca North American Indian tribe), and *Zonnebloem* (Dutch); and in flower language is said to be a symbol of adoration (dwarf), affection, constancy, false riches, glory, gratitude, haughtiness (tall), infatuation, lofty thoughts, solar wheel, and 'you are splendid' (large).

Unlike the branched many-headed wild plants cultivated varieties usually have a massive single head. The seed shell can contain over 1000 seeds in larger cultivated varieties. There are dull white to chestnut brown hybrids and also double-headed varieties.

The stems are gathered in Autumn. The drooping flower heads are cut and hung until the seeds fall and then the seeds are dried. Oil can be pressed from the seeds and the residue is formed into 'oilcake'.

Warning – growing, immature plants can be poisonous for animals and they normally avoid it because of the bitter taste.

Annuus means 'annual'.

The common name Sunflower is said by some authorities to have emerged because the flower's face follows the sun. However others dispute this and state that it came about because the flower resembles drawings of the sun eg. those in the carvings on ancient Inka temples (in their representation of the head on ceremonial standards or in their golden jewellery and ornaments).

Aztec rituals in Mexico featured the sunflower in the 13th-15th Centuries when it was revered as a symbol of the sun. Their priestesses wore medallions made of gold that were shaped like a sunflower. It had spread northwards from Middle America hundreds of years earlier and was being cultivated for its seed by North American Indian tribes 3,000 years ago. From research early in the 20th Century authorities noted that the plant played a

significant role in the ritual of several tribes, not least in the creation myth of the Onondaga. One of the Teton Sioux sayings held that when the flowers were tall and in bloom, the buffalo were fat and their meat was good. Among the Hopi not only were the ground petals an ingredient in a yellow face powder worn by the women in their basket dance, but the seeds also yielded a purple dye (used by the Navajo as well) for material and baskets, as well as contributing to a black dye used for similar purposes. The flowers themselves were used to adorn the Hopi flute priests, and were also used in rituals by the Zuni tribe. The Mandan, Ree, and some of the Algonkin Indians painted seed oil on their bodies – and they also dried and ground the seeds and made them into cakes that their warriors took with them and ate during battles to counter tiredness. In the Isleta tribe ritual cigarettes were lit using the pith, and the plant was not only an ingredient in a liniment used for the Navajo War Dance but it was also used in their sand painting ceremony, and its hollow stalks were made into ritual flutes (and prayer sticks), and served as the ‘arrows’ which they swallowed during some ceremonies.

Apart from this the stalks and twigs gave Navajo hunters material for bird snares. The Tewa Indians used the dried stalks as spalls to light cigarettes, and inner pulp from the stalk was used by the Tohono O’Odham tribe to make quick-burning candles.

North American Indian tribes harvested the sunflower for food. The seeds (with or without the dye element) would be dried or sometimes ground to a paste and eaten – and in this form particularly it was a staple food for several tribes, including the Havasupai, Tohono O’Odham, Ree, Algonkin, Mandan, Mohave, some of the Apache, Paiute and Kawaiisu Indians. The Luiseño Indians also collected the seeds for food, and they were ground into bread flour by the Costanoan, Gosiute, Montana Indian, Cahuilla, Navajo and some of the Apache tribes. For the Kiowa, Navajo, Paiute, Sanpoil and Montana Indian tribes the seeds also provided a porridge-like dish. Records indicate that at least the Paiute, Mohave, Sanpoil and Havasupai Indians processed the seeds in various ways so that they could be stored for Winter use. The flower heads are also believed to have provided a vegetable, and the Tohono O’Odham Indians chewed the stalks like gum. In the Kiowa tribe it was reported that the elders chewed the coagulated sap to reduce thirst, while the Navajo Indians took the seeds as an appetite enhancer.

Records have noted that the plant was recognized by the Hopi tribe as important Summer bird food, and the Navajo tribe fed their livestock on it. The Tohono O’Odham Indians applied a leaf decoction for particular sores found on any of their horses.

The sunflower was also the source of a medicine for chest disorders for some tribes, including the Teton Sioux. The Zuni certainly included it in their remedy for rattlesnake bites, a regimen that was understood to have lost only one patient in over 50 years – and that only because the unfortunate man, who had been bitten in the foot, had none of the necessary medicine with him and had had to walk 15 miles back to his village before he could get treatment. (Some of the Apache Indians used it on snake bites generally.) The Pawnee added the ground seeds to a mixture that was given to pregnant women as it was believed this would protect the baby from illness while it was being breastfed. Some North American tribes, such as the Dakota, used leaves and flowers not only in remedies for treating bronchitis and asthma but also as with the Zuni Indians to heal sores. It provided a remedy in the Paiute tribe for some female disorders (and they also used it to ease rheumatism), and the Tohono O’Odham Indians turned to it for treating fever and worms. It was used on insect bites by the Hopi tribe.

In the 16th Century the sunflower was introduced to Europe by the Spaniards and reached British shores during the same Century. Its popularity in English towns and cities was considerable during the 19th and early 20th Centuries because, despite polluted air, smog and fog, the flower’s bright face was able to survive and soften its surroundings.

In the 17th Century Samuel de Champlain (1567-1635), a French explorer who was appointed the Country's first lieutenant in 1612 and is often known today as the 'Founder of Canada', made many expeditions from coast to coast. On one when he was visiting Indians on the eastern shores of Lake Huron he found that the sunflower was being cultivated there and that it provided them with food, fibre, fodder, a yellow dye and hair oil.

The mid-19th Century saw the Mormons trekking westward from Missouri in search of their eventual home in Salt Lake City. Some authorities claim that they dropped a trail of sunflower seeds as they progressed across the Utah plains and these developed into a glorious path for the wagon trains that followed them the following Summer.

For Christians the sunflower which is dedicated to the Virgin Mary is a symbol of obedience. In literature a poem entitled simply *Song* by Alfred Tennyson (1809-1892) refers to the sunflower in its refrain

Heavily hangs the broad sunflower
Over its grave i' the earth so chilly;
Heavily hangs the hollyhock
Heavily hangs the tiger-lily.

A far more cheerful quotation is attributed to Marguerite Blessington (1789-1849), the vivacious Irish literary hostess and author.

The Sunflower;this bright and constant flower
enamoured of the sun.

Its fascination with the sun had also been remarked upon earlier by the Spanish dramatist, Pedro Calderón de la Barca (1600-1681) in words translated by the English lyric poet and writer, Shelley (1792-1822).

Light-enchanted sunflower, thou
Who gazest ever true and tender
On the sun's revolving splendor.

The European artist most associated with sunflowers for many people would be the Dutchman, Vincent Van Gogh (1853-1890). Not only did he make several paintings of sunflowers (which were considered to have religious connotations because their faces followed the sunlight) but they, the sunflower paintings, were immortalised further when they were themselves portrayed in a series of portraits of different women (both nude and dressed) by his younger peer, Isaac Israels (1865-1934). In fact Van Gogh's sunflower paintings seem to have influenced quite a few of his admirers including the Hungarian artist, Vilmos Huszár (1884-1960), who painted the subject in oils and dedicated it specifically to Van Gogh. The sunflower was the centre of attraction in 1995 in another art form, landscaping (or one might even say, in a contribution to the regeneration of a joyless community – shades perhaps of English towns and cities in the 19th and early 20th Centuries) in the United States. That Summer in 1995 a thin strip of the San Francisco concrete jungle beneath a junction of elevated highways was transformed into a carefully managed field of sunflowers by a far-seeing American artist and landscape designer, Topher Delaney (1950-). Her careful management of this project was not confined to the actual cultivation as it included such considerations as the appearance or type of the variety grown, the flowering period and height of the cultivars chosen and also their arrangement – not least to ensure that when mature they would not obscure the line of sight for drivers thundering along the adjacent roads. The local community, which included displaced African-American farmers from the Deep South, was closely involved and, according to authorities reporting on this project, after initial wariness the flowers and the bouquets handed out not only won smiles but anticipation – especially from the asphalt-consumed farmers who queried such things as the type of manure used and the

possibilities from future crops. (Unfortunately I have never learnt whether the project was pursued further.)

The plant's moisture absorbent properties have been used in the Dutch reclamation of marshy land, and the pith or fibre (one of the lightest known substances) is used in scientific laboratories in making slides for microscopes. Like wormwood (*Artemisia absinthium*) it is used by the Chinese as moxa in acupuncture. The fibre is also used on the one hand for making delicate silks, and on the other for coarse ropes. In addition it has been used to make paper and life-saving equipment .

The unopened buds are edible and have been prepared like artichokes (*Cynara scolymus*), and the flowers are a source of honey.

The leaves when dried have been an ingredient in tobacco mixtures.

In Russia the seeds of the larger varieties have been eaten like chestnuts (*Castanea sativa*) and were not only available in large bowls in railway restaurants but were also sold on the streets. The Country has boasted large areas given over to the crop which has provided her with a major source of food oil. In fact some authorities claim that Russia, in the mid- to late 18th Century, was the first country to cultivate the plant expressly for its edible seed oil while others suggest that Bavaria beat her to it in 1725. Whatever the outcome of this debate many authorities seem to be agreed that Russian expertise is owed the credit for the development of many of the modern sunflower varieties – and none of this might have occurred if the plant had not been introduced to the Country by Peter the Great (1672-1725) in the early 18th Century. At that time the Russian Church had decreed that oily plants could not be eaten during a period of fasting – but the recently introduced sunflower was not on the list and the Church's congregations took full advantage of this and chewed the raw or roasted seeds.

Much farther south seeds have also attracted popularity in India. Both the Balkan area in Europe and Argentina in South America have also been major growers. In both Russia and Portugal, particularly, seeds have also been used as a coffee substitute. The seeds occupy a leading position in the birdseed market in Europe and North America. But perhaps their most widely recognized virtue today lies in their oil content (about 40%).

This oil, which is pressed from the seeds and has a sweet taste, has a wide range of uses. In the past these have included the manufacture of soap and candle making, as well as wool dressing, for all of which oil extracted from a secondary pressing of the oil cake has been adequate. Today the oil provides not only cooking oil but also a significant ingredient for soft margarines and salad dressings. It is also used in cosmetic creams and lotions, and it provides a binder in some artists' oil paints (instead of linseed oil, *Linum usitatissimum*), as well as in varnishes and paints. In North America it is even being used, refined, as a fuel supplement with diesel in farm machinery.

The oil cake can be fed to cattle, pigs, sheep and poultry. It is also enjoyed by rabbits and pigeons. The leaves have provided cattle fodder and the seeds are popular with poultry (bruised seeds are said to increase their egg-laying power). In the early 20th Century in Britain sunflowers were cultivated for their seeds (particularly on sewage farms) which were believed at that time thus to provide a useful crop for pheasants.

The stems and seedless heads have not only provided bedding for poultry, but have also been used as kindling. And ash from burnt plants has been applied as a manure.

In addition to the foregoing the sunflower is used commercially as an alternative to olive (*Olea europaea*) or ground-nut (*Arachis hypogaea*) oils in pharmaceutical preparations. The pith from the stalk and the seed receptacles can be used in the manufacture of paper, and flour can be used by biscuit manufacturers.

Since 1903 the sunflower has been the State flower of Kansas in the United States. It was also adopted by the renowned Irish playwright, novelist, essayist, poet and wit, Oscar Wilde (1854-1900) as a symbol of the 'new aestheticism' he espoused in the late 19th Century. Medicinally, it seems that in its native habitat the sunflower was largely overlooked as a source of medicine and that it was only when it was introduced in other parts of the world beyond Middle America that appropriate recognition was made. Various medicinal uses found for it by North American Indian tribes have been referred to already, and in folk medicine generally the seeds were used for treating bronchial infections and coughs. In parts of Russia the leaves and flowers were employed in remedies for malaria, and in Turkey and Persia (now Iran) they used a tincture of the seeds instead of quinine (*Cinchona officinalis*) as a remedy for fevers. Recent research has shown that one of the ingredients of the seed oil can be effective in the treatment of asthma. At the same time it is now common knowledge that because this oil is very low in saturated fats it is less harmful to the arteries than animal fats. It is the birthday flower for 30th June.