Garlic
Allium sativum

Family Liliaceae

Common name Garlic

Description Perennial or biennial; subglobular bulbs consisting of 8-20 cloves (partial bulbs) encased with silky white papery layer which forms a protective layer. Cloves are swollen buds formed in the leaf axil at the base of the bulb.

Scape - to 60cm with 4-6 flat leaves about 1-1.5 cm wide. These form a sheath at the base of the plant.

Flowers - pedicallate, small, white or pinkish borne in a terminal umbel, interspersed with bulbils.

Seed - not usually fertile, however bulbils used as seed though garlic usually grown from cloves.

Habitat Garlic is unknown in the wild. It probably evolved from the wild from *Allium longicuspis* of Central Asia. In ancient times spread to the Mediterranean being known in Egypt from at least 3000 BC. An ancient crop in India and China. The Spanish, Portuguese and French introduced the plant to the New World. Crop grows easily in cool and warm climates. Small amounts are grown commercially in New Zealand, with China, South Korea, India, Spain and the USA as major producers.

Cultivation Grown increasingly in the home vegetable, as awareness of food security and food sovereignty increase. A gardeners guide is to plant on the shortest day and harvest on the longest day. Plant healthy bulbs at a depth of 5cm and 25 cm spacings during mid winter in rich compost. Apply mulch over freshly planted garlic, this assists in keeping weeds down. Keep well watered until three weeks before harvesting in mid – late December.

Uses *Culinary*: Garlic is one of the world's best-known flavouring agents. While rarely used as a vegetable alone it is used to flavour many foods, Garlic acts as a preservative minced, juiced, as a dehydrated powder or as a distilled oil. Garlic is marketed in capsule, extract, and tablet form.

Historical: Used as treatment for worms; tumours; arthritis and heart disorders. An ancient heal all; diuretic; emmenagogue; cure for all poisons; removes spots and blemishes; jaundice; epilepsy. A treatment for bites of mad dogs and venomous creatures; cure for lethargy; prophylactic for the plague; piles; small pox , hoarseness; tuberculosis; rheumatism.

Medicinal

The bulb is used after summer harvesting and drying. Bulb breaks into cloves. The extensive list of constituents reflects the large amount of research carried out on this herb. Sulphur content gives garlic its familiar odour, and makes garlic chemically active. Allicin is the active element in the in the noted actions of Allium family. Allicin is produced on crushing the intact clove which releases the enzyme allinase which allows it to come in contact with alliin.

Garlic has been proven to be helpful

1. in the treatment and prevention of atherosclerosis
2. to reduce blood pressure.
3. to decrease blood viscosity by inhibiting platelet aggregation.
4. to increase fibrinolysis.

Garlic has strong anti bacterial activity in vivo and invitro. It has antiviral and antifungal action in vitro. Garlic is often considered a "herbal antibiotic".

Significant in cardiovascular system, respiratory tract, gastrointestinal tract.

Garlic can be used externally for infected wounds, and earache (drops).

An Indian study found that the risk of a second heart attack was reduced by eating 6-10gms (4 fresh cloves) of garlic per day.

Constituents

Essential oil, comprising largely allyl disulphide and allyl propyl disulphide; contains vitamins A, Bi , B2; C, antibacterial substances comprising allicin, allicetoin I and II; along with an enzyme allinase.

Minerals selenium, germanium, sulphur, calcium, magnesium, copper, potassium, zinc, and some iron.

Contra-indications

Occasionally Allium can cause gastro-intestinal disturbance , allergic reactions but no toxicity or interaction with other drugs is known. Should be used with care for children under two years as can cause colic like symptoms. Can cause perceptible odours on the breath – chewing on a sprig of parsley takes away the odour.

References

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Vaughan, J.G., Judd, P.A., (2006) Oxford Book of Health Foods. Oxford University Press