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Gladiolous

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INTRODUCTION

Gladiolous is sometime called the 'sword lily', but usually by its generic name (plural gladioli). Botanical name – galdiaclus –spp, Family-irdaceae.

The genus Gladiolus contains about 260 species. The flowers of unmodified wild species vary from very small to perhaps 40 mm across, and inflorescences bearing anything from one to several flowers. The spectacular giant flower giant flower spikes in commerce are the products of centuries of hybridisation, selection, and perhaps more drastic manipulation. Gladiolus flower is commercial crop in the world, these are provide highly income to the growers.

Gladiolus Plant Structure: Gladioli are half-hardy in temperature climates. They grow from rounded, symmetrical corms, that are enveloped in several layers of brownish, fibrous tunics. Stem take erect and size 30-40 cm long in height. Their stems are generally unbranched, producing 1 to 9 narrow, sword-shaped, longitudinal grooved leaves, enclosed in a sheath. The lowest leaf is shortened to a cataphyll. The leaf blades can be plane or cruciform in cross section.

Gladiolus Flower Spikes: The flower spikes are large and one-sided, with second bisexual flowers, each subtended by 2 leathery, green bracts. The sepals and the petals are almost identical in appearance, and are termed tepals. They are united at their base into a tube-shaped structure.

Seed/Corm Condition: The ovary is 3-locular with ablong or globose capsules, containing many, winged brown, longitudinally dehiscent seeds. In their center must be noticeable the specific pellet-like structure which is the real seed without the fine coat. In some seeds this feature is wrinkled with black clour. These

seeds are unable to germinate. Corms are round, semi circle and flat shape in broun colours.

Flower Colour: These flowers are variously colored, pink to reddish or light purple with white, contrasting marketings, or white to cream or orange to red and variegated, double colours also in various varieties of gladioli which is very attracted, decorated and use in vase life flower.

The South African species were originally pollinated by long-tongued anthrophorine bees, but some changes in the pollination system have occurred, allowing pollination by sunbirds, noctuid and Hawk-moths, long-tongued flies and several others. In the temperate zones of the hybrid large flowering sorts of gladiolus can be pollinated by small well-known wasps. Actually, they are not very good pollinators because of the large flowers of the plants and the small size of the wasps. Another insect in this zone which can try some of the nectar of the gladioli is the best.

Gladioli have been extensively hybridized and a wide range of ornamental flower colours are available from the many varieties. The main hybrid groups have been obtained by crossing between four or five species, followed by selection: Grandiflorus, Primulines and Nanus. They make very good cut flowers.

Chromosome:

The majority of the species in this genus are diploid with 30 chromosomes but the Grandiflora hybrids are tetraploid and possess 60 chromosomes. This is because the main parental species of these hybrids is Gladiolus dalenii which is also tetraploid and includes a wide range of varieties (like the Grandiflora hybrids).

Cultivation: In temperate zones, the corms of most species and hybrids should be lifted in autumn and stored over winter in a frost-free place, then replanted in spring. Some species from Europe and high altitudes in Africa, as well as the small 'Nanus' hybrids, are much hardier (to at least -15 °F/-26 °C) and can be left in the ground in regions with sufficiently dry winters. The large-flowered types require moisture during the growing season, and must be individually staked as soon as the sword-shaped flower heads appear. The leaves must be allowed to die down naturally before lifting and storing the corms. Plants are propagated either from small cormlets produced as offsets by the parent corms, or from seed. In either case, they take several years to get to flowering size. Clumps should be dug up and divided every few years to keep them vigorous.

Gladiolus in Art: All gladioli spikes are arranging for the decoration. Use in vase life at many functions in India. Use in bunches, bouquets and other gifted in to the friend and relative circle.

Corm:

- A **corm**, **bulbo-tuber**, or **bulbotuber** is a short, vertical, swollen underground plant stem that serves as a storage organ used by some plants to survive winter or other adverse conditions such as summer drought and heat.

- The word **cormous** is used to describe plants growing from corms, in analogy to the use of the terms "tuberous" and "bulbous" to describe plants growing from tubers and bulbs.

Growing Techniques: Gladioli can be propagated by corm. The plants need about 70 days flower after corm sowing/planting. Corm sowing 5-6 cm depth in prepared soil. Coved corm, with manure soil, corm planting/sowing in Distance 20 cm at plain or ridge soil in open area which can take complete sunlight

because this crop is winter season. Best sowing time is Oct-Nov month of years.

Manure and Fertilizers application: cow-dung/compost or ion fertilizers of crops manure should be applied at land preparation time with MPK. But half N_2 (Nitrogen) give after 30-55 days in two time.

Organic Cultivation: Organic cultivation means without chemical use in soil only organic manure in crops. The details are organic manore like – neem catee, bone meal, leaf mould, fum, compost, vermin-compost, poultrymanure, green manuring. Legume crops in crop rotation.

Irrigation and Weed Management: 1st irrigation after 30-55 days when the corm sprouting and out in air. The frequency of irrigation depend on soil moisture but calculate the irrigation provide in crop after 10-12 days. After irrigation, grow the wild plants or weeds. Control by hoeing in young crop because there are competitor of Food/nutrients. So that all weeds early removed from crop.

Harvesting of Spike: when spike grow in complete length/height and open the 2-4 bud in spike then cut by sharp life/blade 3-4 inch/surface and collect the harvested spikes from soil or flowers. Kept in coal plamee with good or safely handling.

An inflorescence is a group or cluster of flowers arranged on a stem that is composed of a main branch or a complicated arrangement of branches. Morphologically, it is the part of the shoot of seed plants where flowers are formed and which is accordingly modified. The modifications can involve the length and the nature of the internodes and the phyllotaxis. Inflorescence can also be defined as the reproductive portion of a plant that bears a cluster of flowers in a specific pattern.

Bulbos Crop: Tunicate bulbs have dry, membranous outler scales that protect the continous lamina of fleshy scales. Species in the genera Allium, Hippeastrum, Narcissus, and Tulipa all have tunicate bulbs. Non-tunicate bulbs, such as Lilium and Fritillaria species, lack the protective tunic and have looser scales.

Cut flower and Foliage: Cut flowers are usually sold in bunches or as bouquets with cut foliage. The production of cut flowers is specifically known as the cut flower industry. Farming flowers and foliage employs special aspects of floriculture, such as spacing, training and pruning plants for optional flower harvest; and post-harvest treatment such as chemical treatments, storage, preservation and packaging. In Australia and the United States some species are harvested from the wild for the cut flower market.

Floral Industry: The floral industry is one of the higher industries in many developing and underdeveloped countries. The present day floral industry is a dynamic, global, fast-growing industry, which has achieved significant growth rates during the past few decades. In the 1950s, the global flower trade was less than US$3 billion. By 1994, it had grown the US$100 billion. In recent years, the floral industry has grown six percent annually, while the global trade volume in 2003 was US$101.84 billion.

The floral industry essentially consists of three major components: the growers, the wholesalers and the retailers whose businesses are quite intermingled. The recent trends are more towards eliminating the intermediaries, the wholesalers between the growers and the retailers, so that the flowers are made available at considerably low prices.

The Netherlands and the history of the flower industry: Traditionally, the center of flower production has been near their largest consumers: the developed world, where Japan, Western Europe and North America were both major producers and consumers. The major consumer markets being Germany (22 percent), the United States (15 percent), France (10 percent), the United Kingdom (10 percent), the Netherlands (9 percent), Japan (6 percent), Italy (5 percent), and Switzerland (5 percent).

Global Flower Market: The Netherlands remains the center of production for the European floral market, as well as a major international supplier to other continents. The flower auction at Aalsmeer is the largest flower market in the world. Since the mid-1970s, the production and distribution of cut flowers in Netherlands has burgeoned. In 1995, Dutch growers produced over 8 billion blooms and the flower auctions collectively traded more than 5.4 billion guilders (about $3.2 billion) in cut flowers and potted plants, contributing over 4 billion guilders annually to the Dutch balance of trade.

New flower growing centres: Experts believe that the production focus has moved from traditional growers to countries where the climates are better and production and labor costs are lower. This has resulted in a paradigm shift in the floral industry. The Netherlands, for instance, has already shifted attention from flower production to flower trading, though it plays an important role still in the development of floricultural genetics. The new centers of production are typically developing countries like Colombia (second largest exporter in the world and with a market of more than 40 years old), Ecuador, Ethiopia, Kenya, and India. Other players in this global industry are Israel, South Africa, Australia, Thailand and Malaysia. New Zealand, due to its position in the Southern Hemisphere, is a

common source for seasonal flowers that are typically unavailable in Europe and North America.

Cut flowers are flowers or flower buds often with some stem and leafs that have been cut from the plant bearing it. It is usually removed from the plant for indoor decorative use. Typical uses are in vase displays, wreaths and garlands. Many gardeners harvest their own cut flowers from domestic gardens, but there is a significant commercial market and supply industry for cut flowers in most countries. The plants cropped vary by climate, culture and the level of wealth locally. Often the plants are raised specifically for the purpose, in field or glasshouse growing conditions. Cut flowers can also be harvested from the wild.

The cultivation and practices of raising cut flowers form a part of horticulture. They are often included in that branch of horticulture called floriculture.

Packing of cut flower: There are different techniques of ensuring that fresh cut flowers remain alive for the longest amount of time. A vase is an open container, often used to hold cut flowers. Vases are often decorated. Vases are defined as having a certain anatomy. Lowest is the foot, a distinguishable base to the piece.

The design of the base may be bulbous, flat, carinate, or another shape. Some vases are also given handles. Today, the shapes of vases have evolved from the conventional or traditional ones to modern designs and shapes. After some time they got more fancy and unique.

A wreath is an assortment of flowers, leaves, fruits, twigs or various materials that is constructed to resemble a ring. Wreaths are used typically as household ornaments, mainly as Christmas decoration. They are also use in ceremonial events in many cultures around the globe. A garland is a decorative wreath or cord, used at festive occasions, which can be hung round a person's neck, or on inanimate objects like Christmas trees. Originally garlands were made of flowers or leaves.

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