

Lecture XXII: Flower arrangement and prolonging vase life techniques

Principles: Emphasis/ Focal Point, Balance, Scale or Proportion, Rhythm, Harmony and Utility

- **Focal point:** Mainly in central portion of arrangement, draw attention of viewer, large and brighter with unique shape flowers are suitable.
- **Balance:** May be geometrical or asymmetrical with a distinct focal point
- Smallest buds are placed farthest from the focal point
- The colour may be darkest at focal point and gradually lighter at the rims.
- Rhythm is achieved through colour and size of flowers
- Blending of all the components of flower arrangement is called harmony
- **Primary colours:** Red, Blue and Yellow
- **Secondary colours :** Orange, Green, Purple
- **Tertiary colours:** Vermilion (red-orange), blue-green, Amber (yellow orange), Chartreuse (yellow-green), Teal (blue-green), Violet(blue-purple), Magenta (red – purple)
- Container selection for flower arrangement on the basis of design, arrangement, water holding and support the weight.
- For skelton: Gladiolus, tuberose, golden rod, heliconia, stocks, delphiniums
- Fillers: Bottle brush, Sansievieria, Murraya, Thusa, Asparagus
- For focal point: Anthurium, orchids, bird of paradise, heliconia, spathyphyllum, tulip, rose Grapes, cashew fruit.
- Single stem mass flower: Rose, chrysanthemum, gerbera, anthurium

TYPES OF FLOWER ARRANGEMENTS

- Japanese flower arrangement (Ikebana or *Kado*): Emphasis is given on spiritual and religious background and only few flowers are used.
- English flower arrangement: Emphasis is given on mass flower arrangement and is primarily a form of art, so as make the arrangements attractive as far as possible.
- Ikenobo or Ikebana started by Buddhist monk Semmu (621 AD)
- Basic lines of Ikebana: *Shin* (Heaven), *Soe* (Man) and *Hikae* (Earth)
- *Hikae* is placed at bottom with an angle of 75° to the vertical line,
- *Soe* is placed after *Hikae* at 45° angle to vertical line of other side.
- *Shin* is placed between *Soe* and *Hikae* with an angle of 15° to vertical line.

Types of Ikebana

- **Moribana:** Called natural Ikebana, moribana means piled flowers and arranged in shallow containers. Flowers, branches supported with pin-holders (Kensan).
- **Nageire:** means thrown in and arranged in upright containers or tall vases. Flowers have sufficient stem length and supported with cross bar fixture (may be single or split types)
- **Jiyubana:** Free flowers, arranged both in Moribana or Nageire styles. Wood, metal or any other materials were used with flowers.
- **Zeneika:** Straight material with uneven height is used and doesnot simulate nature.
- **Morimono:** Use fruits, vegetables and flowers in arrangement and looke like English style of flower arrangement.

- **Rikka (Rikkwa):** Flowers standing and arrangement is large, splendid and spherical in shape.
- **Shoka (Seika):** Asymmetrical and classical form, three branches in a triangular form and a typical Shoka arrangement will employ just branches for the Shin and Soe, using only flowers as the Hikae.
- **Tatebana (standing flowers):** Plant with branches or twigs placed upright in the vase and bottom grasses are placed around the core with incense burner and candle stand.

Types of English flower arrangements

- The triangular shape is most common flower arrangement. Focal point well established.
- Circular shape widely used on conference tables and buffet tables.
- Crescent shape is also known as half-moon shaped arrangement. It is very eye catching.
- Fan shape
- Hogarth or 'S' shape

Techniques for prolonging vase life of flowers

Pre-cooling: In a cold storage at the temperature of 4.4-7.2°C the flowers have to be kept immediately after harvesting to remove latent heat which enhances the keeping quality of flowers. Then they have to be dispatched to market with maintaining cold chain. It should be transported to Airport by 'Refrigerated Van' and store them in cold storage at airport and directly shifted to refrigerated cargo flights. Usually pre-cooling is done for 6-8 hours in winter and 8-12 hours in summer.

Table: Precooling temperature for flowers

Crop	Precooling tem (°C)	Crop	Precooling tem (°C)
Carnation	0.5-1	Rose	1-3
Chrysanthemum	0.5-4	Gerbera	4
Cymbidium	0.5-4	Gladiolus	4-5
Bird of Paradise	7-8	Anthurium	13
Dendrobium	5-7		

Conditioning/hardening: A treatment given immediately after the harvesting of flowers by using warm de-ionized water with germicide to restore turgidity.

Impregnation: Loading of flower with high concentration of silver nitrate or nickel chloride for a short periods of time known as impregnation. Generally practice in Gerbera, Gladiolus and Carnation

Pulsing: A treatment in which lower portion of cut flowers dipped in higher concentration of sugar (5-20 %) with germicide solution for 12-48 hours at 20-27 °C temperature and 80-100 % RH under 2000-2500 lux candle light.

STORAGE METHODS

Refrigerated storage: Most widely used methods for cut flower. Two type storage i.e. wet and dry methods.

(a) **Wet storage:** Flower dipped in preservative solution or water and stored at 2-4°C.

(b) **Dry storage:** Flowers are sealed in plastic bags to prevent loss of moisture. Pre-cooling and pulsing are recommended before dry storage. For tropical flowers like anthurium, cattleya and

poinsettia is 10-15° C and for sub-tropical flowers like gladiolus, Strelitzia and anemone is 2-8° C.

Controlled atmosphere storage (CA): It is low temperature storage in gas tight chamber with increase level of CO₂ and decrease level of O₂. CO₂ levels higher than 4% and O₂ level lower than 0.4 per cent causes injury and anaerobic conditions respectively.

Modified Atmosphere storage (MA)

Hypobaric storage: It is also called low pressure storage (LPS), atmosphere pressure under refrigerated conditions (3.2 k Pascal at 2 °C, continuous ventilation and high relative humidity. Rapid loss of water from tissues and high cost of installation are major disadvantages.

Storage	Crop	Storage Tem (°C)	Max. Storage period
Dry	Carnation	0-1	16-24
	Chrysanthemum	0.5-1	21
	Gerbera	2.00	2
	Gladiolus	4-5	5-7
	Rose	0.5-2	7
	Wet	Anthurium	13
Carnation		0.5-1	21-28
Dendrobium		5-7	10-14
Gerbera		4	4-7
Gladiolus		4-5	7
Tuberose		7-10	3-5
Rose		2-3	5-7

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