

Penang Sangam High School
P.O. Box 44, Rakiraki
Year 12 Agriculture Lesson Notes Week 14

Strand	AS 12.3 Agronomy
Sub-Strand	AS 12.3.2.3: Ornamental Horticulture
Content Learning Outcome	Deliberate on Ornamental Horticulture by investigating, selecting and practicing appropriate husbandry methods on selected ornamental plants.

Lesson 14: Harvesting and Sale of Florist Crops

Lesson Outcome: At the end of this lesson the student will discuss the sale of pot plants.

It is important to use methods which will prolong the shelf life and value of ornamental plants which decrease due to:

1. Wilting - results from removal of plant part from environment and/or parent plant, resulting in stress and a break in natural water supply for the plant.

This is countered by providing plants with shaded, cool travelling, storage and selling conditions and keeping the plants hydrated.

2. Abscission - plant parts fall off due to dehydration, heat, excess movement, overcrowding and the buildup of ethylene gas.

2017 – Identify one cause of abscission in harvested flowers (1 mark)

This can be prevented by keeping the environment cool, careful packaging of plants, providing moisture for plants, minimizing movement of plants during transport and maintaining adequate aeration to minimize buildup of ethylene gas.

3. Flower senescence – plant parts, like flowers and leaves, begin to get old as soon as they are removed from the parent plant.

The stem of plants should be soaked in flower preservatives to provide nourishment and control the action of microorganisms.

4. Yellowing - pollinated flowers begin to lose their color and turn yellow. Remove stigma of flowers to prevent pollination and add cut flower preservatives to the water in the vase.

2018 – State one reason why florists remove stigma from harvested flowers. (1 mark)

As well as cleaning, sorting, grading, weighing and packaging, following methods are practiced:

(i) Before harvesting, plants are heavily irrigated to ensure that parts to be harvested are well hydrated.

(ii) Cut flowers - once removed from the stem most flowers begin to wilt, therefore flowers are cut with long stems attached. The stems are then placed in water and recut underwater to remove air bubbles which have entered the xylem. Cotton wool is soaked in water and wrapped around the base of each stem to reduce water loss too.

(iii) Pot plants - pot plants are either sold in plastic bags or cheap pots in which they are growing to minimize damage to the root system during movement.

(iv) Foliage plants - Foliage leaves are usually sold attached to stems. Same as cut flowers.

(v) Bedding plants - sold in pots so are transferred to pots prior to flowering.

(vi) Some ornamentals are sold as planting material like Sun flower seeds, seedlings like palms, heliconias rhizomes and hibiscus branches etc.

Lesson 15: Floral Designs and Flower Arrangements

Lesson Outcome: At the end of this lesson the student will identify, discuss and practice designing flower arrangements.

Floral designs include arrangements which are used for a wide range of purposes including:

- (i) decoration of offices and homes
- (ii) weddings, funerals and church services
- (iii) gifts
- (iv) decoration of venues for events like parties, graduations etc

Tools used for floral designs include:

- (i) Knives - for cutting stems of flowers and foliage before they are inserted into a design
- (ii) Pruning shears - for cutting or trimming thicker flower and foliage stems
- (iii) Scissors - for cutting ribbons, lace, thin wires, plastic wraps and thin stems
- (iv) Floral foam [Oasis] is the spongy material into which the elements are stuck
 - ✓ Wet floral foam is used to hold fresh elements
 - ✓ Dry floral foam is used to hold artificial elements
- (v) Floral tape - to secure the foam in the container.
- (vi) Flower preservative - provides flowers with water and food and contains a disinfectant to prevent bacteria from growing
- (vii) Containers - hold the flower arrangements.

Cut Flower Preservatives

<u>Recipe #1</u>	<u>Recipe #2</u>	<u>Recipe #3</u>
2 cups lemon-lime carbonated beverage 1/2 teaspoon bleach 2 cups warm water	1 tablespoon sugar 1/2 teaspoon bleach 1 quart warm water	2 tablespoons white vinegar 2 tablespoons sugar 1/2 teaspoon bleach 1 quart warm water

2017 – MC No. 10

Design Principles

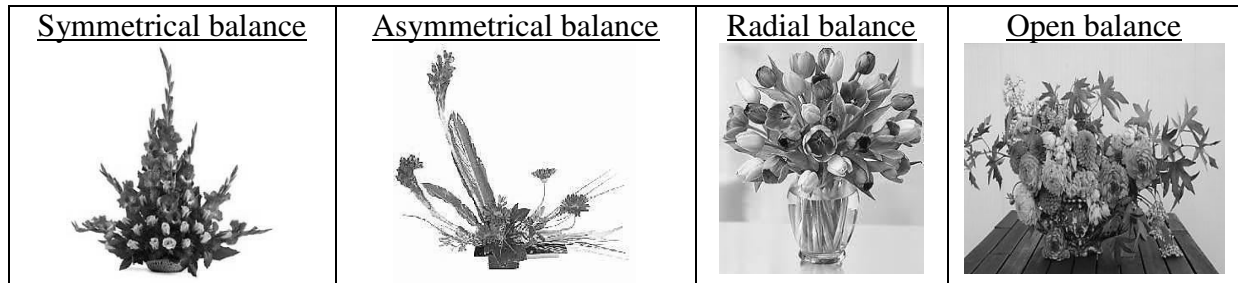
1. **Balance** - the various elements including the container, flowers, foliage and accessories need to fit with one another visually as well as physically.

(i) Physical balance - stand on its own without falling over. This is achieved by placing equal amounts and weights of flowers and foliage on each side of the container.

(ii) Visual balance - when the arrangement looks like it will not fall over.

There are four types of visual balance:

- (a) Symmetrical balance - when identical flowers and foliage are arranged and repeated in the same position on either side of the design, resulting in one side mirroring the other.
- (b) Asymmetrical balance - when unequal visual weight is placed on each side of the design.
- (c) Radial balance - when all elements of a floral design radiate or circle out from the common central point like rays of the sun.
- (d) Open balance - uses material throughout the arrangement in a relaxed, unstructured manner.



2. **Focal point** - creates interest of the arrangement and so catches the eye of the viewer.
3. **Proportion** - used to keep relative size, color and texture of flowers in proportion to the container.

Rule of thumb

- ✓ keep the arrangement 1½ to 2 times the height or width of the container
- ✓ the container used should be in proportion to the area

4. **Accent** - used to draw attention to the design e.g. using flowers that contrast with the environment: bright red flowers against a white wall
5. **Repetition** - using one or two colored flowers throughout the design e.g. only heliconias
6. **Rhythm** - creates a sense of continuity among the shapes, colors and textures so that the viewer feels that everything is flowing together
7. **Harmony** - gives a completed look to the arrangement
8. **Unity** - when the arrangement flows together and is not segmented. The components of the arrangement complement each other in size, color and shape

Design Materials

- (i) line flowers or foliage - establish the outer framework of the arrangement
- (ii) massing flowers or foliage - have the flower head on the terminal end of the stem and are used to create the design principals and to accent the focal point e.g. roses
- (iii) form flowers - flowers with a unique shape or form which are used to create the accent or focal point of the arrangement e.g. orchids, lily
- (iv) filler flowers or foliage - used to tie the arrangement together by filling in gaps and covering up the mechanics of the arrangements e.g. fine ferns, crotons, baby's breath etc.

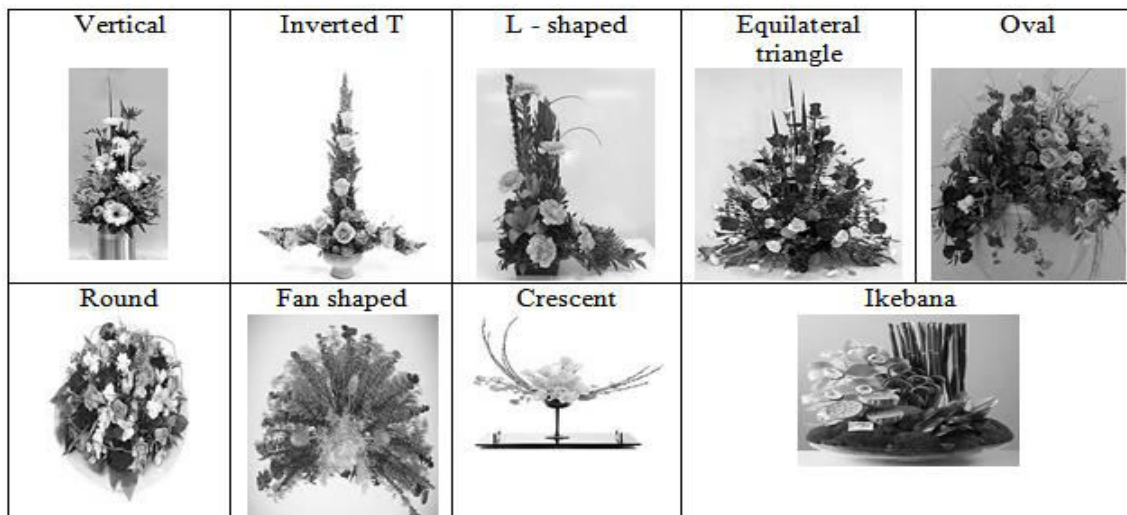
Types of Floral Arrangements

Flowers are arranged for various purposes including:

1. Bouquet - a bunch of arranged flowers which can be held or presented as a gift.

2. Wreath - a circular band of flowers, foliage or any ornamental work for any decorative purpose including wreaths for funerals and for placing on a grave.
3. Corsage - is a small bouquet of flowers worn on a woman's dress or worn around her wrist to a formal occasion.
4. Buttonniere - a flower or small bouquet worn, usually by a man, in the buttonhole of a lapel.
5. Swag - a decorative garland or chain of flowers, foliage, or fruit fastened so as to hang in a drooping curve.
6. Garland - is any series of objects, including flowers and foliage, strung together with the intent to be worn.

Flower arrangements come in many forms and some basic designs are illustrated below:



Student Activity

1. Discuss the treatment of florist plants which are for sale.

2. Discuss the care of a flowering and a foliage pot plant.
