HORTICULTURAL AND BOTANICAL CLASSIFICATION

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CLASSIFICATION OF VEGETABLES

1. Based on botanical relationship
2. Based on temperature tolerance or hardiness
3. Based on soil acidity
4. Based on parts used as food

1. Based on botanical relationship

Family	Crop	Scientific name
Alliaceae	Onion	*Allium cepa*
	Garlic	*Allium sativum*
Araceae	Colocasia	*Colocasia esculenta*
Poaceae	Sweet corn	*Zea mays*
Liliaceae	Asparagus	*Asparagus officinalis*
Dioscoreaceae	Yam/Dioscorea	*Dioscorea sp.*
Aizoaceae	Newzealand spinach	*Tetragonia tetragonioides*
Amaranthaceae	Amaranthus	*Amaranthus sp.*
Basellaceae	Basella	*Basella sp.*
Brassicaceae / Cruciferae	Cabbage	*Brassica oleraceae var. capitata*
	Cauliflower	*Brassica oleraceae var. botrytis*
	Radish	*Raphanus sativus*
Chenopodiaceae	Beetroot	*Beta vulgaris*
	Spinach	*Spinacea oleracea*

Family	Crop	Scientific name
Cucurbitaceae	Cucumber	*Cucumis sativus*
	Watermelon	*Citrullus lanatus*
	Bitter gourd	*Momordica charantia*
	Bottle gourd	*Lagenaria siceraria*
	Pointed gourd	*Trichiosanthes anguina*
	Pumpkin	*Cucurbita moschata*
Euphorbiaceae	Cassava	*Manihot esculenta*
Fabaceae / Leguminaceae	Garden Pea	*Pisum sativum*
	French bean	*Phaseolus vulgaris*
	Cowpea	*Vigna sinensis*
Labiatae	Chinese potato	*Coleus parviflora*
Malvaceae	Okra	*Abelmoschus esculentus*
Portulacaea	Ceylon spinach	*Talinum triangulare*
Rutaceae	Curry leaf	*Murraya keonigi*

Family	Crop	Scientific name
Solanaceae	Tomato	*Solanum lycopersicum*
	Brinjal	*Solanum melongena*
	Chilli	*Capsicum annum*
	Potato	*Solanum tuberosum*
Umbelliferea	Carrot	*Daucus carota*
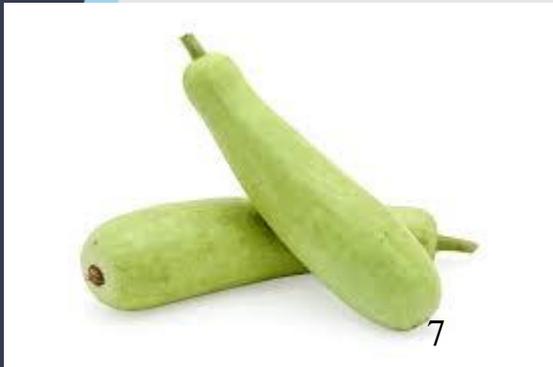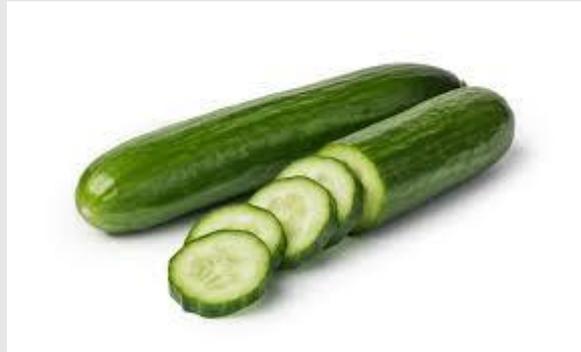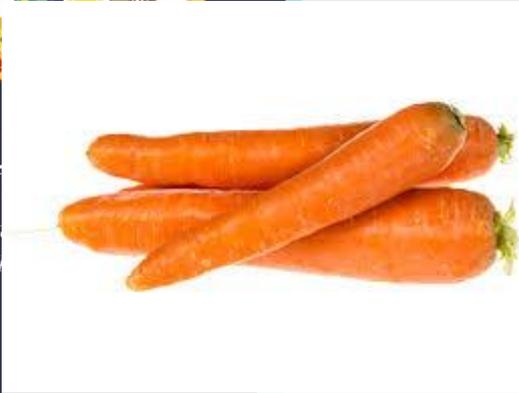
Identify?

Image credit: istockphoto.com/len4foto

Identify?

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2. Based on temperature tolerance

Warm season crop	Tomato, Brinjal, Chilli, Cucumber, Watermelon, Bottle gourd, Bitter gourd, Pumpkin, Amaranthus, Cow pea, Cluster bea
Cool season crop	Cabbage, Cauliflower, Brocolli, Knol khol, Radish, Carrot, Spinach, Beet root, Onion, Garlic, Capsicum, Fenugreek, Garden Pea, French bean

3. Based on soil salinity

Less tolerant	**Beans, radish, potato, sweet pepper, pea, brinjal**
Moderate tolerant	Tomato, broccoli, watermelon, chilli, cucumber, cauliflower
Tolerant	Turnip, palak, asparagus, bitter gourd

CLASSIFICATION OF FRUITS

1. Based on botanical relationship
2. Based on climatic requirement
3. Based on rate of respiration
4. Based on fruit morphology

1. Based on botanical relationship

Family	Crop	Scientific name
Musaceae	Banana	*Musa paradisica*
Bromeliaceae	Pineapple	*Ananus comosus*
Palmeae	Date palm	*Phoenix dactylifera*
Anacardiacea	Mango	*Mangifera indica*
Annonaceae	Custard apple	*Annona squamosa*
Caricaceae	Papaya	*Carica papaya*
Euphorbiaceae	Aonla	*Emblica officinalis*
Myrataceae	Guava	*Psidium guajava*
	Jamun	*Syzygium cumini*
Moraceae	Jack fruit	*Artocarpus heterophyllus*
Punicaceae	Pomegranate	*Punica granatum*
Rhamnaceae	Ber	*Zizyphus mauritiana*
Rosaceae	Apple	*Malus domestica*

Family	Crop	Scientific name
Rutaceae	Sweet orange	*Citrus sinensis*
	Mandarin	*Citrus reticulata*
	Bael	*Aegle marmelous*
Sapindaceae	Litchi	*Litchi chinensis*
Sapotaceae	Sapota	*Achras zapota*
Tiliaceae	Phalsa	*Grewia subenaequalis*
Vitaceae	Grape	*Vitis vinifera*

2. Based on climatic requirement

Tropical fruits	Mango, Banana, Papaya, Sapota
Sub-tropical fruits	Grape, Citrus, Jackfruit
Temperate fruits	Apple, Almond, Peach, Pear, Strawberry, Apricot, Walnut, Cherry, Kiwi fruit

3. Based on rate of respiration

Climacteric fruit	Mango, Banana, Papaya, Guava, Sapota, Annona
Non-climacteric fruit	Citrus, Grape, Pomegranate, Pineapple, Cucumber, Jamun, Cherry

4. Based on morphology

1. Simple fruit	
a) Berry	Banana, Papaya, Grape, Sapota, Avocado
2. Modified berry	
a) Balusta	Pomegranate
b) Amphisarca	Bael
c) Pepo	Watermelon
d) Pome	Apple, Pear
e) Drupe(stone)	Mango, Pear
f) Hesperidium	Citrus
g) Nut	Cashew, Litchi
h) Capsule	Aonla

3. Aggregate fruits	
a) Etaerio of berries	Custard apple, raspberry
4. Multiple fruit	
a) Syconus	Fig
b) Sorosis	Jackfruit, Pineapple

CLASSIFICATION OF FLOWERS

1. Based on season of growing
2. Based on purpose of growing
3. Based on growth behaviour
4. Based on colour of flower

1. Based on season of growing

Summer season annuals	Zinnia, Kochia, Portulaca, Gomphrena, Sunflower
Rainy season annuals	Balsam, Cock's comb, Celosia, Gaillardia
Winter season annuals	China aster, Cornsflower, Larkspur, Sweet Phlox, Verbena, Candy tuft

2. Based on purpose of growing

a) Rockery	Phlox, Portulaca, Ageratum, Alyssum, Euphorbia
b) Hanging	Petunia, Portulaca, Verbena, Begonia, Dwarf ageratum
c) Fragrant flowers	Sweet alyssum, Sweet sultan, Sweet pea, Rose, Jasmine
d) Bedding purpose	Dahlia, Marigold, Phlox, Verbena, Carnation, Petunia
e) Dry flowers	Statice, Helichrysum, Gomphrena, Acroclinum, Rose
f) Hedge	Duranta, Tecoma, Bougainvillea, Hibiscus, Murraya

Identify?

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3. Based on growth behavior

a) Annuals	Hollyhock, Sweet pea, Annual chrysanthemum, carnation, Dahlia, Marigold, Verbena, Phlox, Calendula
b) Perennials	Rose, Jasmine, Crossandra, Orchids, Chrysanthemum, Hibiscus, Gerbera, Anthurium

4. Based on flower colour

a) White flowering	**Jasmine, Alyssum, Dianthus, China aster, Chrysanthemum, Gladiolus**
b) Purple, Lavender, Blue	Dahlia, Carnation, Petunia, Verbena, Clitoria, Viola, Torentia
c) Yellow or orange	Marigold, Calendula, Zinnia, Gaillardia, Gladiolus, Carnation, Nasturtium
d) Red or pink	Rose, Gladiolus, Carnation, Gerbera, Dahlia, Antirrhinium

CLASSIFICATION OF PLANTATION CROPS

1. Based on botanical relationship

Family	Crop	Scientific name
Arecaceae / Palmae	Arecanut	*Areca catechu*
	Coconut	*Cocus nucifera*
	Oil palm	*Elaeis guineensis*
	Palmyrah palm	*Borassus flabellifer*
Anacardiaceae	Cashew nut	*Anacardium occidentalis*
Camelliaceae / Theaceae	Tea	*Camellia sinensis*
Euphorbiacea	Rubber	*Hevea brasilensis*
Rubiacea	Coffee	*Coffea sp.*
Sterculiaceae	Cocoa	*Theobroma cacao*

Identify?

THANK YOU