

# CLASSIFICATION OF VEGETABLE CROPS

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# CLASSIFICATION OF VEGETABLE CROPS

## Horticultural Classification

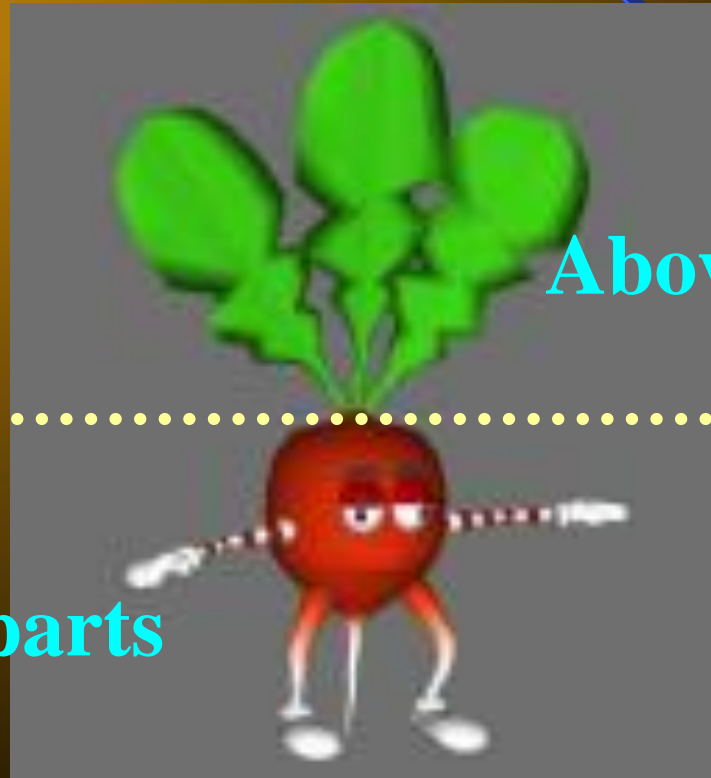
1. Edible parts
2. Uses
3. Life cycle
4. Temperature
5. Cultural methods
6. Others(soil pH, salinity,moisture, habits, habitats, etc...)

## Botanical Classification

1. Natural populations ~ ICBN  
(*International Code of Botanical Nomenclature*)

2. Cultivated populations ~ ICNCP  
(*International Code of Nomenclature for Cultivated Plants*)

# CLASSIFICATION OF VEGETABLE CROPS based on *Edible parts*



Above ground parts

Underground parts

# *Underground parts: Root*



carrot



radish



yam



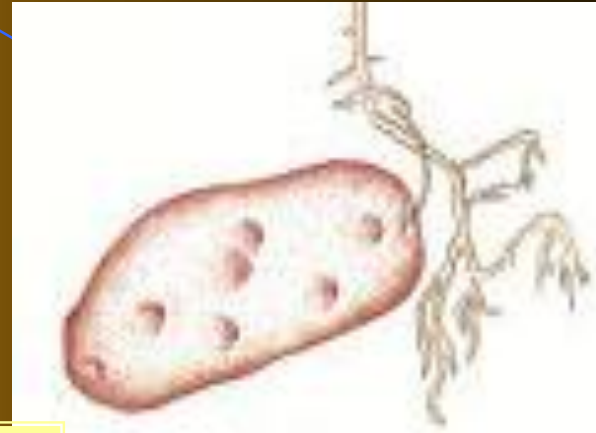
Sweet potato



# *Underground parts: Tuber*



potato



*Oxalis tuberosa*: oca





# *Underground parts: rhizome*

Ginger



*Alpinia galanga*



Turmeric

# *Underground parts: corm*

## Chinese water chestnut



Gladiolus



## Taro



## *Underground parts: bulb*



**garlic**



**Onion**





**Above ground parts: *stem & young shoot***

**Water mimosa**



**korlhabi**



**asparagus**



**Bamboo shoot**

**Above ground parts:** *palm heart & leaf stalk*



*Caryota/ Cocos, etc.*

**Celery**



**Above ground parts: *leaf & fruit***



**brinjal**



**pepino**



## Above ground parts: *flower & seed*





# CLASSIFICATION OF VEGETABLE CROPS based on Uses

*1. Green vegetables* ~ raw or cooked

*2. Salad crops* ~ lettuce

*3. Processing types:*

- canned ~ asparagus, bamboo shoots, etc.
- pickled ~ cucumber, radish, ginger, etc.
- dehydrated ~ onion, garlic, leek, ginger, etc.
- fermented ~ Chinese cabbage, mustard, etc.
- others ~ potato (fried, flour), soybean(tofu), etc.

# **CLASSIFICATION OF VEGETABLE CROPS** based on Life cycle

## **1. Annuals**

amaranths, spinach, cucumber, baby corn, etc.

## **2. Biennials**

broccoli, cabbage, parsley, etc.

## **3. Perennials**

asparagus, eggplant, pepper, most tropical vegetables

# CLASSIFICATION OF VEGETABLE CROPS based on Temperature Requirement

## 1. *Cool season vegetables(1-12-20°C):*

- *Hardy* (asparagus, leek, kale, etc.)
- *Half hardy* (carrot, lettuce, cauliflower, etc.)

## 2. *Warm season vegetables(18-28 °C ):*

- *tender* (tomato, sweet corn, soybean, etc.)
- *very tender* (cucumber, eggplant, okra, etc.)

# CLASSIFICATION OF VEGETABLE CROPS based on Cultural Methods

1. *Leafy vegetables*: lettuce, celery, etc.
2. *Cole crops* or crucifers or brassicas: cabbage, etc.
3. *Cucurbits*: luffa, wax gourd, cucumber, etc.
4. *Pulses* or Legumes: yardlong bean, sweet pea, etc.
5. *Root crops* incl. bulb, tuber, corm, rhizome
6. *Solanaceous crops*: chilies, eggplant, tomato, etc.



# CLASSIFICATION OF VEGETABLE CROPS based on Others

*1. Soil pH :*

*2. Soil salinity :*

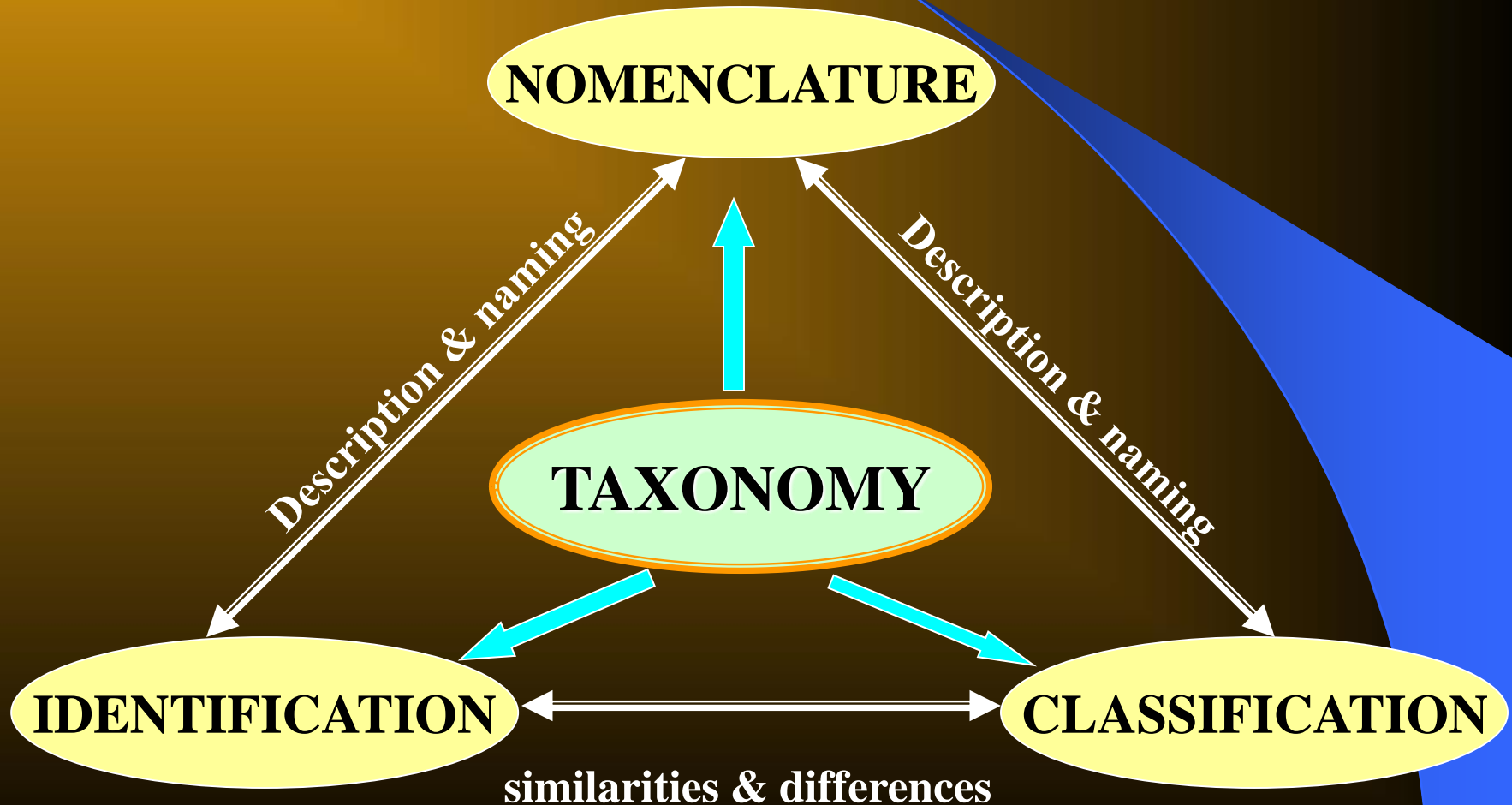
*3. Photoperiod :*

*4. Chilling damage susceptibility :*

*5. Dept of root zone :*

*6. Economic*

# BOTANICAL CLASSIFICATION



## BOTANICAL CLASSIFICATION

# Why classify ?

individuals

kinds(species)

diversity

### **Classification**

= summarizes information & organizes our knowledge of  
plant kingdom into a useful & predictive system

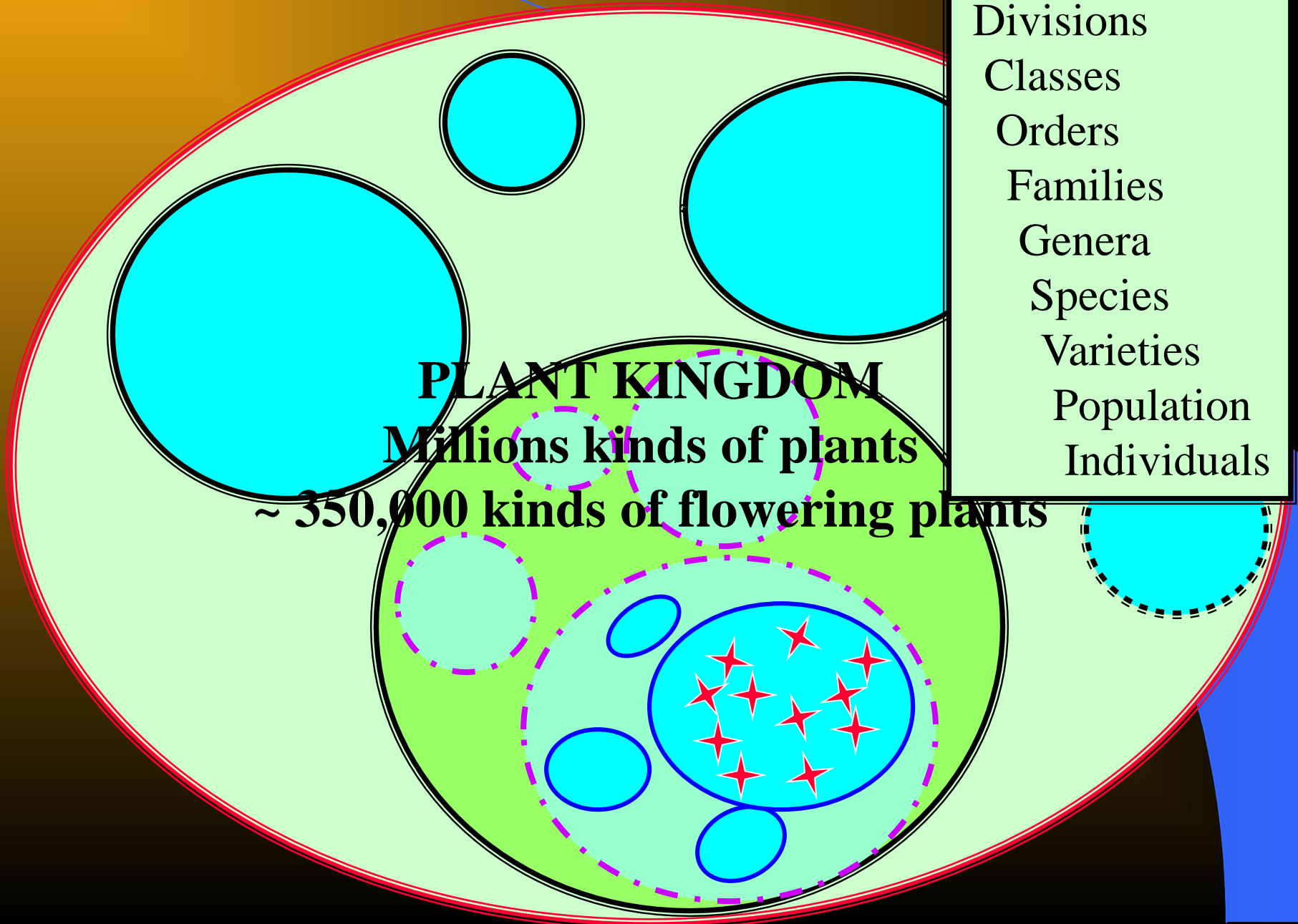
# BOTANICAL CLASSIFICATION

Kingdom  
Divisions  
Classes  
Orders  
Families  
Genera  
Species  
Varieties  
Population  
Individuals

## PLANT KINGDOM

Millions kinds of plants

~ 350,000 kinds of flowering plants





# BOTANICAL CLASSIFICATION

## Species/ varieties

### Species

The smallest unit of classification of naturally occurring plants  
= *a population with a number of constantly associated characters  
which separate this from the other populations*

### Variety(~subspecies)

= *subunit of a species that naturally deviate from the typical species  
in minor aspect and that variation is self-maintained*

**JUDGEMENT & EXPERIENCE**

# PLANT NAME

Communication

Vernacular name/ Local name

Common name

Scientific name ~ Botanical name



**1. Local/ Vernacular/ Common names**



*Benincasa hispida* Cogn.

**EN:** *wax gourd, white gourd, etc.*

**TH:** *fak, faeng*

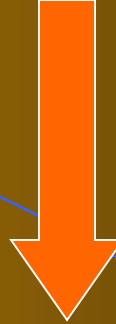
**INDO:** *kundur, bligo*

**PH:** *kondol, tibiayon, rodal*

**KP:** *trallaach*

**LA:** *tonx*

**VN:** *b(is)dao, b(is) xanh*



Limitation of local & common names

Effective in very small/ particular areas

Ambiguous & confusion

Hard to remember ~ many languages/ dialects

Many plants has no names

No common rule in naming



# Limitation of local & common names: *carrot*



# PLANT NOMENCLATURE

**International Codes for Plants**

```
graph TD; A[International Codes for Plants] --> B[International Code of Botanical Nomenclature (ICBN)]; A --> C[International Code of Nomenclature for cultivated plants (ICNCP)]; B --> D[Botanical name]; C --> E[Cultivar name];
```

The diagram is a flowchart titled 'PLANT NOMENCLATURE'. At the top is a box labeled 'International Codes for Plants'. Two arrows point down from this box to two separate boxes: 'International Code of Botanical Nomenclature (ICBN)' on the left and 'International Code of Nomenclature for cultivated plants (ICNCP)' on the right. From the ICBN box, an arrow points down to a box labeled 'Botanical name'. From the ICNCP box, an arrow points down to a box labeled 'Cultivar name'. A blue curved line starts from the top left and points towards the ICNCP box.

**International Code of  
Botanical Nomenclature  
(ICBN)**

**Botanical name**

**International Code of  
Nomenclature  
for cultivated plants  
(ICNCP)**

**Cultivar name**

# PLANT NOMENCLATURE

## BASIS OF SCIENTIFIC NAMES

### Component of Botanical Name

Ex.: *Lactuca sativa* Linn. = species

*Lactuca* = generic name

*sativa* = specific epithet

Linn. ~ Linnaeus = author citation

LATINIZED  
LATINIZED

## **Nomenclature of Cultivated Crops**

<http://www.ishs.org/sci/icraname.htm>

<http://www.anbg.gov.au/acra/naming-acultivar.html>

## Guide for forming new cultivar names-1

**Do I have a new cultivar ?**

<a group of individual plants which  
Collectively is distinct from any other,  
which is uniform in its overall appearance  
and which remain stable in its attributes>

**<Is it really worth naming ?>**

## Guide for forming new cultivar names-2

**How do I form a new cultivar name ?**

1. Make sure your proposed name is unique and in modern language e.g. not in Latin

2. Make sure that your name can not be confused either in spelling or pronunciation with an existing one



## Guide for forming new cultivar names-3

How do I form a new cultivar name ?

3. Make sure that your name could not be interpreted as being likely to exaggerate the merits of the other cultivars.

<‘The Greatest’, ‘Tastiest of All’, ‘The Best’ >  
are not acceptable for obvious reasons !

## Guide for forming new cultivar names-4

How do I form a new cultivar name ?

4. Make sure that your epithet has no more than **10 syllables** and no more than **30 characters** , excluding spaces and the single quotation marks

5. Make sure that your epithet is not only made up of simple descriptive words like **‘Red’, ‘Giant White’ or ‘Small’**

## Guide for forming new cultivar names-5

How do I form a new cultivar name ?

6. Do not use any of the following banned words or their equivalents in any languages:

< “cross”, “hybrid”, “grex”, “group”, “form”,  
“maintenance”, “mutant”, “seedling”, “selection”,  
“sport”, “strain”, “variety” >

or plural form of these words  
or the words “improved” or “transformed”

## Guide for forming new cultivar names-6

How do I form a new cultivar name ?

7. Do not use any punctuation marks **except** for the:

< apostrophe (') , comma (,) ,  
single exclamation mark (!) ,  
hyphen (-) , and fullstop (.) >

Guide for forming new cultivar names-7

How do I form a new cultivar name ?

8. One word cv. epithet **must not be the same as that of a genus**, whether in botanical Latin or in a modern language, but allowed as first word in 2-word epithet:

Ex *Erica* 'Erica', = X

*Erica* 'Erica Smith', *Iris* 'Iris Jones' = ✓

## Guide for forming new cultivar names-8

How do I form a new cultivar name ?

9. cv. epithet **must not** contain the botanical name of its genus or the common name of any species in that genus

*Rosa* ‘Christmas Rose’,

Potato ‘Jim’s spud’

*Primula* ‘White Cowslip’

=





## ICNCP(1995) Guide for forming new cultivar names-9

- All the words in a ‘cultivar epithet’ (except words, other than the first word, like ‘the’, ‘a’, ‘at’, ‘or’, ‘by’, etc..) start with a capital letter.
- The abbreviations “cv.” or “var.” are no longer valid.
- Hybrids should not be designated with ‘x’ before the cultivar name.
- Grafted plants assume the name of the scion
- Author names are not usually cited.

ICNCP(1995)  
Cultivar-group-1

Convar, sort, type, hybrids

=

×



Cultivar-group

ICNCP(1995)  
Cultivar-group-2



*Dracaena fragrans* (Deremensis Group) 'Christianne'

*Dracaena fragrans* 'Christianne' (Deremensis Group)



*Dracaena fragrans* [Deremensis Group] 'Christianne'

*Dracaena fragrans* 'Christianne' [Deremensis Group]

## Other naming requirements

1. Do not use trade marks: ‘Coca-Cola’, ‘Big Mac’
2. Not to compose a name with a mixture of upper and lower case letter within a word unless customary:  
 ‘John McNeill’ ✓  
 ‘FuNnyFiSh’ ✗
3. Not to compose names which resemble terms used in the market place:  
 ‘Twenty Marks’, ‘Two Litres’, ‘Five Kilos’ ✗

## Other naming requirements

4. Not to use abbreviations of an international organization:  
‘AVRDC Super’, ‘TRC Wonder’, ‘ASEAN Stupid’
5. Not to use names which might cause offence in the country where a cultivar is to be marketed:  
‘Adolf Hitler’, ‘Little Bastard’, ‘Pinky Pork’
6. Not to use names which might be mislead to the origin of a cultivar.  
*Mangifera* ‘Kaan Yao’, Durian ‘Nam Dok Mai’



## What to do with my new name ?

1. **Register** it with appropriate international cultivar registration authorities(ICRAs)
2. **Publish** in the technical medias which are designed to last long and distributed to general public.
3. **Publish with:** dated at least to year, **consent of the originator**, description of the cultivar, **informative illustration** (optional), place “**new cultivar name**” after the propose name

## How can I protect my cv. name ?

1. Send your publication to ICRA and libraries.
2. Distributed the standard specimens of your new cultivar to as many herbaria as practical at least to your nearest herbarium.
3. Label your plants clearly & unambiguously, always maintain “your cultivar epithet” within single quotation mark: ‘.....’



Thank you

