

Taking Photos for DUS Testing

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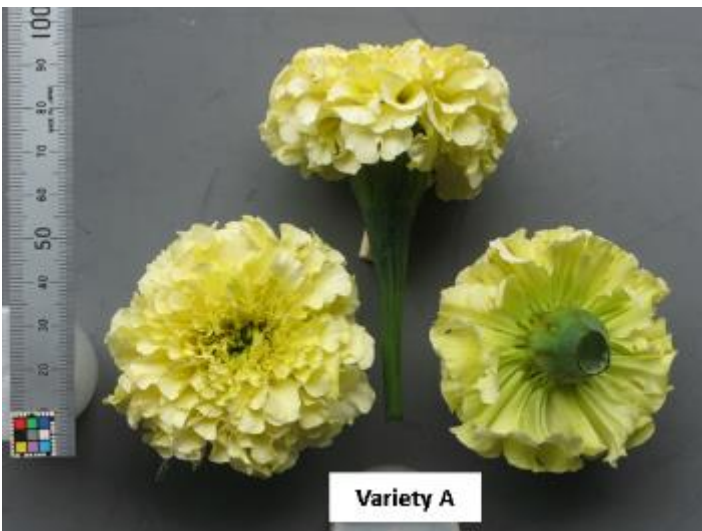
1. Purpose taking photographs

The purpose of photographs is to show...



- Plant **growth and condition** are suitable for DUS tests.

- States of **characteristics** of varieties.



- The evidence that **distinctness, uniformity and stability** are satisfied or not.

Use of Photographs

Figure 1. 「オレンジジュビリー(第9104309号)」

004 標準品種「オレンジジュビリー」区画



撮影年月日
2010/07/01
撮影

004 標準品種「オレンジジュビリー」花茎



撮影年月日
2010/07/01
撮影

004 標準品種「オレンジジュビリー」葉



撮影年月日
2010/07/01
撮影

V I P S No.	U P O No.	品 名 (日本語) (English)	形 質 (Characteristic) (日本語) (English)	定 義	測定 方法	状 態 (state) (日本語) (English)		標準品種 (St. Var.)	備 考
						階級 (日本語) (English)	階級 (日本語) (English)		
22	21	04	葉の裏面の二次大刻の数 (c) 大刻の数	葉の裏面の二次大刻の数 (a) (b) (c)	観察	3 少 5 中 7 多	few medium many	CP 13	

調査時期
● (a) : 先端のつばみが開花直前で、十分な色を示しているときに調査する。
調査方法
● (c) : 葉の中葉部1/3の典型的な葉で調査する。
● 二次大刻 (縦溝を含む) の数で評価する。
● 葉の中央を軸として評価する。(CP10参照)

参考事項

V I P S No.	U P O No.	品 名 (日本語) (English)	形 質 (Characteristic) (日本語) (English)	定 義	測定 方法	状 態 (state) (日本語) (English)		標準品種 (St. Var.)	備 考
						階級 (日本語) (English)	階級 (日本語) (English)		
77	74	74	花茎の直径 (ア シメの直径) 及び半八重輪 に際る。) (cm)	花茎の直径 (アシメ型 (形質21 参 照) の最大径が基準 値 (形質30 参照) に際 る。)	測定	3 小 5 中 7 大	small medium large	CP 101 CP 102	

調査時期
● 葉の展開時: 先端の細花の花茎各側の葉状花が2~3回開いたとき。
調査方法
● (a) : 先端の細花について記録する。
● 形質20「葉の型」が「2一重」、「3半八重」で形質21「花茎の型」が「アシメ」型の品種の場合に測定する。
● 花茎の最大径を測定する。

参考事項

Photos attached to the test reports in Japan

An observation manual of chrysanthemum

- Attached to DUS test reports to improve the quality of the test reports and examinations.
- Provide information on the varieties for other examinations or manuals.

2. Basic items for taking photographs

Camera functions and basic setting

- Number of pixels: **1600×1200**
- Compression ratio: **“Fine”**
- ISO speed: At the **Minimum** speed (If not in dark places)
- Photo mode: **P mode** or **A mode**
- Zoom: **Optical zoom**, not digital zoom

Photo mode



- The photo mode should be set on **P mode** or **A mode**.
- P mode (program) : Photos are taken with a suitable **shutter speed and aperture automatically determined** based on brightness.
- A mode (aperture priority) : Photos are taken with **a fixed aperture** and **a shutter speed is determined** based on brightness.

Taking photographs with A (aperture priority) mode



F: 2.0: focused on the flowers



F: 8.0: focused **from the flowers to the background**

- Aperture can be adjusted changing **F value**.
- You can get the focus range **deeper** if you **increase the F value**.
- Usually, **larger F value** is better so that many characteristics can be exhibited clearly in one photo.



Macro mode



Not macro mode



Macro mode

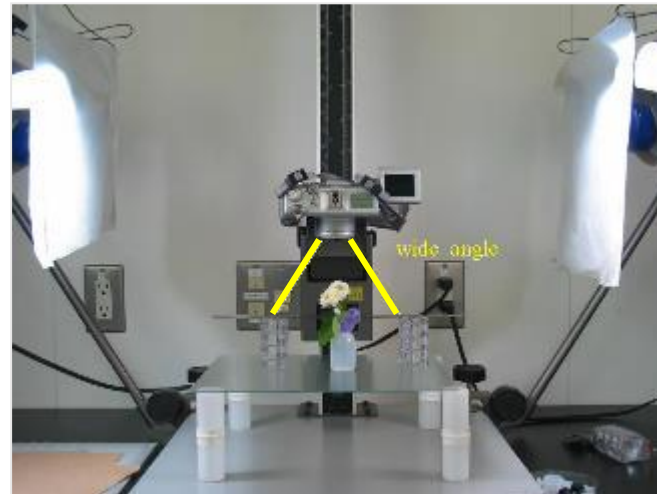


- Macro mode is used to focus on **small objects** like parts of flower.
- Usually, when the distance between the object and camera is **less than 50 cm**.

Distortion



Bent



Too close

The ruler appears bent because the camera is **too close** to the object (taken by a wide angle).



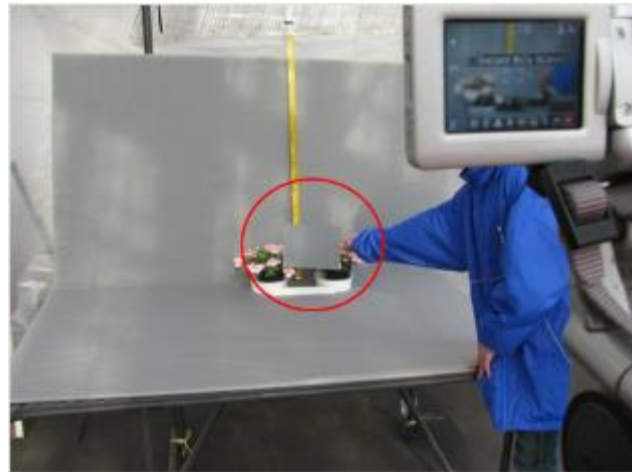
Straight



Distant enough

If the distance is enough from the object, the ruler appears straight (taken by a telephoto side).

White balance



In a field or on a table



Not adjusted



On a copy stand



Adjusted

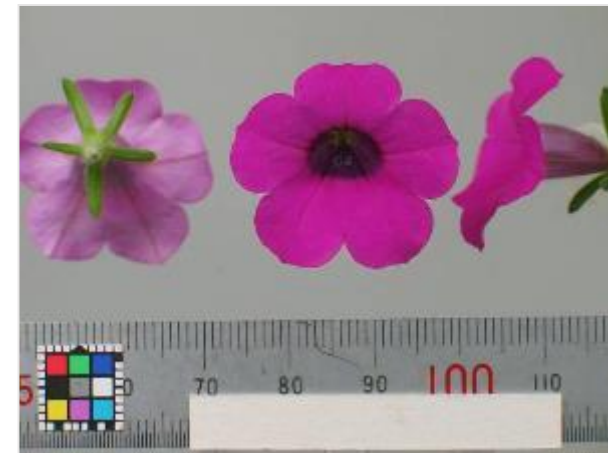
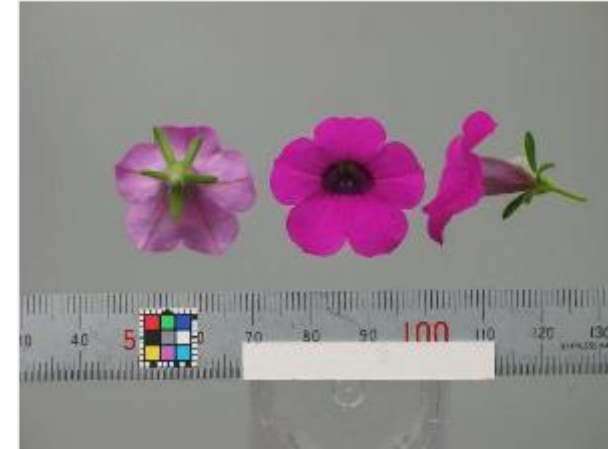
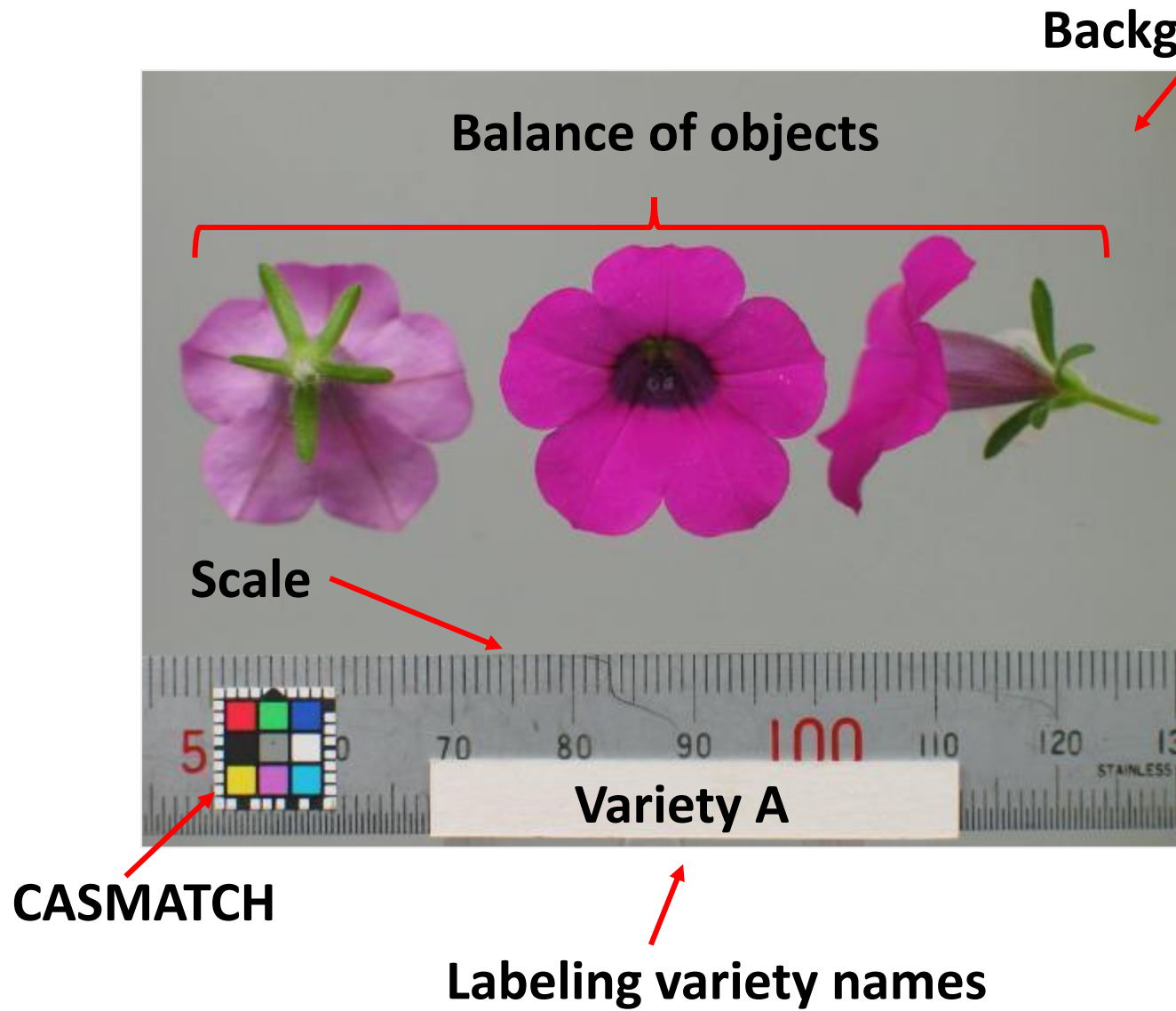
- Every time a light source changes, you should adjust the white balance accordingly.
- White balance is adjusted with either a special **18% gray card** or **pure white paper**.

Basic photography methods



- Use a **tripod** or a **copy stand** whenever possible to prevent camera shaking.
- Take **typical samples** of plants or parts of plants that exhibit characteristics of that variety.
- Take photos in **proper composition**.
- Take photos in **proper photographic environment**.

Composition



When you take photos outdoors...



Direct sunlight



Bright shade

- Avoid **direct sunlight**: take photos in bright shade or on cloudy days as possible.
- Pay attention to reflection, backlight, shadow and movement in the wind.

3. Photographic techniques (practical guide)

Typical compositions (for Marigold)



Field

- Growth conditions of all varieties.
- Should be taken by a high position so that all plots are exhibited.



Test plot

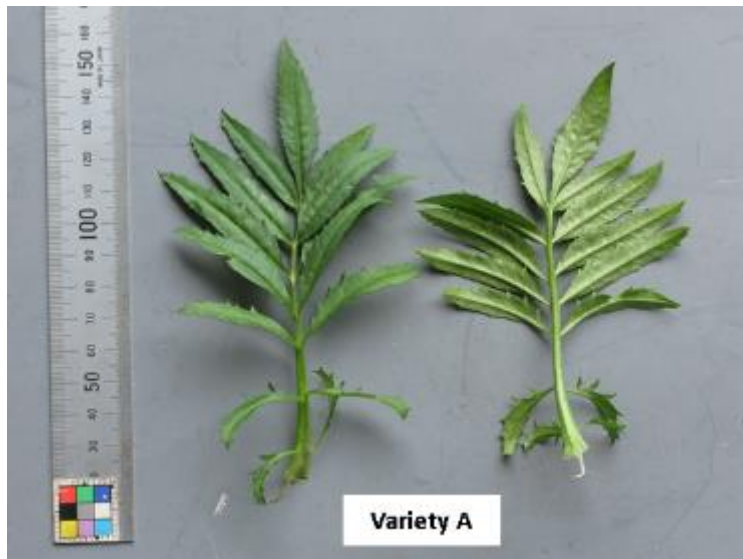
- Growth conditions of each variety, characteristics on plant.
- A label and ruler should be included.

Typical compositions (for Marigold)



Plant

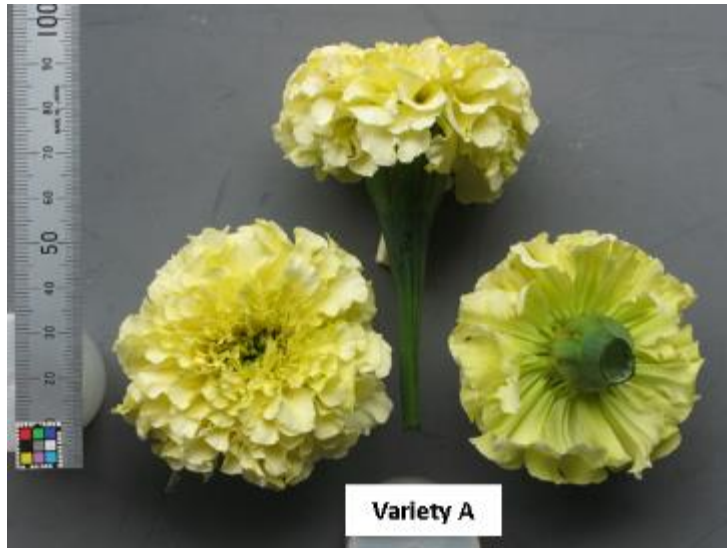
- Characteristics on plant(length, growth habit).
- Take typical two plants as sample.
- A label and a ruler should be included.



Leaf

- Characteristics on leaf (color, size).
- Take both of the upper side and the lower side of leaves.
- A label and a ruler (and a CASMATCH) should be included.

Typical compositions (for Marigold)



Flower head

- Characteristics on flower head.
- Take the top, bottom, and side of the flower heads.
- A label and a ruler and a CASMATCH should be included.



Floret

- Characteristics on floret.
- All types of florets should be taken.
- A label and a ruler and a CASMATCH should be included.

Distinctness



Distinctness is not clear



Distinctness is clear (color of pistil)

- Take photos of comparison between a candidate and a similar variety **in a same photo.**
- It must exhibit the state of the **characteristic showing distinctness.**

If Distinctness is not clear...

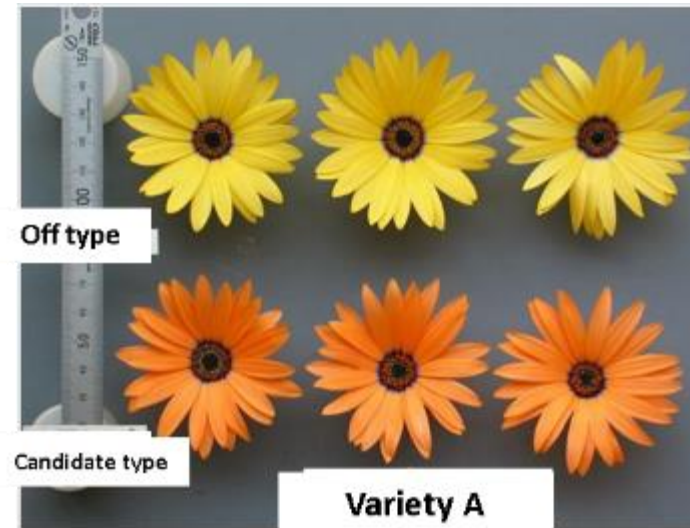


Many photos are required to show lack of distinctness!

Uniformity



Occurrence of off-type in a test plot
(number, location)



States of off-type

- If off types are determined in the trial, you need to take photos to identify the occurrence of the off type.
- The photos should show **occurrence of off type** and **states of off type** and candidate type.

Important points in taking photos



Too much yellow



Original color

Characteristics expressed in the photos must be matched with the original objects or Variety Description.

- Sometimes **discrepancies** (length, color, etc.) occur due to sampling errors or camera settings.
- You should **check photos immediately** so that you can take photos again.

**Thank you for your attention
and let's practice!**