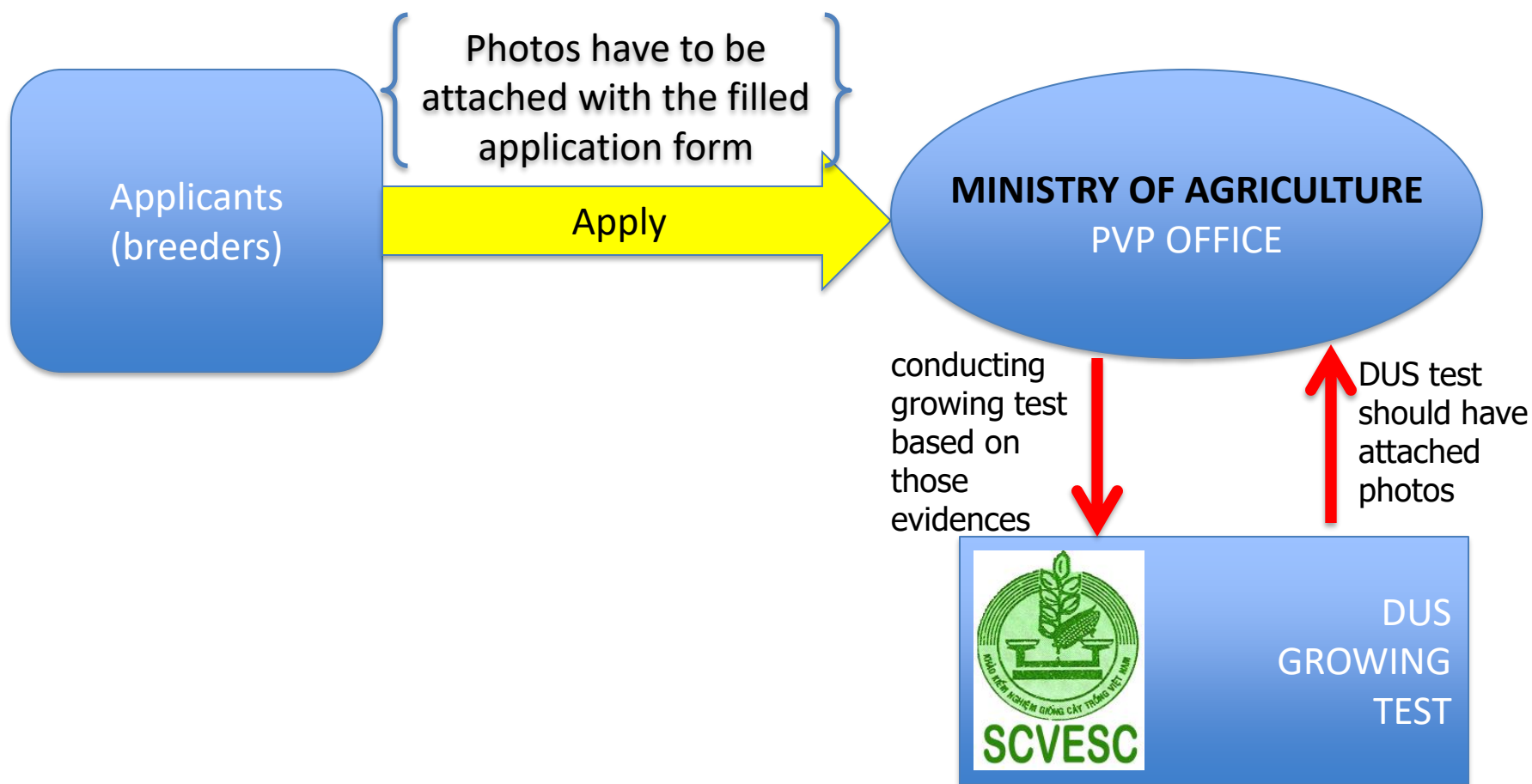


HOW TO TAKE THE PICTURES FOR DUS TEST IN VIETNAM



PHOTOS IN DUS SYSTEM



Photos within examination

Photographs in application form
(taken by applicant)



Photographs in DUS test result
(taken by DUS examiner)



photos by Ohno



The aim of photo taking

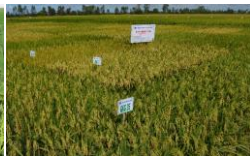
- The taken photos for the DUS trials are attached to the DUS test report, to clear understanding of the plant status and characteristics of the varieties.
- Attaching the appropriate photos in the report will improve the quality of the DUS test report as well as come along the quality of the testing process.



The aim of photo taking



- Confirm the truthfulness of declaration from breeders
- Define the proper conditions for plant growth
- To know the expression of the traits at particular stages
- The evidences for DUS test



Contents of using images

- 1) DUS test report
- 2) Store the image data of the sample
- 3) Select similar varieties
- 4) Others: Photos can be used as a document to develop the Test Guidelines, as well as evidence in complaints, etc.

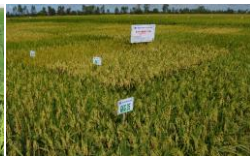






Photo requirements and its usefulness in DUS test

1. Expose exactly trait expression at different stages of candidate and similar varieties
2. The pictures in the test report should be arranged so that they would be easily used in next examinations
3. Photos have to be compared between candidate and similar varieties
4. The pictures could be used to build the instruction manual and develop the database



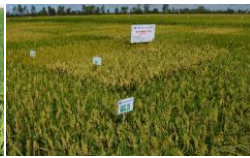
Tính trạng	Candidate Var. (DRAGON 86)	Similar Var. (Trang Nông 119)
<p>17. Quả: màu vỏ thương phẩm</p> <p>Fruit: Color of skin</p>	<p>Dark green (4)</p> 	<p>Medium (3)</p> 



Tính trạng	Candidate var. (SU35)	Similar var. (TLP1368)
<p>20. Quả: số lượng U vầu (number of warts)</p> <p>24. Quả: chiều dài vết gợn (length of ridge)</p>	<p>Nhiều (7) Many</p> <p>Ngắn (3) Short</p> 	<p>Trung bình (5) Medium</p> <p>Dài (7) Long</p> 

Photographic techniques

There are 2 types of digital cameras: DSLR (digital single-lens reflex camera) and compact digital camera, easy-to-use cameras.



1)Pixels and Image quality

The number of pixels is specified as 1600x1200, and the photo quality is "Fine".

2) ISO sensitivity settings

Minimum sensitivity.



ISO 100-200



Daylight

ISO 200-400



Shade/
Indoors

ISO 400-800



Flash
Indoors

ISO 800-1600



Darker
Indoors

ISO 1600-3200



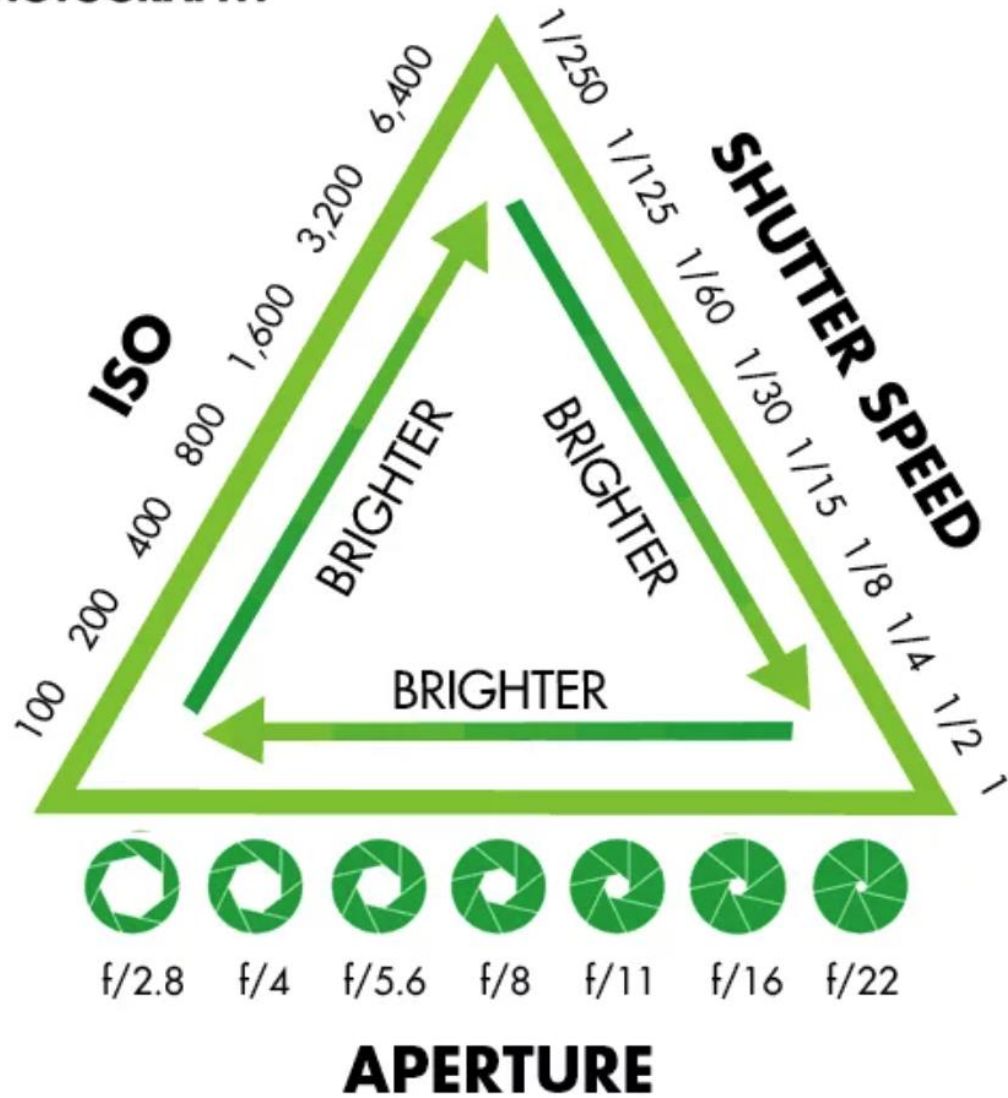
Indoors
at Night

ISO 3200+



Extra Low
Light

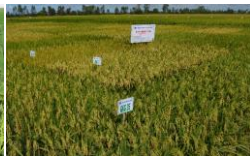




4) Shooting mode



Camera mode should be set at P mode or Av (aperture value priority) mode, which enable to make manual adjustment for white balance and others



P mode



In **P mode**, the **camera** automatically adjusts shutter speed and aperture for optimal exposure.



A mode: Aperture priority



F: 2.0
Focus on the flower



F: 8.0
The image is clearly focused on the
flowers and background

Source: EAPVP forum



5) Close-up shooting mode



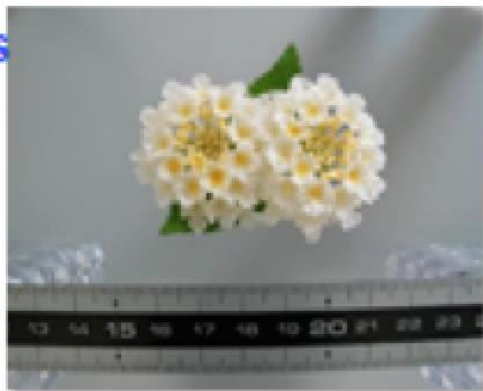
If the shooting distance is less than 50cm, use macro mode.

Source: EAPVP forum



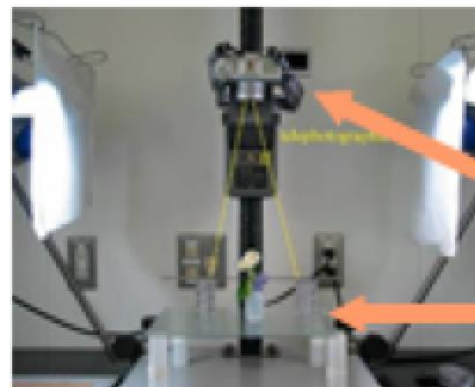
Distorted picture

The ruler appears to bend



wide angle side

The ruler appears to straight



telephoto side

photos by Ohno

approaching the sample with wide angle, the margin of the image will be distorted



6) Exposure



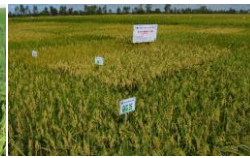
too dark
under exposure



photos by Ohno

too bright
over exposure

The photo showing too dark or bright, you should adjust the exposure mode



7) Tuning the white balance



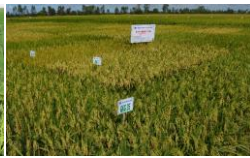
not adjusted



photos by Ohno

adjusted

White balance should be set at by 18% gray paper or white paper so that the picture could appear to the real color



8) Do not use the flash mode

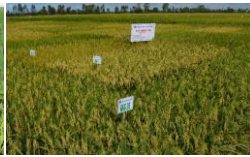


photos by Ohno

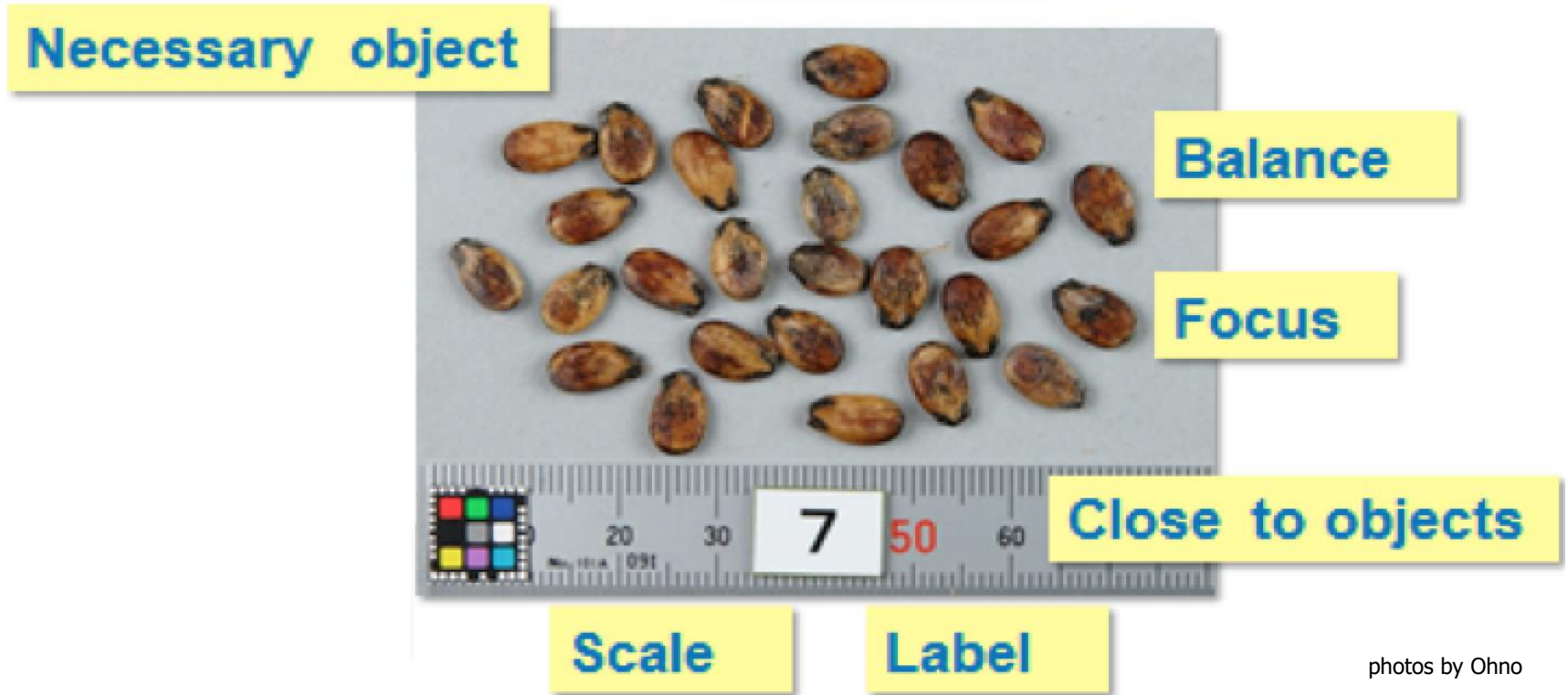


Composition

- Title
- Date
- Labels
- Object
- Ruler
- Casmatch
- Background



Selecting sample

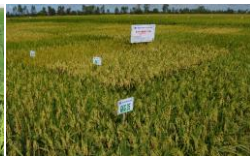


Healthy plants should be chosen for selecting samples to take pictures



Outdoor taking photos

- Avoid direct sunlight,
- Pay attention to shadows and reflected light,
- Choose times with bright shade or light clouds.



Outdoor taking photos



Direct sunlight



Bright shade





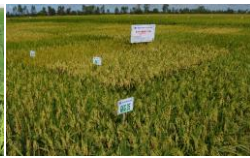
Necessary
object

Focus

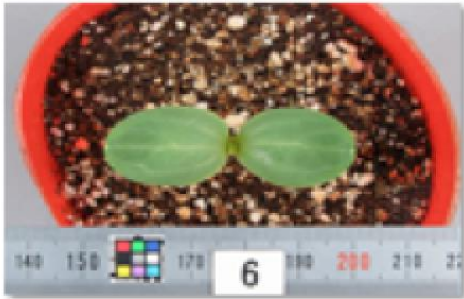
Close to
object

Ruler

label



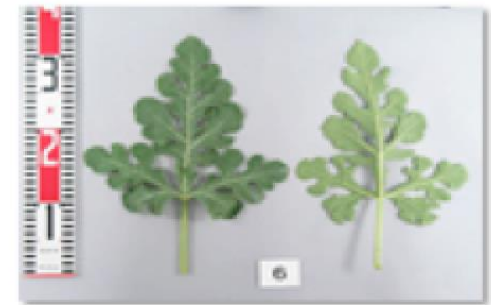
Examples



Cotyledon
• Cotyledon



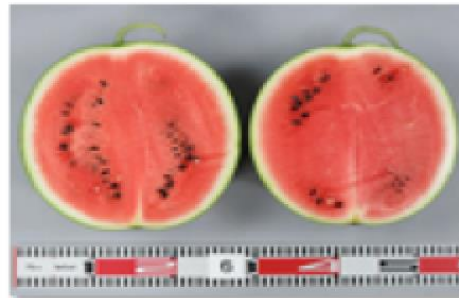
Test plot
• growth habit, height, etc.



Leaf
• Length, shape, color, etc.



Fruit
• shape, color, stripe, etc.



Fruit longitudinal section
• pericarp, flesh, etc.



Seed
• ploidy, size, color, etc.

The photos need to be shown the growth condition and characteristics





**THANK YOU
FOR YOUR
ATTENTION**

