Reference Variety Selection

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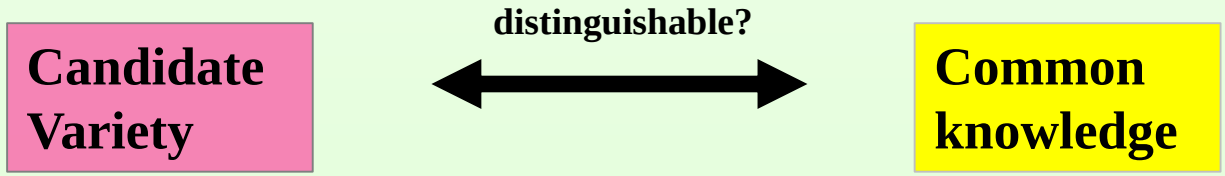
Distinctness Examination

Distinctness
Requirement

Article 7; 91 Act of the UPOV

- **The variety shall be deemed to be distinct if it is clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of the filing of the application.**



Distinctness Examination

Common Knowledge

TG/1/3; 5.2.2

- ✓ commercialization of propagation or harvested material of a variety or publishing a detailed description
- ✓ Filing of an application for grant of breeder's right or for entering of a variety in an official register of varieties
- ✓ Existence of living plant material in publicly accessible plant collection

Common knowledge is not restricted to national or geographical borders.

Distinctness Examination

Comparing Varieties

TG/1/3; 5.3.1.1

- ✓ **It is necessary to examine distinctness in relation to all varieties of Common Knowledge.**
- ✓ **However, where a candidate variety is sufficiently different, in the expression of its characteristics, it would not be necessary for a systematic individual comparison with the varieties in that group.**

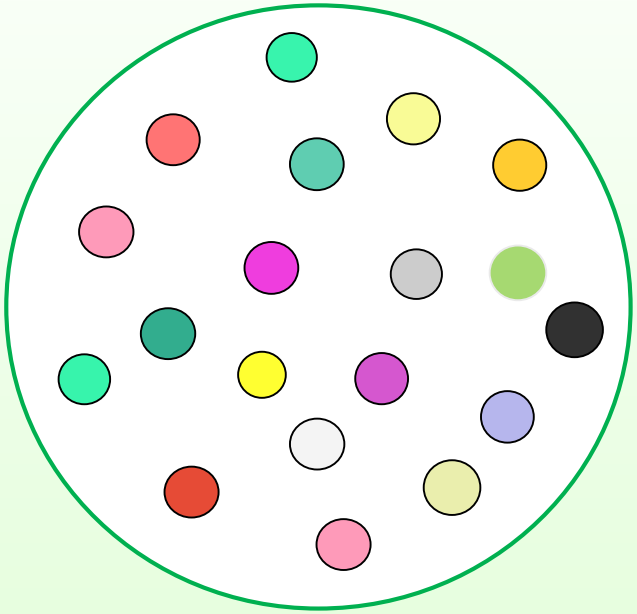
what is reference varieties?

It is necessary to examine distinctness in relation to all varieties of Common Knowledge.

C

Candidate Variety

VS



Varieties of Common Knowledge

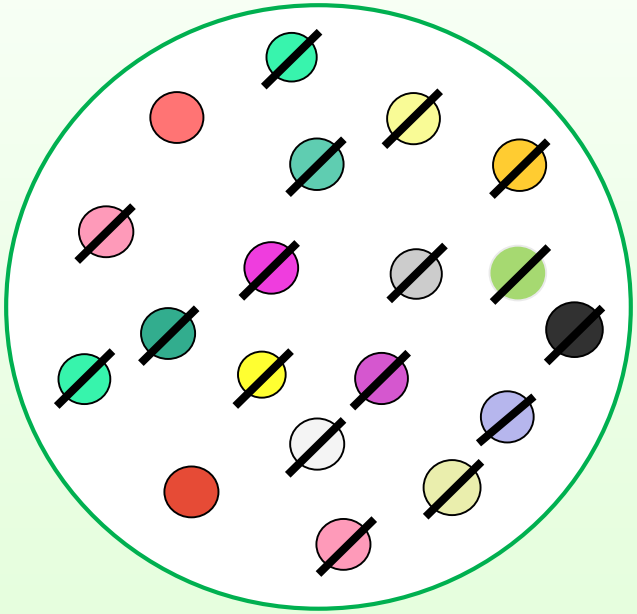
what is reference varieties?

Where a candidate variety is sufficiently different from particular group of varieties,
no need to compare the candidate variety with different group of varieties.

C

Candidate Variety

VS

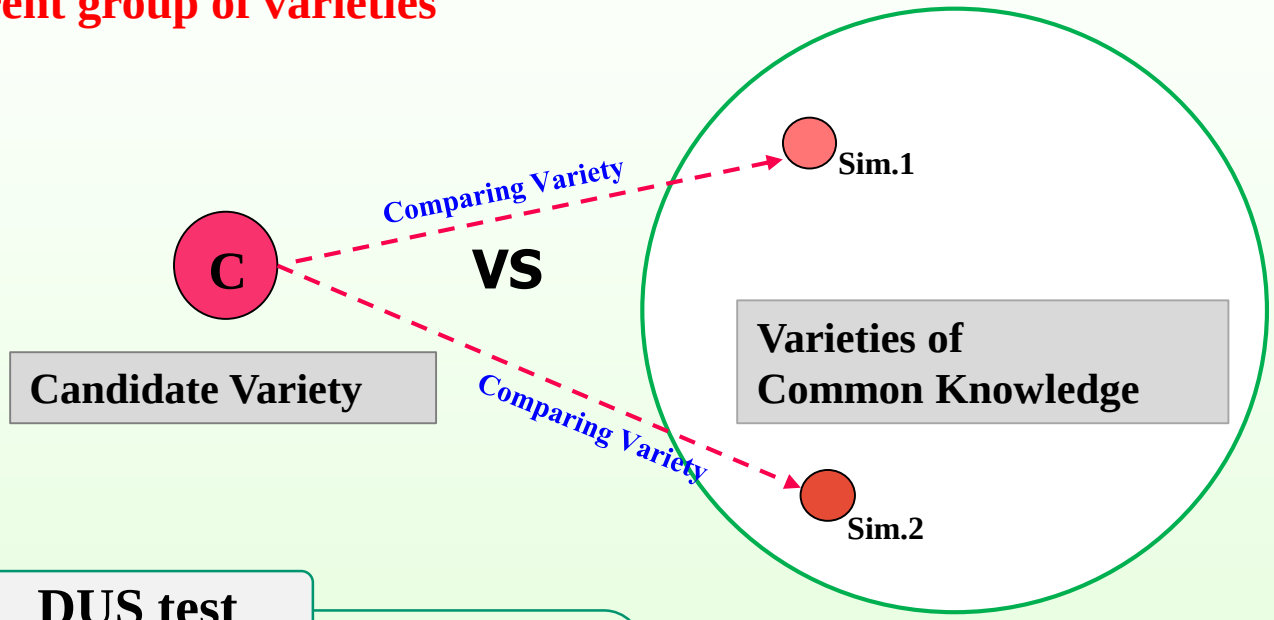


Varieties of Common Knowledge

what is reference varieties?

after excluding different group of varieties

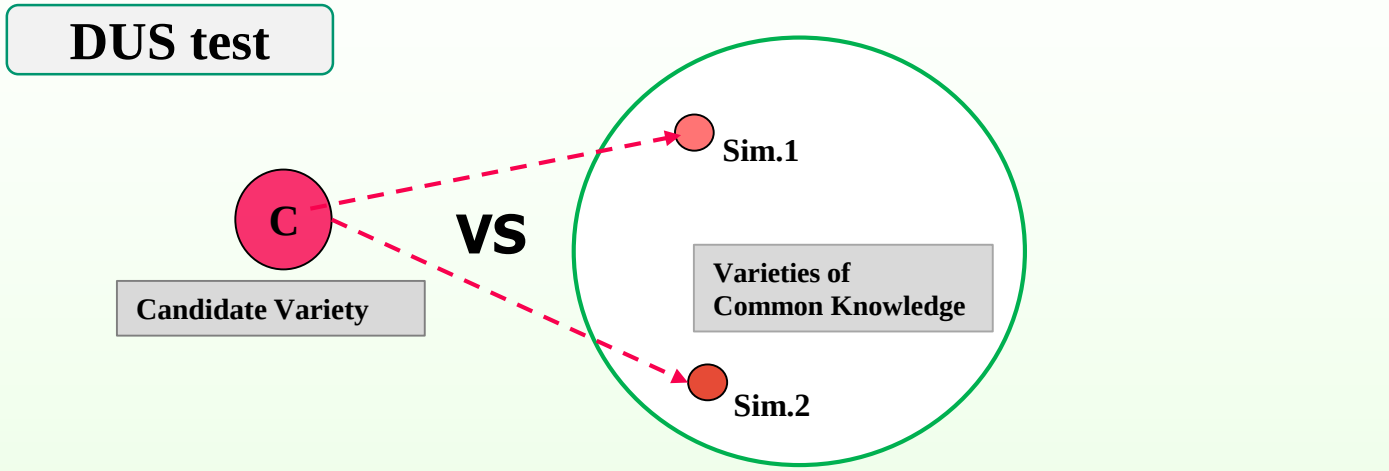
comparing varieties:
Sim.1 and Sim.2

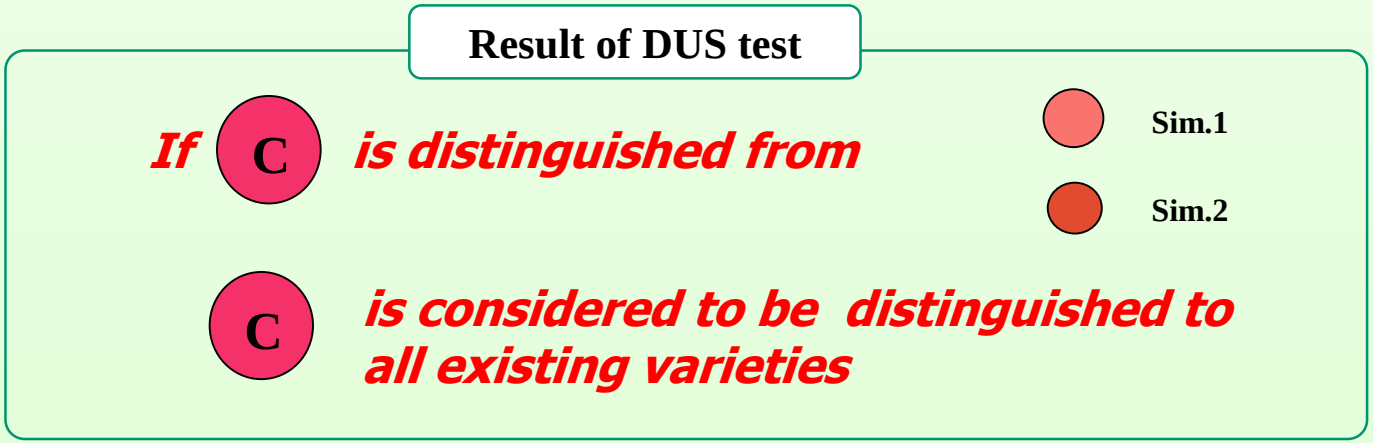


DUS test

we just compare the candidate variety with the similar varieties.

what is reference varieties?





what is reference varieties?

How do we get information on the candidate varieties?

Information of Candidate Variety

TG/2/7 Maize

TECHNICAL QUESTIONNAIRE

- ✓ **5. Characteristics of the variety to be indicated (refer: TGs for Maize 5.3 Grouping Characteristics)**
- ✓ **6. Similar varieties and differences from these varieties**
- ✓ **#7. Additional information which may help in the examination of the variety**
- ✓ **Other information ---→ Photos**

These information is for excluding the different group of varieties.

Selection of Similar Varieties

TG/1/3: 5.3.1.1

"it is necessary to examine distinctness in relation to all varieties of common knowledge. However.."

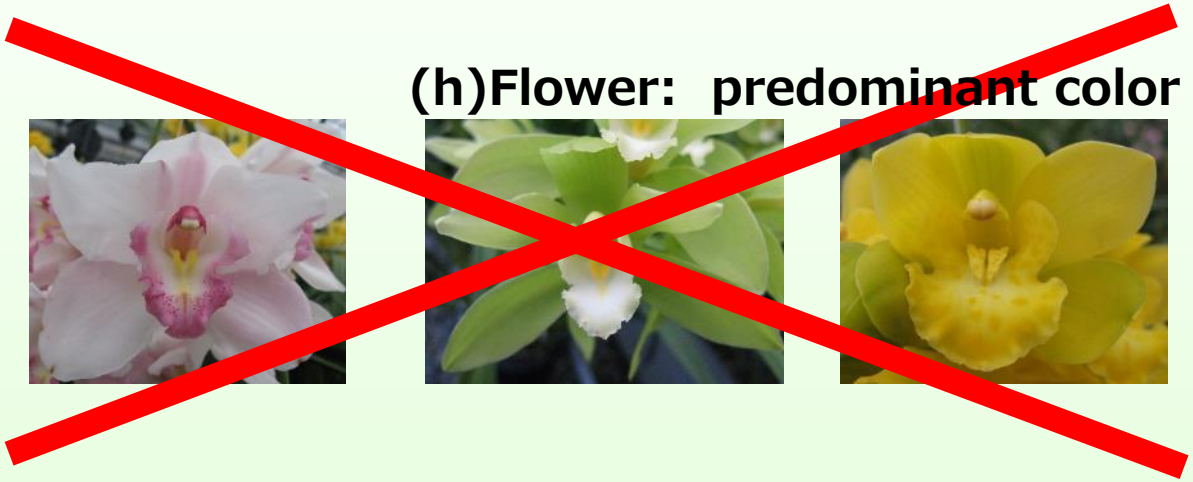
VS

Compare Candidate variety VS Existing varieties

Selection of Similar Varieties

Where a candidate variety is sufficiently different from particular group of varieties,

VS

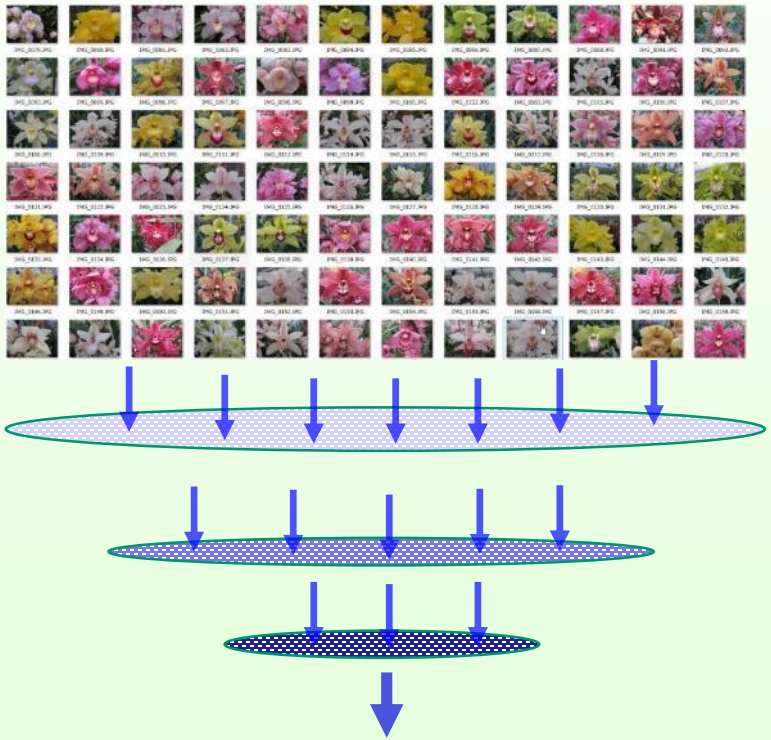


No need to compare the candidate variety with different group of varieties

Selection of Similar Varieties

Selecting the similar varieties

Candidate varieties



Grouping characteristics

Similar varieties

Selection of Similar Varieties

No need to compare the candidate variety with different group of varieties

VS

Selection of Similar Varieties

Candidate varieties

≠

≠

≠

Similar varieties

the candidate variety is considered to be distinguished to all existing varieties

Grouping characteristics

Grouping characteristics: Cymbidium

(a) Plant: size (char. 1)

(b) Inflorescence: number of flowers (char. 20)

(c) Peduncle: attitude (char. 24)

(d) Flower: general impression of petals and sepals (char. 28)

(e) Flower: length (char. 29)

(f) Flower: width (char. 30)

(g) Flowering time (char. 100)

(h) Flower: predominant color (Technical Questionnaire 5.8)

Grouping characteristics

Grouping Characteristics

TGP/7; TGs 5.2

Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics:

A) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and

B) to organize the growing trial so that similar varieties are grouped together.

Selection of Similar Varieties

(f) Fruit: shape in longitudinal section

VS

No need to compare candidate variety with different group of varieties

Grouping characteristics

- **Grouping characteristics: Tomato**

  (a) Plant: growth type (characteristic 2: QL)

  (b) Leaf: type of blade (characteristic 10: QL)

  (c) Peduncle: abscission layer (characteristic 19:QL)

  (d) Fruit: green shoulder (before maturity) (characteristic 21:QL)

  (e) Fruit: size (characteristic 26:QN)

  (f) Fruit: shape in longitudinal section (characteristic 28:PQ)

  (g) Fruit: number of locules (characteristic 36:QN)

  (h) Fruit: color (at maturity) (characteristic 3:PQ)

Selection of Similar Varieties

Reference varieties

- must be the <u>most similar</u> morphologically to the candidate variety

✓ To have the same state of expression as many as possible in the grouping characteristics

Selection of Similar Varieties

Most similar variety **char.1-7 Grouping char. (QN)**

	Char. 1	char. 2	Char. 3	Char. 4	Char. 5	Char. 6	Char. 7	Char. n
Candidate variety	**3**	**5**	**7**	**5**	**5**	**5**	**7**	**--**
Variety 1	**3**	**5**	**5**	**3**	**9**	**7**	**5**	**--**
Variety 2	**3**	**3**	**7**	**5**	**5**	**7**	**9**	**--**
Variety 3	**3**	**5**	**7**	**3**	**5**	**5**	**7**	**--**

Selection of Similar Varieties

Most similar variety **char.1-7 Grouping char. (QN)**

	Char. 1	char. 2	Char. 3	Char. 4	Char. 5	Char. 6	Char. 7	Char. n
Candidate variety	**3**	**5**	**7**	**5**	**5**	**5**	**7**	**--**
Variety 1	3	5	5	3	9	7	5	--
Variety 2	3	5	7	5	5	7	9	--
Variety 3	3	5	7	3	5	5	7	--
Variety 4	3	5	7	5	7	5	7	--

Selection of Similar Varieties

Most similar variety **char.1-7 Grouping char. (QN)**

	Char. 1	char. 2	Char. 3	Char. 4	Char. 5	Char. 6	Char. 7	Char. n
Candidate variety	**3**	**5**	**7**	**5**	**5**	**5**	**7**	**--**
Variety 1	**3**	**5**	**5**	**3**	**9**	**7**	**5**	**--**
Variety 2	**3**	**5**	**7**	**5**	**5**	**7**	**9**	**--**
Variety 3	**3**	**5**	**7**	**3**	**5**	**5**	**7**	**--**
Variety 4	**3**	**5**	**7**	**5**	**7**	**5**	**7**	**--**

Selection of similar variety for Maize

Example:

Grouping characteristics: Maize

Char. No.	type	Grouping Characteristics	Candidate Variety	
8	QN	Tassel: time of anthesis	5	medium
9	QN	Tassel: anthocyanin coloration at base of glume	5	medium
16	QN	Ear: anthocyanin coloration of silks	3	weak
24	QN	Plant: length	5	medium
36	QL	Ear: type of grain	2	flint-like
39	PQ	Excluding varieties with ear type of grain: sweet: Ear: color of dorsal side of grain	4	yellow orange
41	QN	Ear: anthocyanin coloration of glumes of cob	1	absent or very weak

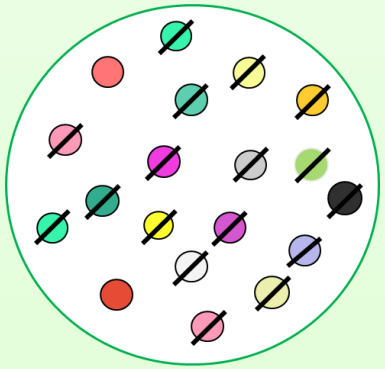
Selection of Similar Varieties

Step for Selecting of similar varieties

- **Making an inventory of the varieties**
  - data of growing test
  - Catalogue's data
- **Selection of similar varieties**
  - using grouping characteristics
- **After Selection of similar varieties**
  - confirm the characteristics of the reference varieties with photos as much as possible

Summary

- ✓ **Requirement of Distinctness: a variety must be clearly distinguishable from any other variety whose existence is a matter of common knowledge.**
- ✓ **In order to confirm "distinctness" of a candidate variety, the candidate varieties must be grown together with similar reference varieties for comparative purpose.**
- ✓ **To select the similar reference varieties from common knowledge, "grouping characteristics" is an effective tool.**



Varieties of Common Knowledge

different group of varieties can be excluded by using grouping characteristics.

Thank you for your attention

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