

DUS Test of Corn in Japan

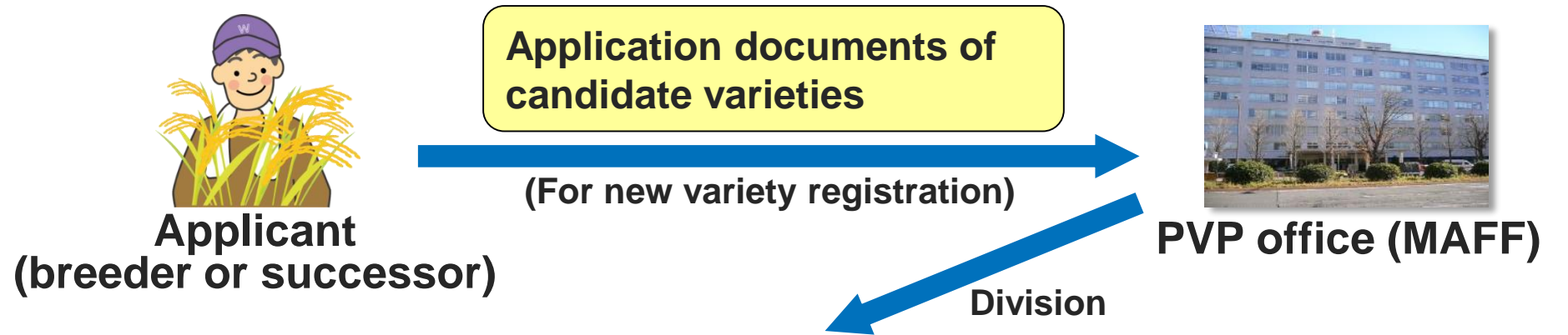


Kohei IMAMURA

Senior staff, DUS Test Section, NCSS (Center for Seeds and Seedlings, NARO)

- 1. Overview of examination procedures of plant new varieties in Japan**
- 2. Application and registration of corn**
- 3. Situation of DUS test of corn in Japan**
- 4. DUS growing test of corn in Japan**

Overview of examination procedures of plant new varieties in Japan- 1



DUS test methods

<p>On-Site Inspection (by examiner) 25%</p> 	<p>Growing Test (by NCSS) 70%</p> 	<p>Documentary Examination (by examiner) 5%</p> 
---	---	---

PVP office (MAFF)

Results of DUS test

Examination of Denomination and Novelty

New

Not new

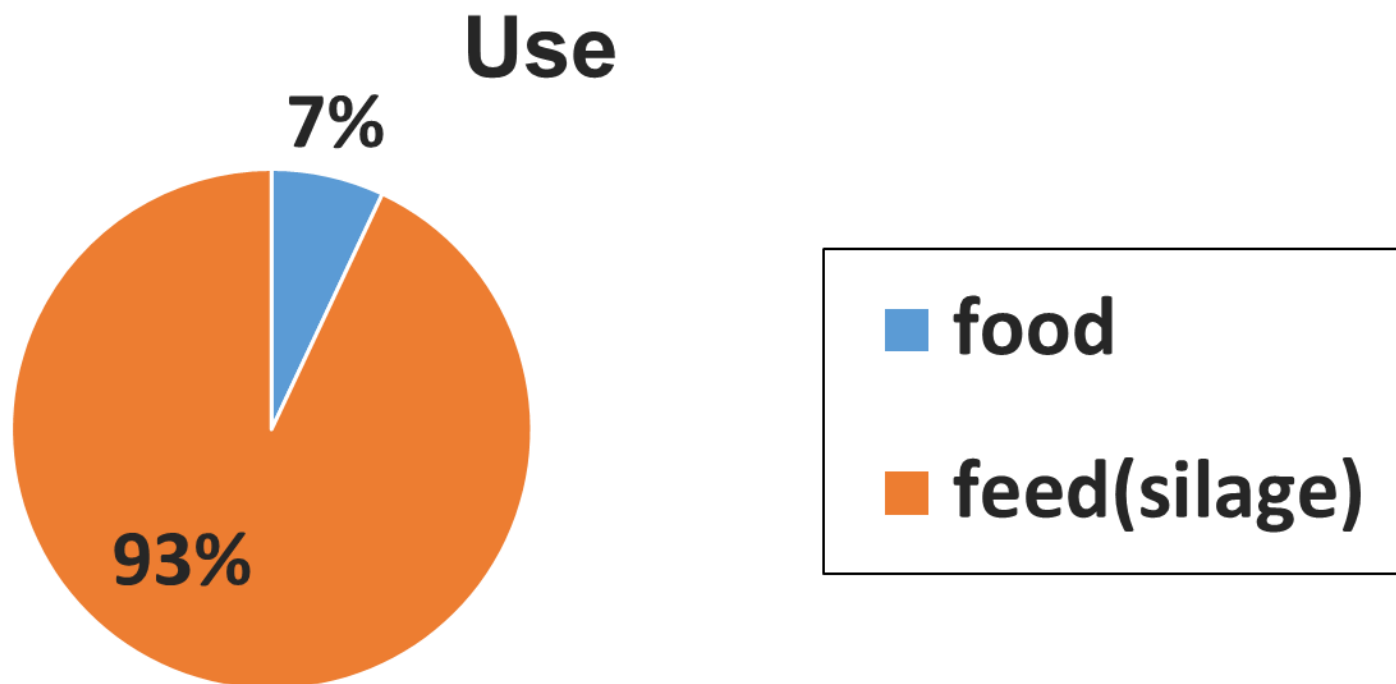
Variety registration

Rejection

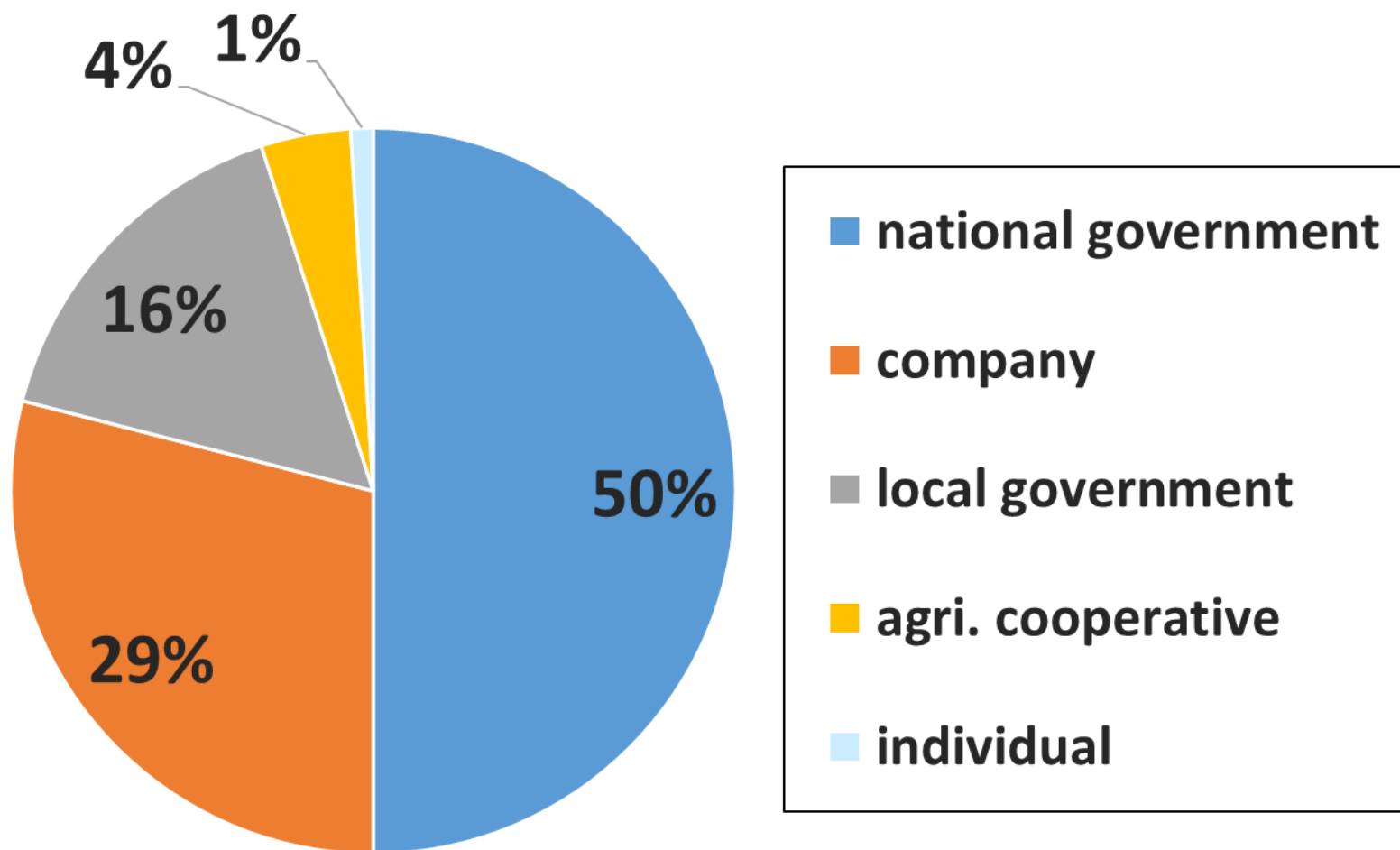
[Applicant will be granted the breeder's right of the new variety.]

Number of applications: 123 varieties

Number of registration: 92 varieties
(~ July. 10, 2016)



Type of applicants



- **Documentary Examination : 53%**
- **On-Site Inspection : 46%**
- **Growing Test : 1%**



- **The majority of the applicant is a public institution.**
- **It is not sufficiently equipped to do routine DUS growing test of corn.**

On-site inspection



PVP office
(MAFF)

1. order to prepare materials



(For on-site inspection)



Applicant



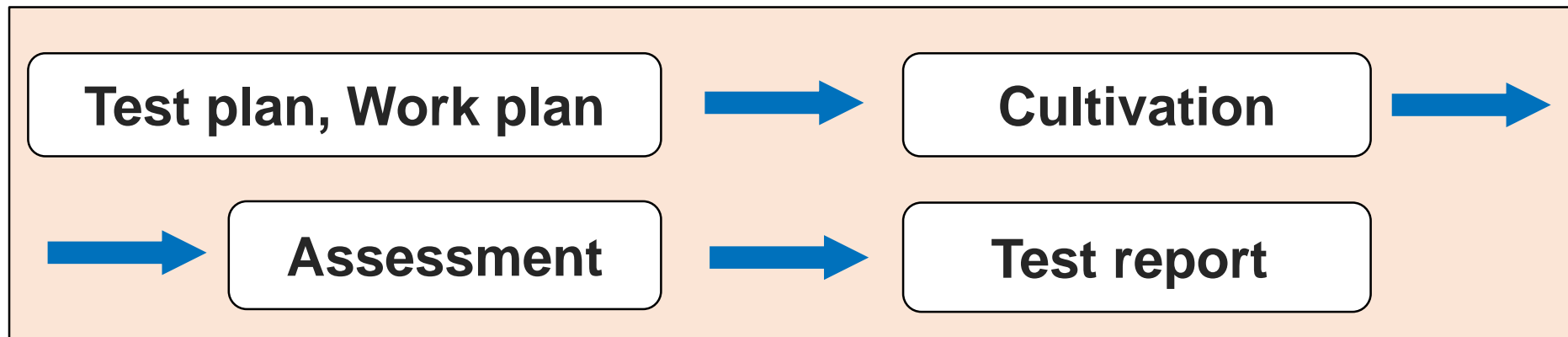
2. visit the field for assessment of characteristics



DUS growing test

- The similarity of existing variety and candidate variety is very high.
- The determination of distinctness is difficult in on-site inspection.

General flow of DUS growing test



Test planning

Test plan is a simple list that summarized when, where and how to do DUS growing test.

In particular, we need to select the test place with appropriate climate for corn.

< Test sites >

Nishinihon Station

- Warm climate
- Plain

Yatsugatake Station

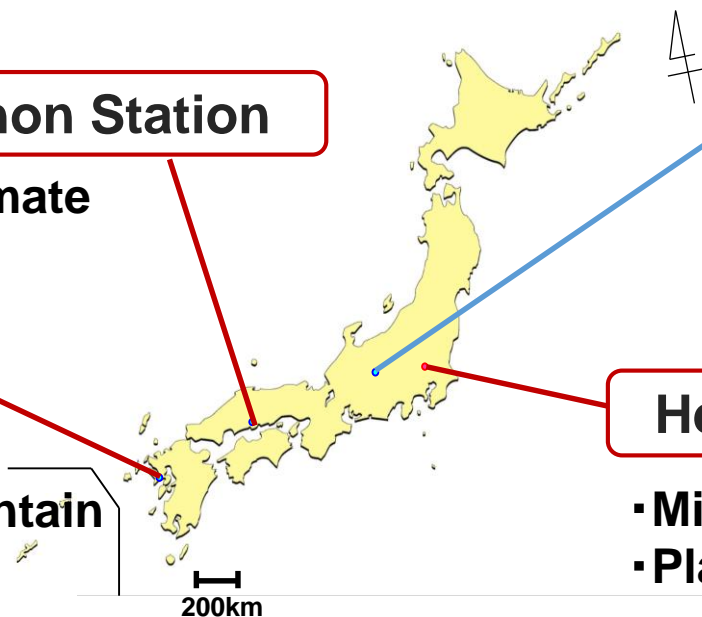
- Cool climate
- High mountain

Unzen Station

- Warm climate
- Slightly higher mountain

Headquarters at Tsukuba

- Mild climate
- Plain



Work planning

Work plan is a document that is described concrete cultivation method for each plant species.

We determine the standard cultivation method of corn based on the references.

sowing

number of plants

spacing

Test plot

fertilization

pest control

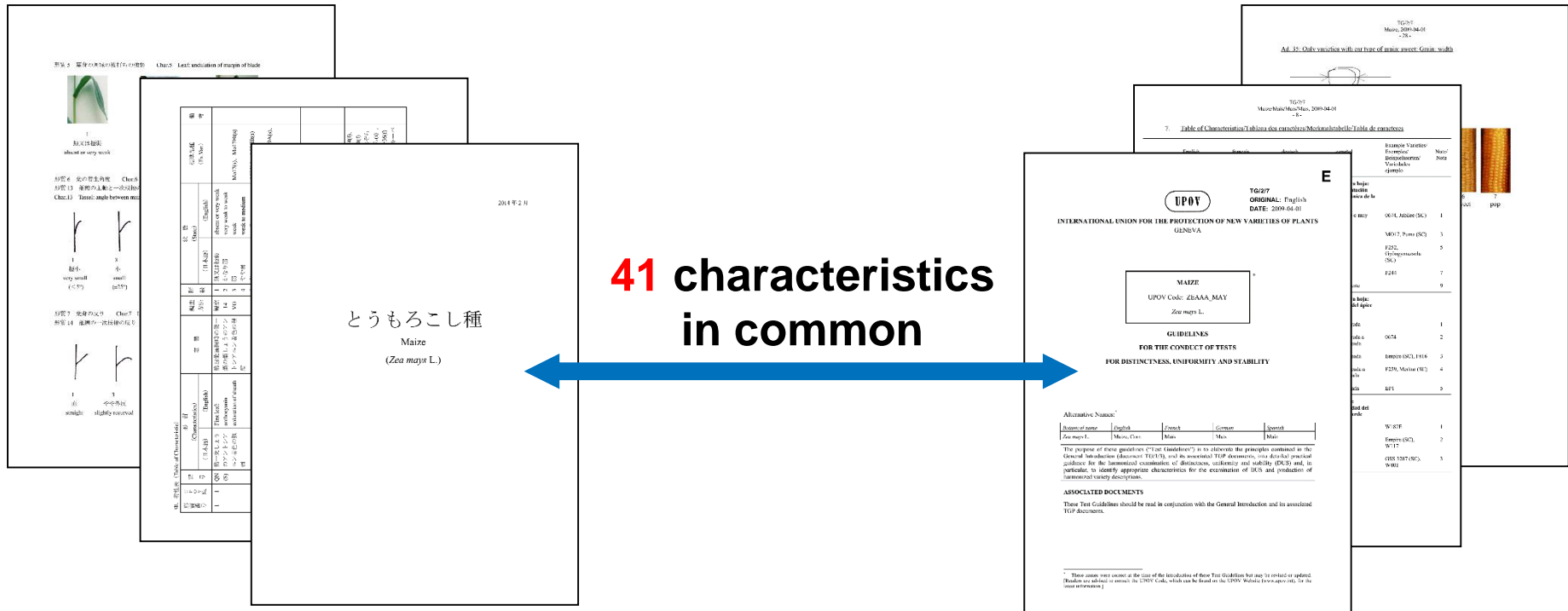
, etc.

< Objectives >

I . Confirmation of the practical method of the test

II . Sharing and accumulation of information

Assessment: TG



Japanese Test Guideline of Corn (51 Characteristics)

UPOV Test Guideline of Corn (41 Characteristics)

Japanese TG only

number of leaves

color of silks

weight of ear

sweetness of grain

tolerance lodging

, etc.

Assessment: QN

Japanese Test Guideline of Corn (51 Characteristics)

QN **QL** **PQ**
(**42** characteristics) (3 Characteristics) (6 Characteristics)

Note the annual variation

We assess QN characteristics based on the growth ratio of the past and present data of the example varieties.

Assessment: photo



It is important that photographs are taken to be able to confirm the characteristics of the plant.

As for how to take photo, I'll give you more details in next my lecture.

Assessment: check



- We check the assessment by three or more staff.
- On the basis of examination data and plant condition, the assessment is determined.

In the case of corn, it is important that we often check the assessment of characteristics with more than three staff.

Test report

Tester in charge

Making test report

Submit
→

NCSS
Headquarters

Check

Submit
→

PVP office
in MAFF



NCSS headquarters

**Thank you for
your attention.**

Have a nice day.

