

PROJECT FULL TITLE:
**COORDINATION AND COLLABORATION BETWEEN REFERENCE COLLECTIONS OF
PLANT PESTS AND
DISEASES FOR EU PLANT HEALTH POLICY**

GRANT AGREEMENT NO.: (612712)



Workpackage: WP2. Inventory
Deliverable: Deliverable D2.2, List and descriptions of relevant collections
Date: 21 Jan 2015
Partner responsible: Partner 2 (INRA)

First data from the Q-collect questionnaire

Questions are followed by their **tag** in the spreadsheet of answers, so that you can locate and understand the data for each question.

1 always represents Yes and **-1** always represents No

General questions on your institute / laboratory

1. Please identify your institute/laboratory. **Idlab**

Labs answered altogether	61
Finalized the questionnaire	51
Entered a collection but did not finalize the questionnaire	10
Different institutes reported	41, of which 3 have 2 laboratories
Collections reported	110

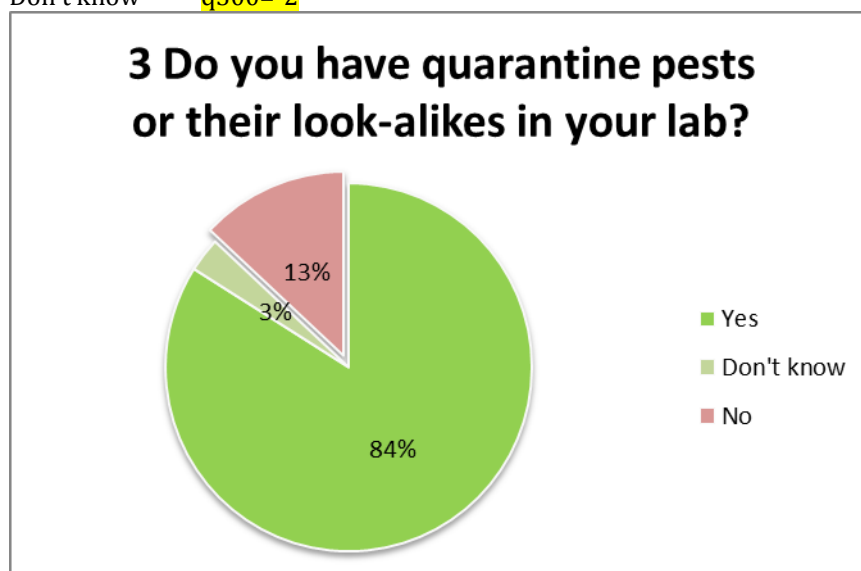
2. Does your institute/laboratory host a collection containing plant pests?

Labs with one collection	38
Labs with two collections	6
Labs with three collections	9
Labs with four collections	2
Labs with five collections	0
Labs with six collections	3
Labs with seven collections	1

3. Do you have quarantine pests or their look-alikes in your collection?

For look-alikes, consider organisms that could be confused with a quarantine pest during identification by routine diagnostic laboratories and could be usefully included during the validation of a test.

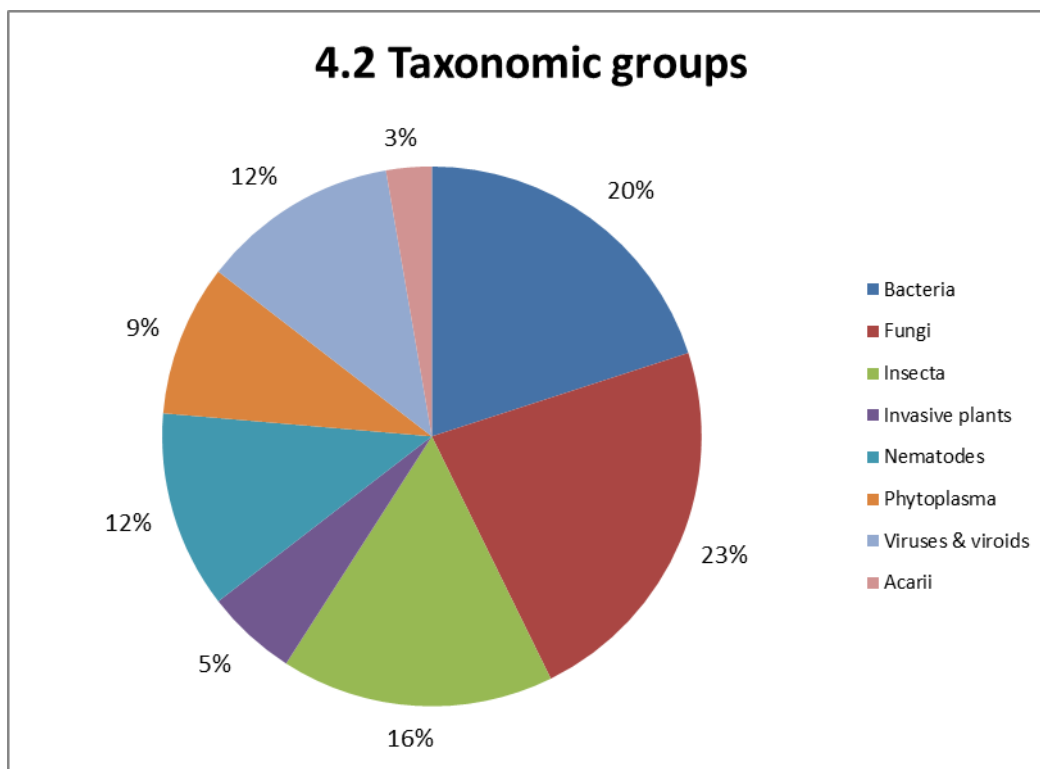
Yes q300=1
 No q300=-1
 Don't know q300=-2



Identification of collection(s) in your institute/laboratory

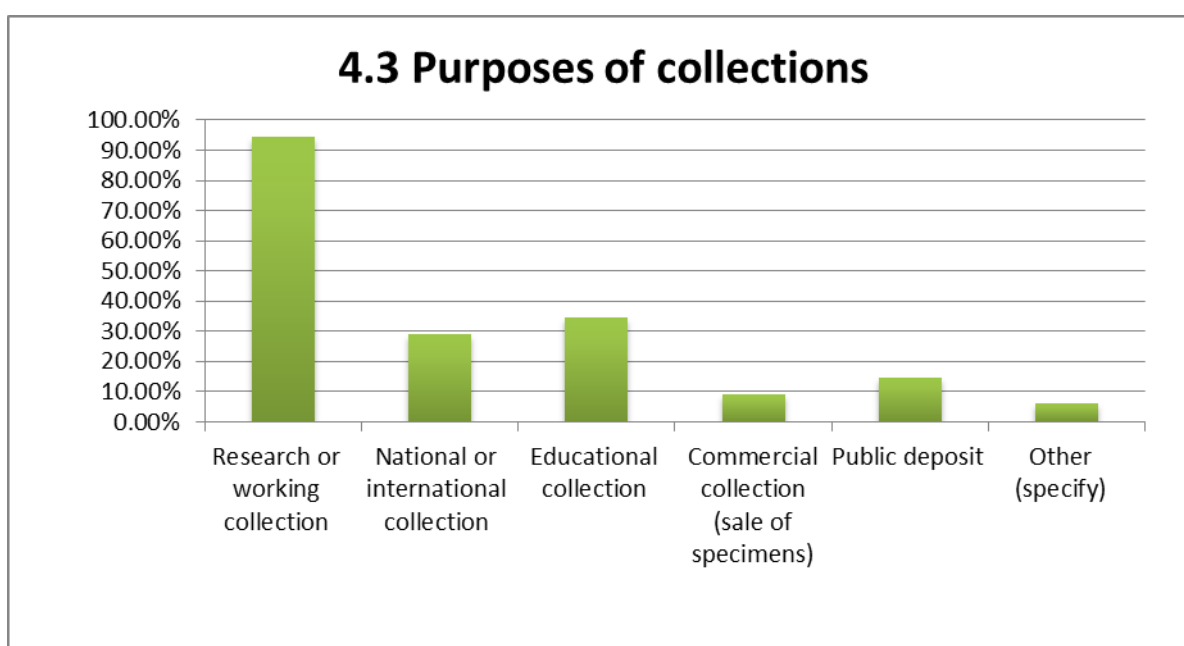
4.2. Taxonomic group

Add a collection of Viruses and Viroïds colgroup=V
 Add a collection of Phytoplasmas colgroup=P
 Add a collection of Bacteria colgroup=B
 Add a collection of Fungi and Chromista colgroup=F
 Add a collection of Nematodes colgroup=N
 Add a collection of Invasive plants colgroup=J
 Add a collection of Acari colgroup=A
 Add a collection of Insects colgroup=I



4.3. What are the purposes of the collection? (please choose one or several):

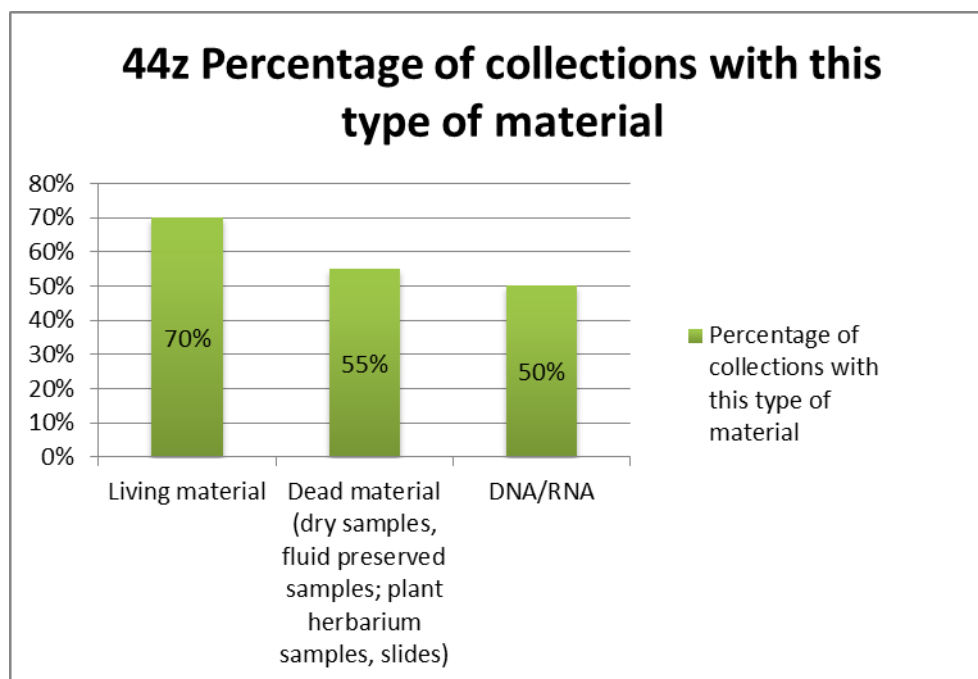
q43=1	Research or working collection
q43=2	National or international collection
q43=3	Educational collection
q43=4	Commercial collection (sale of specimens)
q43=5	Public deposit e.g. a collection for safekeeping; also includes mandatory deposit
q43=6	Other
q43other	(specify other purpose)



Unique combinations Q4.3	
Research alone:	44.5% of collections
Research and education collection:	20% of collections
Research and national/international collection	8% of collections
Research, national, education collection:	4.5% of collections
Other combinations (combined number):	less than 20%

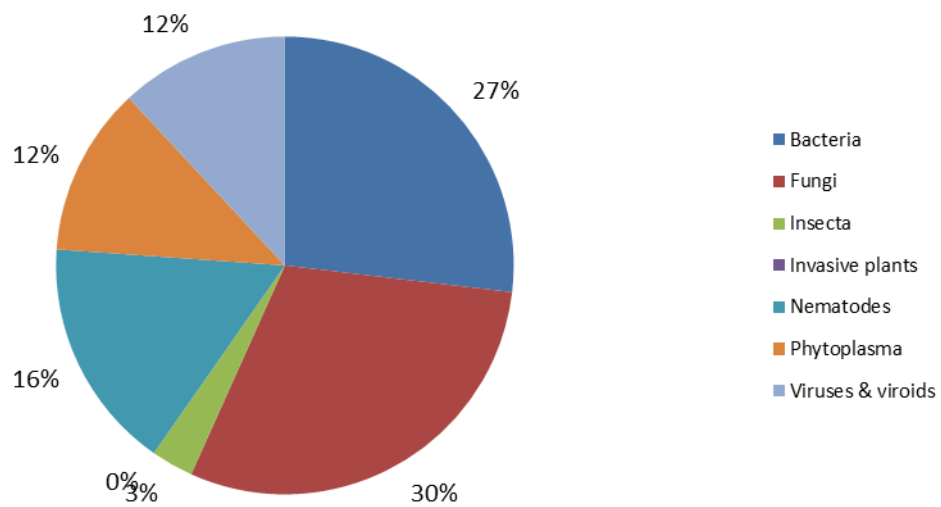
4.4. Type of material (multiple choice)

	Living material	Dead material	DNA/RNA
Does your collection contain the following type of material?	q44z1=1 q44z1=-1	q44z2=1 q44z2=-1	q44z3=1 q44z3=-1

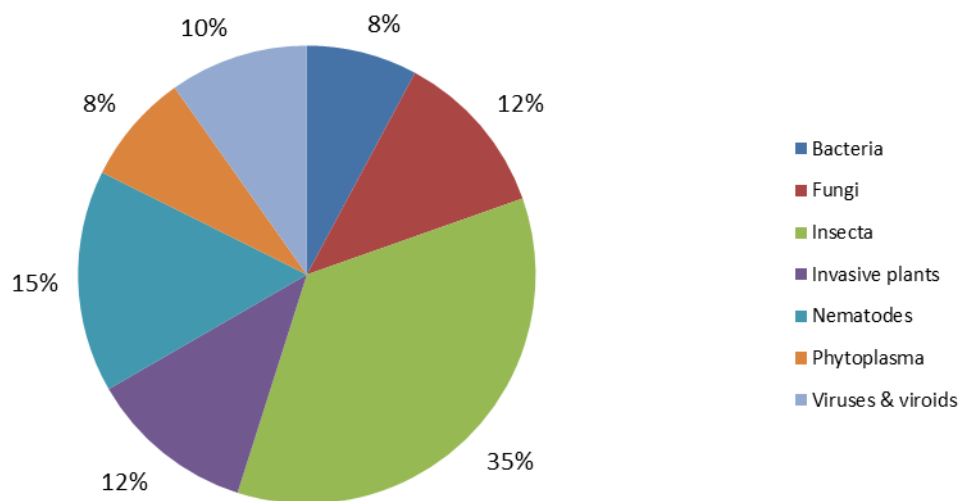


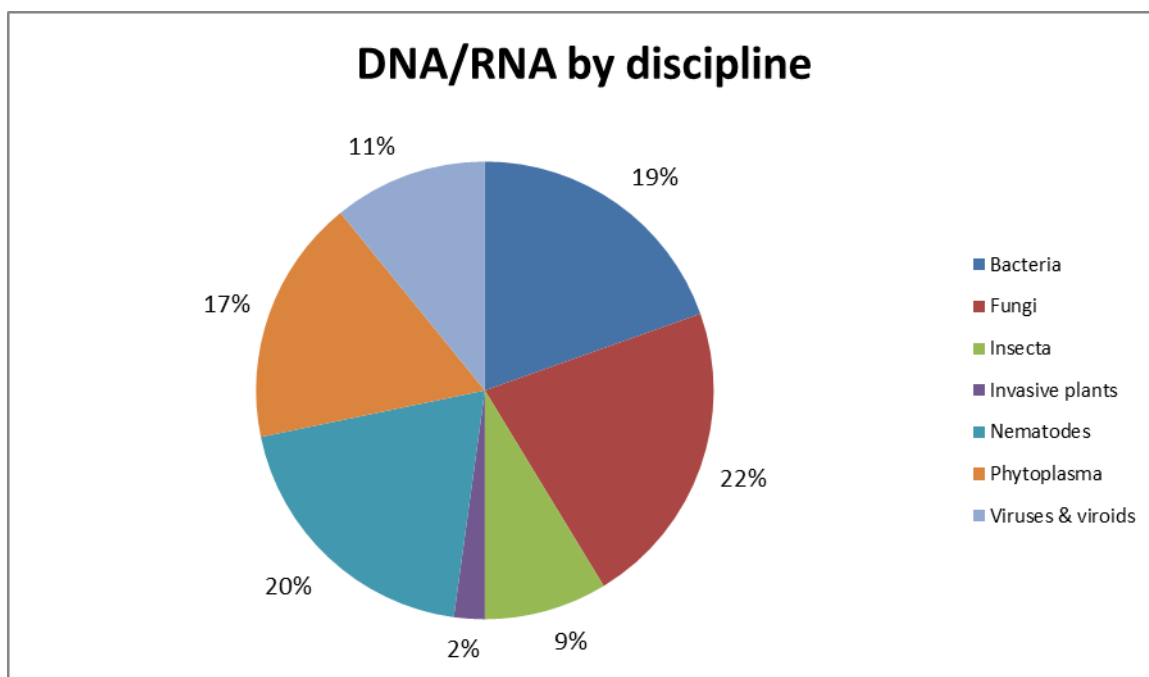
- Note: as there were only 3 collections of Acari, they have not been included in the analyses by discipline

Living material collections by discipline



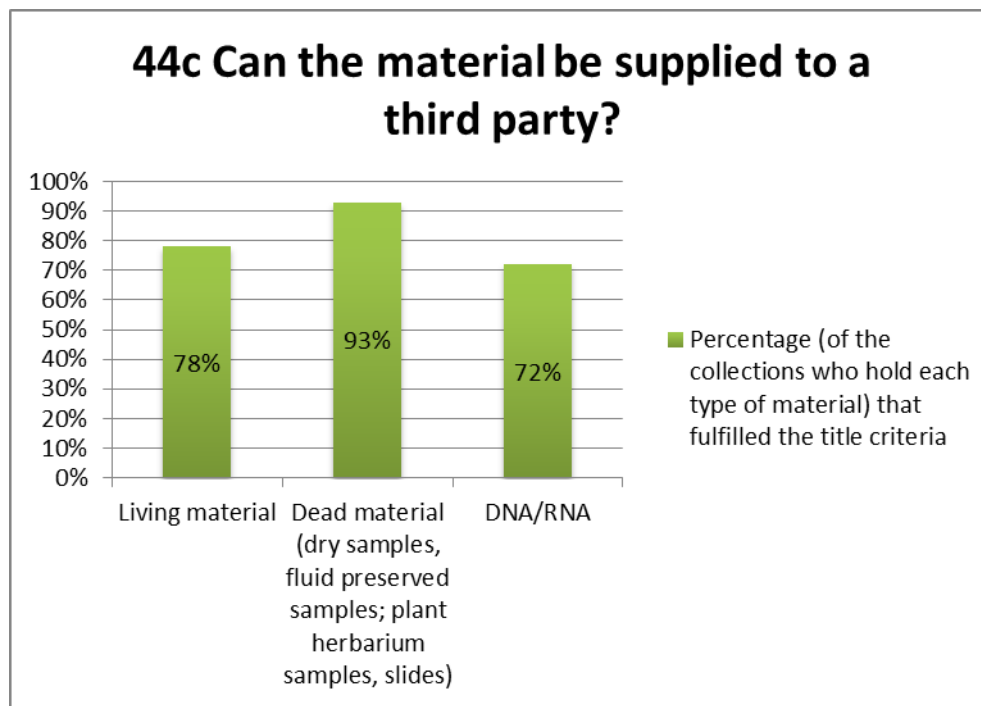
Dead material by discipline





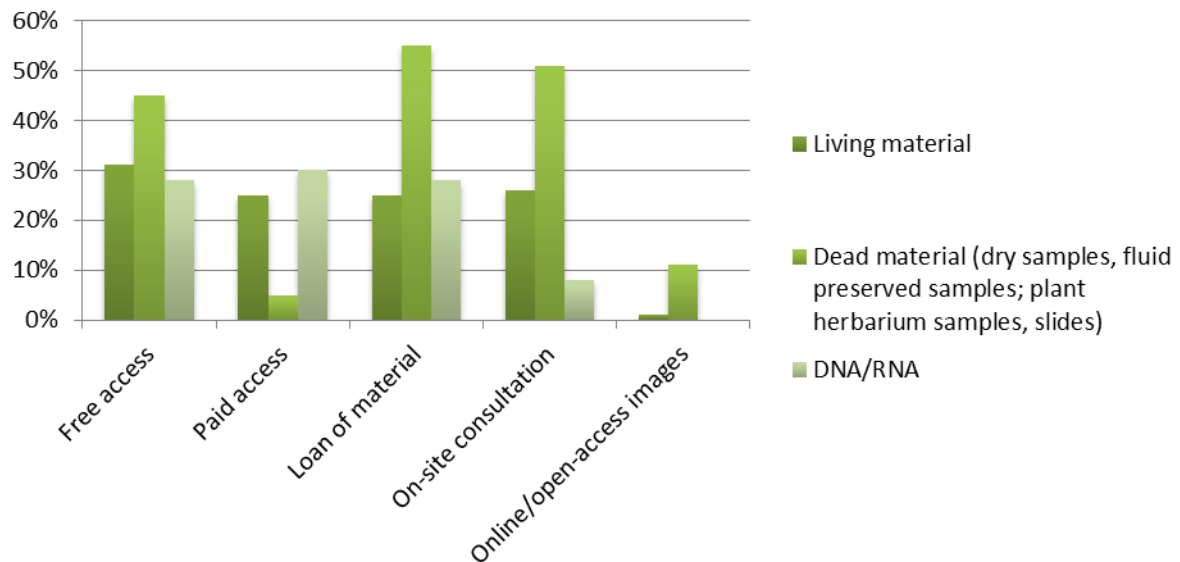
	Living material	Dead material	DNA/RNA
Number of specimens of quarantine organisms (or approx.)	q44i1 Approx 8500 specimens in 59 collections.	q44i2 Approx. 10250 specimens in 36 collections	q44i3 Approx. 5500 specimens in 38 collections.
	I don't know q44i1=-1	I don't know q44i2=-1	I don't know q44i3=-1
Total number of species <i>Explanatory note:</i> provide the approximate number of species present in the collection	q44b1 Approx 19100 species in 71 collections, with a mean of 280 species per collection and a standard deviation of 715 (!)	q44b2 Approx 59400 species in 48 collections, mean and Standard variation meaningless.	q44b3 Approx. 1580 species in 43 collections, mean and Standard variation meaningless.
Number of specimens of quarantine organisms (or approx.)	44j1 number given as: 388 for 60 responding labs. No collections replied that they did not know.	q44j2 number given is 970 out of 39 collections. No collections replied that they didn't know.	q44j3 number given is 356 out of 36 collections. 1 collection replied that they did not know. <input type="checkbox"/> I don't know q44j3=-1

	Living material	Dead material	DNA/RNA
Accessibility (Can the material be supplied to a third party?)	q44c1=1 q44c1=-1	q44c2=1 q44c2=-1	q44c3=1 q44c3=-1

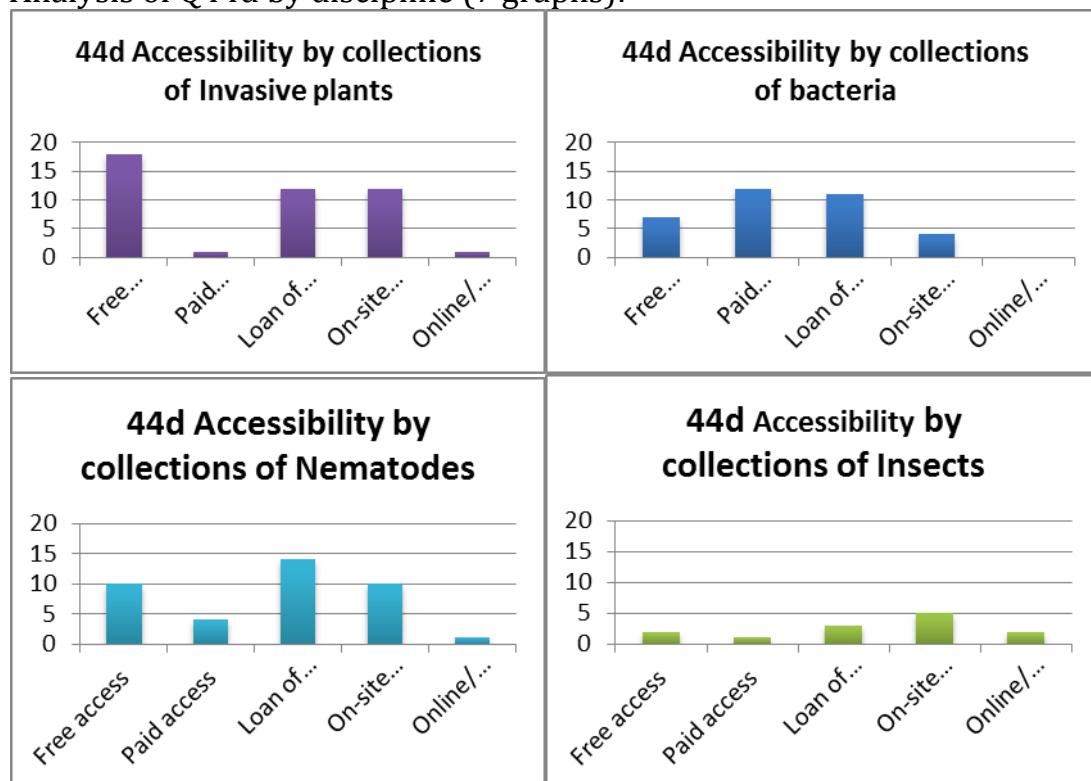


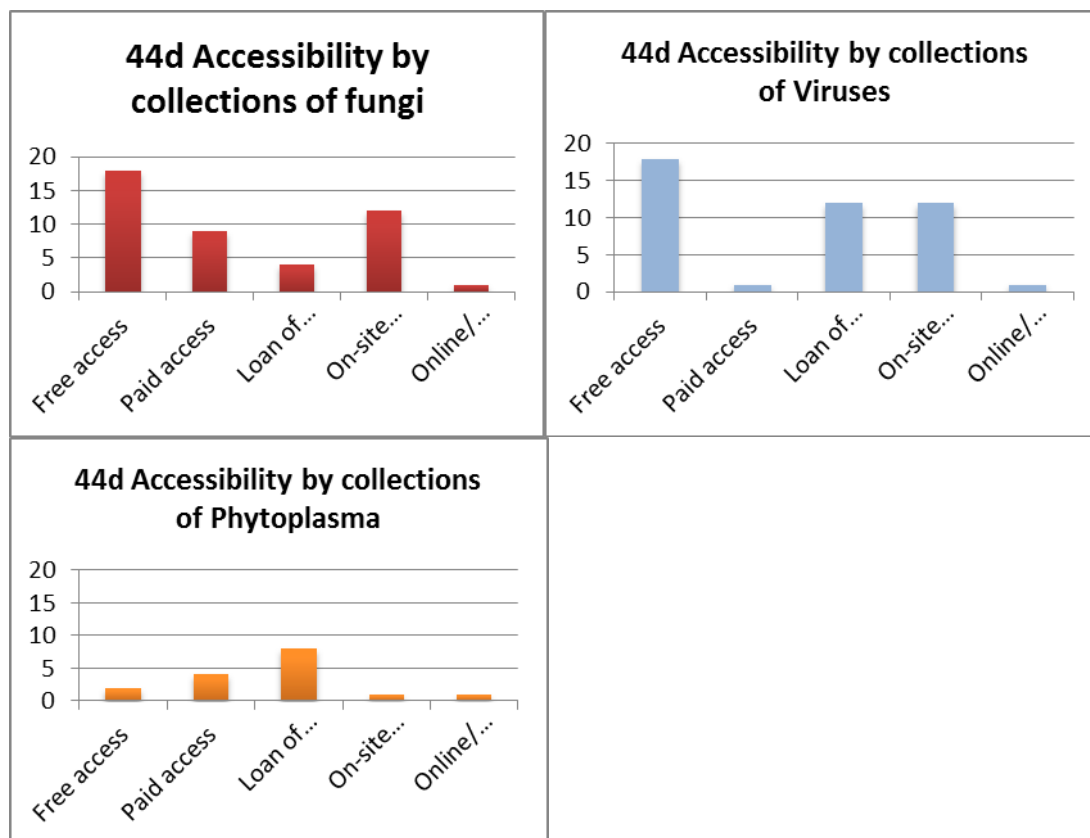
	Living material	Dead material	DNA/RNA
Free access	q44d1=1	q44d2=1	q44d3=1
Paid access	q44d1=2	q44d2=2	q44d3=2
Loan of material	q44d1=3	q44d2=3	q44d3=3
On-site consultation	q44d1=4	q44d2=4	q44d3=4
On-line/ open access images	q44d1=5	q44d2=5	q44d3=5

44d Accessibility, out of collections with that material



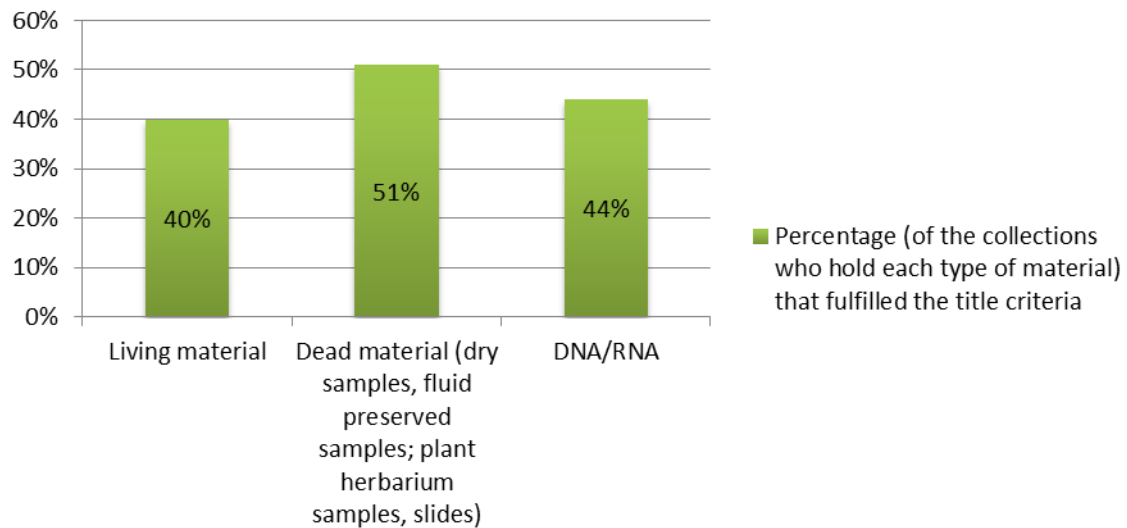
Analysis of Q44d by discipline (7 graphs):



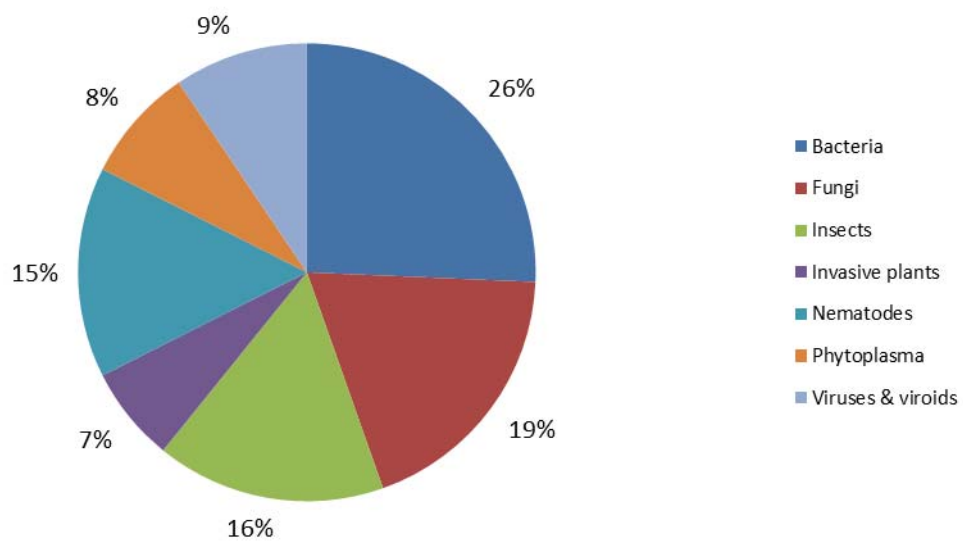


	Living material	Dead material	DNA/RNA
Catalogue	q44e1=1	q44e2=1	q44e3=1
	q44e1=-1	q44e2=-1	q44e3=-1
Paper	q44f1=1	q44f2=1	q44f3=1
Database	q44f1=2	q44f2=2	q44f3=2
Online	q44f1=3	q44f2=3	q44f3=3
Website	q44f1w	q44f2w	q44f2w

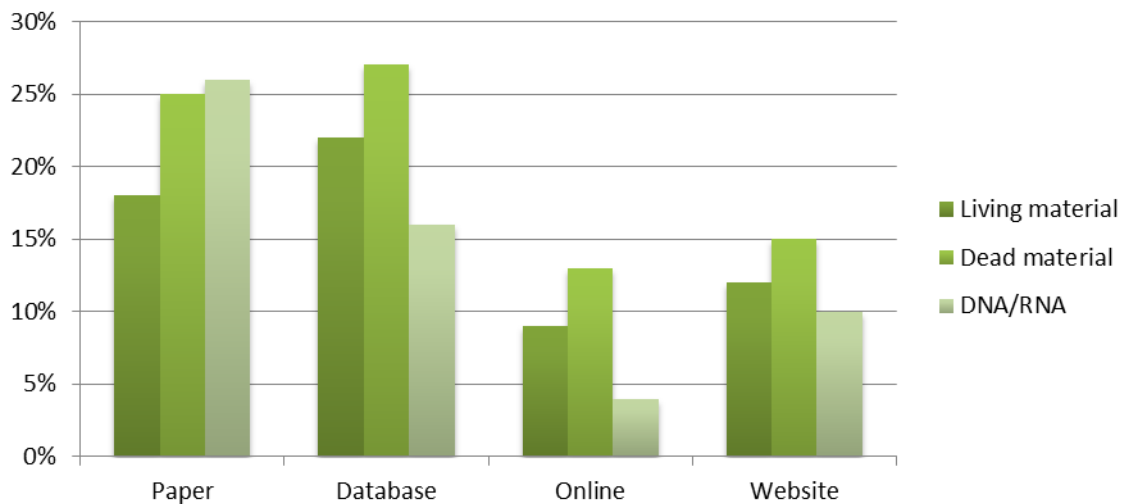
44e Do you have a catalogue of the collection?



Catalogues divided into discipline

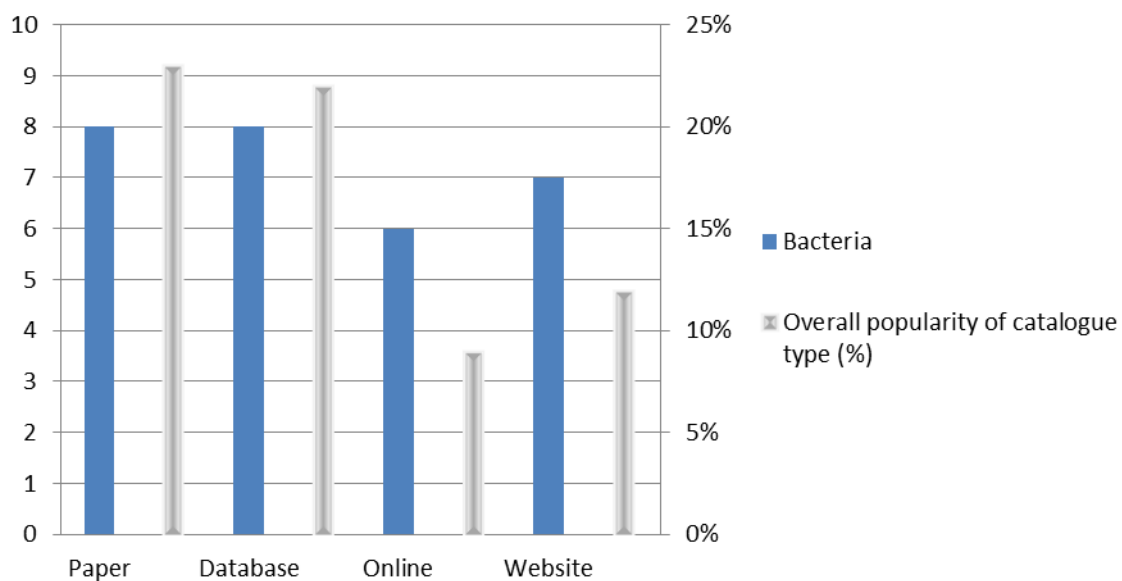


44f Types of catalogue provided, as a percentage of all collections

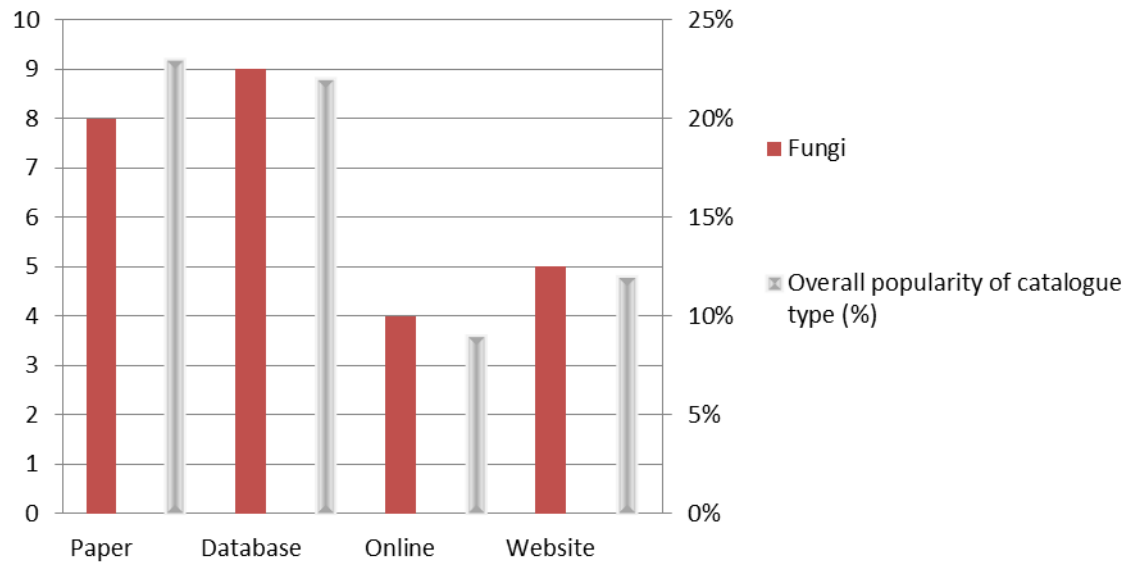


Analysis of Q44f by discipline (7 graphs):

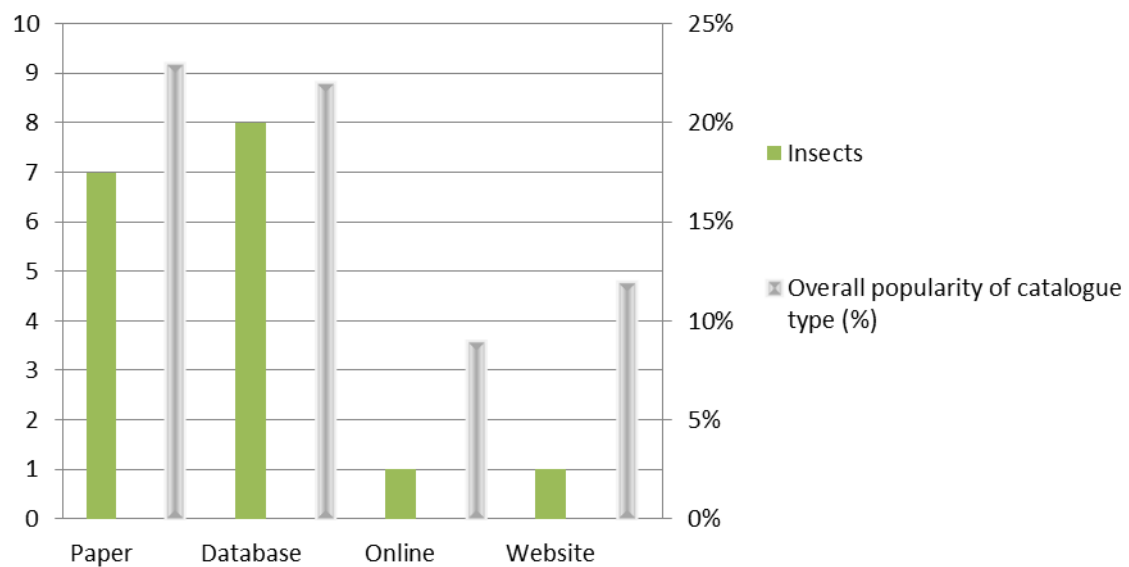
Type of catalogue by discipline: bacteria



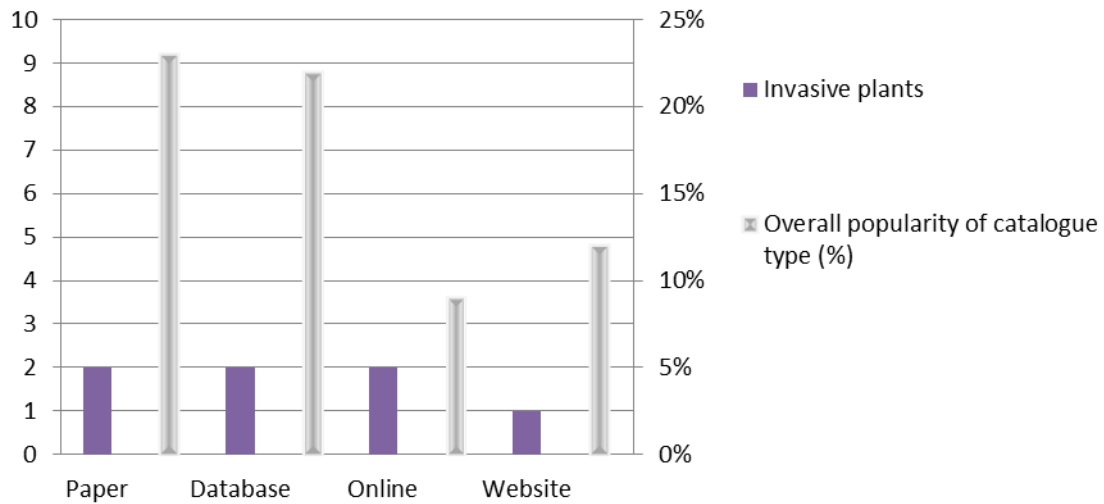
Type of catalogue by discipline: fungi



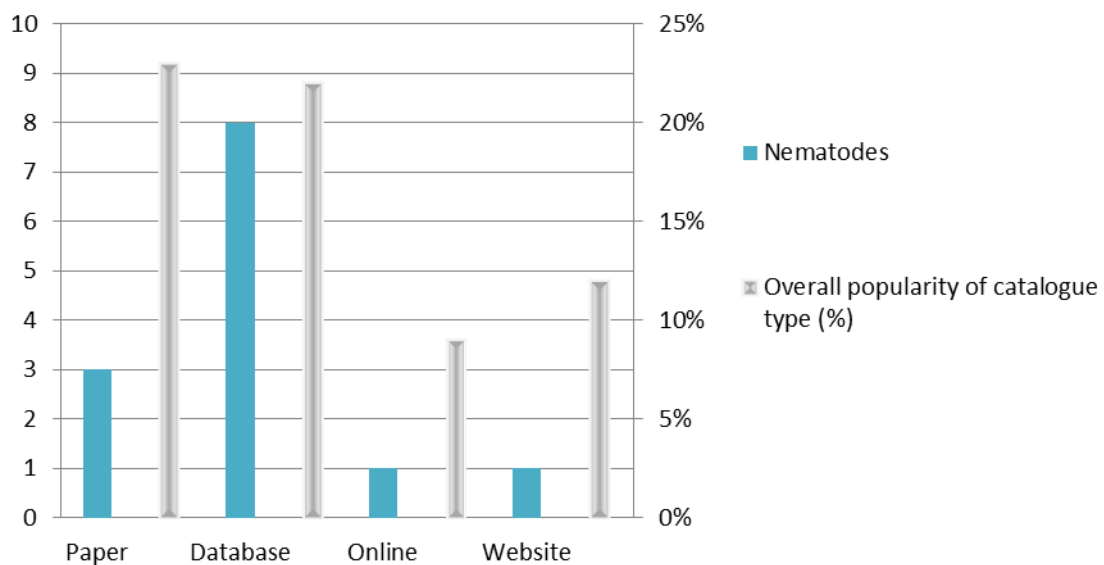
Type of catalogue by discipline: insects



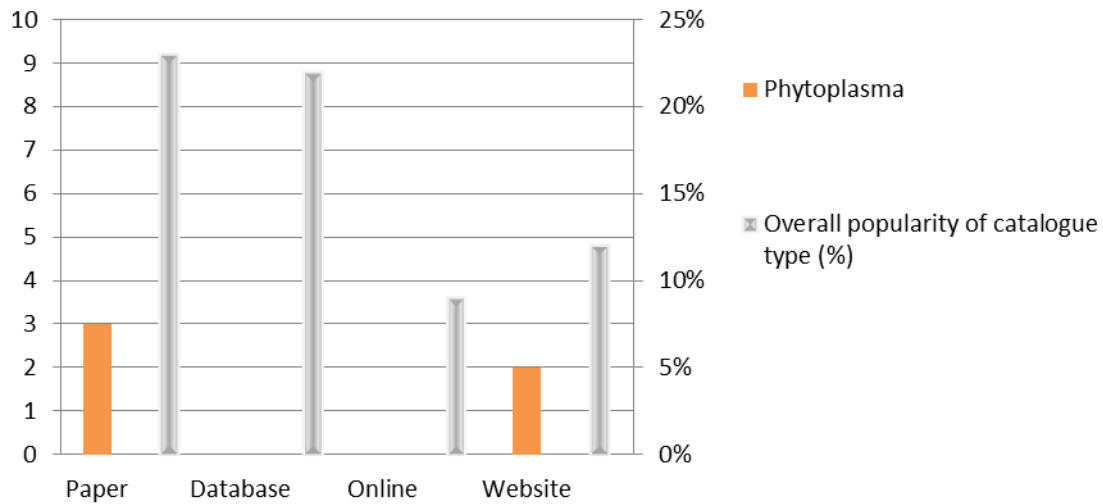
Type of catalogue by discipline: invasive plants



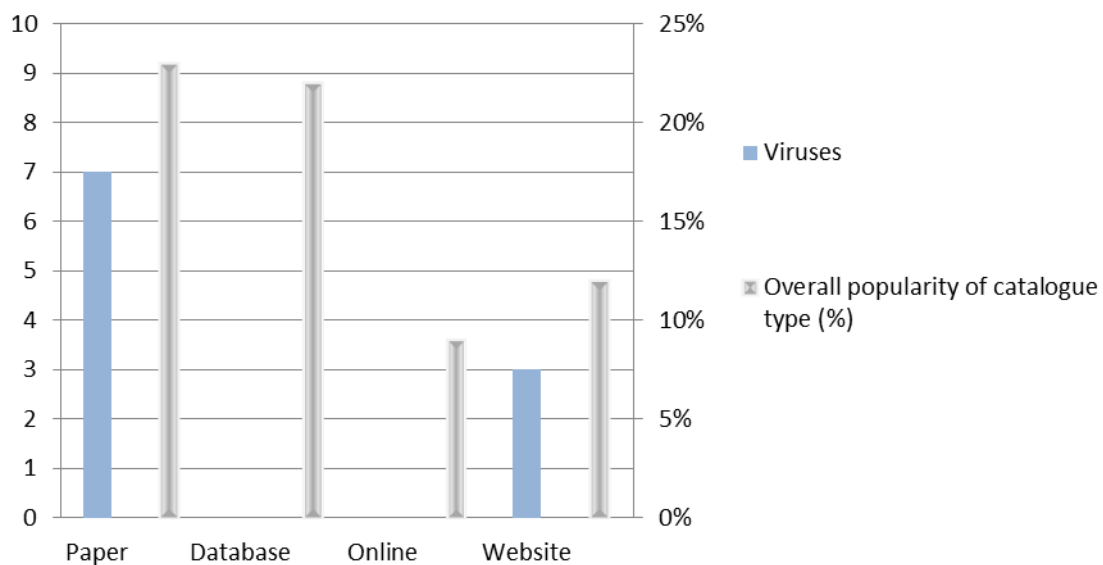
Type of catalogue by discipline: nematodes



Type of catalogue by discipline: phytoplasma

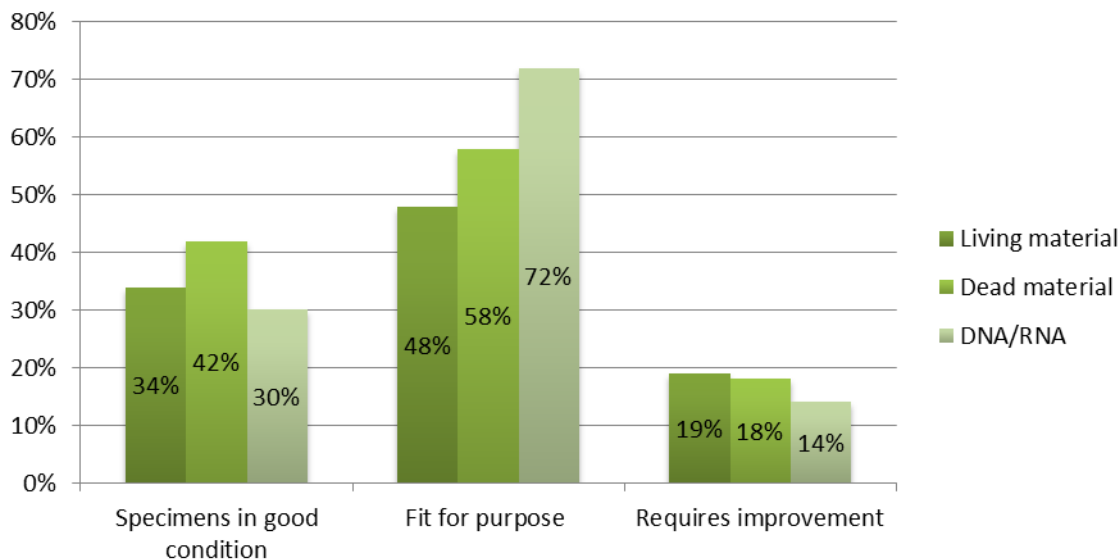


Type of catalogue by discipline: viruses

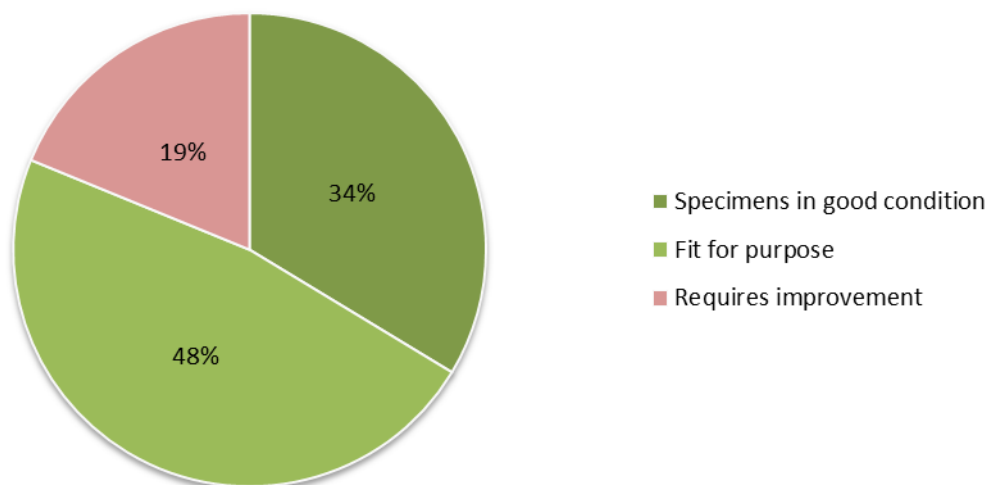


	Living material	Dead material	DNA/RNA
Your judgment on the conservation status of your collection	q44g1=1 Specimens in good condition	q44g2=1 Specimens in good condition	q44g3=1 Specimens in good condition
	q44g1=2 Fit for purpose	q44g2=2 Fit for purpose	q44g3=2 Fit for purpose
	q44g1=3 Requires improvement	q44g2=3 Requires improvement.	q44g3=3 Requires improvement.

44g Conservation status of collection (%)

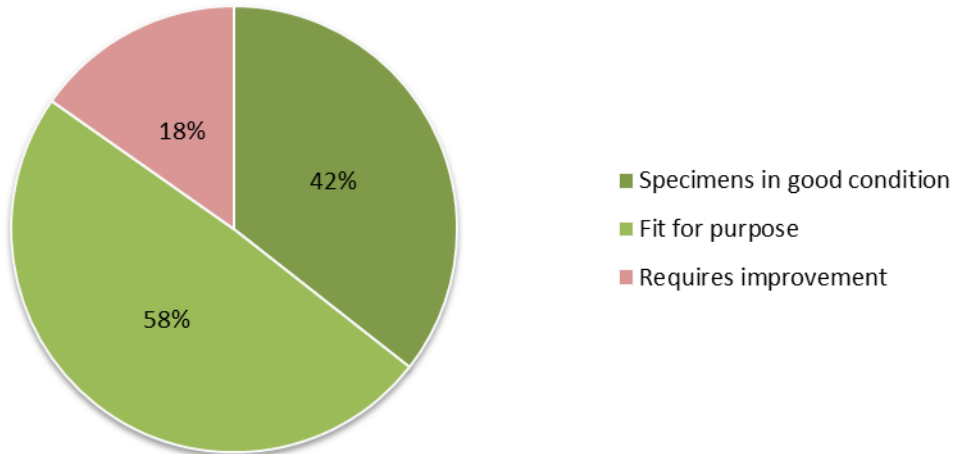


44g Judgment on the conservation status of your Living Material collection (%)



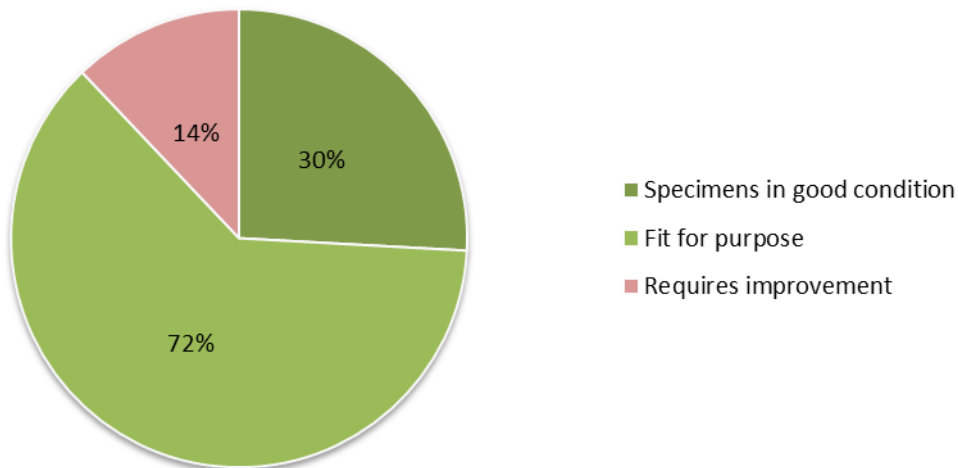
In this 19%: 15 collections, 14 labs (21, 139, 203, 227, 245, 305, 321, 323, 453, 495, 513, 515, 519, 543), 6 Bacteria collections, 6 Fungi, 1 each of Nematodes, Phytoplasma, and Viruses. Labs in red appeared twice as requiring improvement.

44g Judgment on the conservation status of your Dead Material collection (%)



In this 18%: 10 collections, 8 labs (203, 245, 459, 475, 477, 487, 503, 547), 2 Bacteria collections, 2 Fungi, 2 Nematodes, 2 Viruses, and one each of Insects and Invasive plants.

44g Judgment on the conservation status of your DNA/RNA collection (%)



In this 14%: 7 collections, 4 labs (243, 475, 487, 515), 2 Bacteria collections, 2 Fungi, 2 Nematodes and 1 Viruses.

Living material

Dead material

DNA/RNA

Are you willing to provide a separate list of specimens of the key quarantine pests (and if possible look alike) you hold?

q44h1=1 Yes
q44h1=2 No
q44h1=3 Partial

q44h2=1 Yes
q44h2=2 No
q44h2=3 Partial

q44h3=1 Yes
q44h3=2 No
q44h3=3 Partial

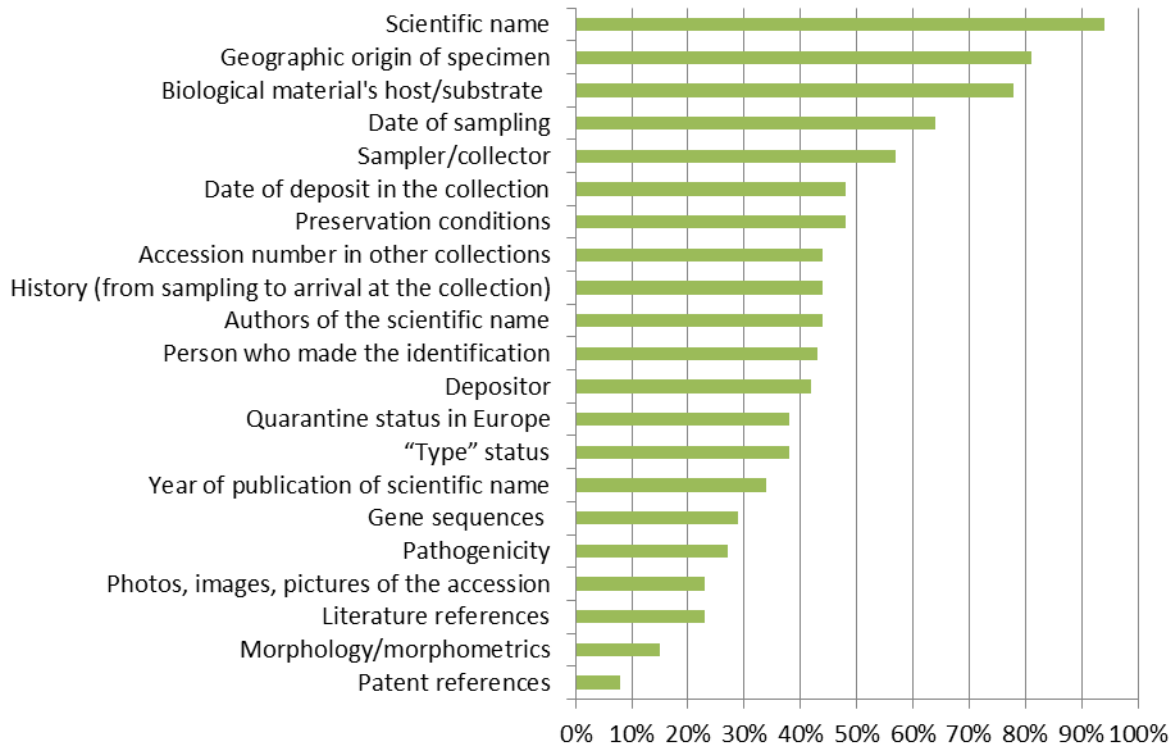
4.4h Are you willing to provide a separate list of specimens of the key quarantine pests (and if possible look-alikes) you hold? Yes Partially

Living material collections	53%	14%
Dead material collections	42%	22%
DNA/RNA	54%	14%

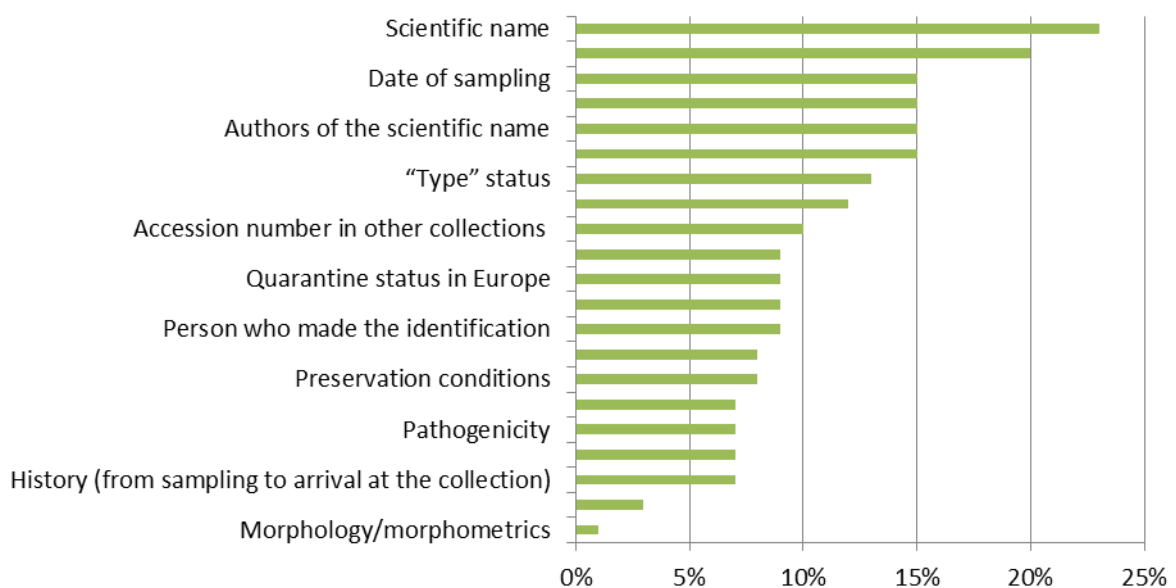
4.5. Which subjects regarding the collection specimen are covered in the collection database(s), which ones are displayed online and which ones are mandatory to accept to include the material in the collection?

	In the database	Displayed online	Mandatory to accept a deposit
Scientific name	q45a1=1	q45a2=1	q45a3=1
Authors of the scientific name	q45b1=1	q45b2=1	q45b3=1
Year of publication of scientific name	q45c1=1	q45c2=1	q45c3=1
"Type" status	q45d1=1	q45d2=1	q45d3=1
Sampler/collector	q45e1=1	q45e2=1	q45e3=1
Depositor	q45f1=1	q45f2=1	q45f3=1
Person who made the identification	q45g1=1	q45g2=1	q45g3=1
History (from sampling to arrival at the collection)	q45h1=1	q45h2=1	q45h3=1
Accession number in other collections	q45i1=1	q45i2=1	q45i3=1
Geographic origin of specimen	q45j1=1	q45j2=1	q45j3=1
Host/substrate from which the biological material was collected/sampled	q45k1=1	q45k2=1	q45k3=1
Date of sampling	q45l1=1	q45l2=1	q45l3=1
Preservation conditions	q4m1=1	q4m2=1	q4m3=1
Pathogenicity	q45n1=1	q45n2=1	q45n3=1
Quarantine status in Europe	q45o1=1	q45o2=1	q45o3=1
Patent references	q45p1=1	q45p2=1	q45p3=1
Date of deposit in the collection	q45q1=1	q45q2=1	q45q3=1
Gene sequences	q45r1=1	q45r2=1	q45r3=1
Literature references	q45s1=1	q45s2=1	q45s3=1
Morphology/morphometrics	q45t1=1	q45t2=1	q45t3=1
Photos, images, pictures of the accession	q45u1=1	q45u2=1	q45u3=1

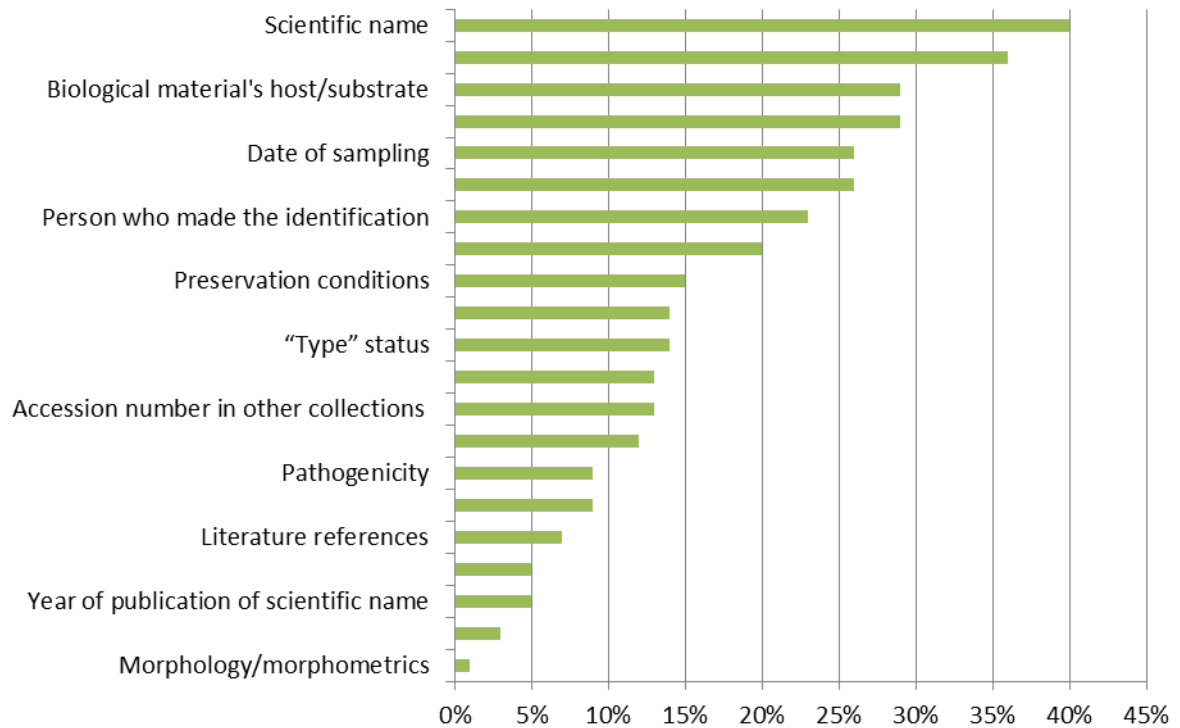
45A1-U1 ranking by percentages of criteria required for entry in the database



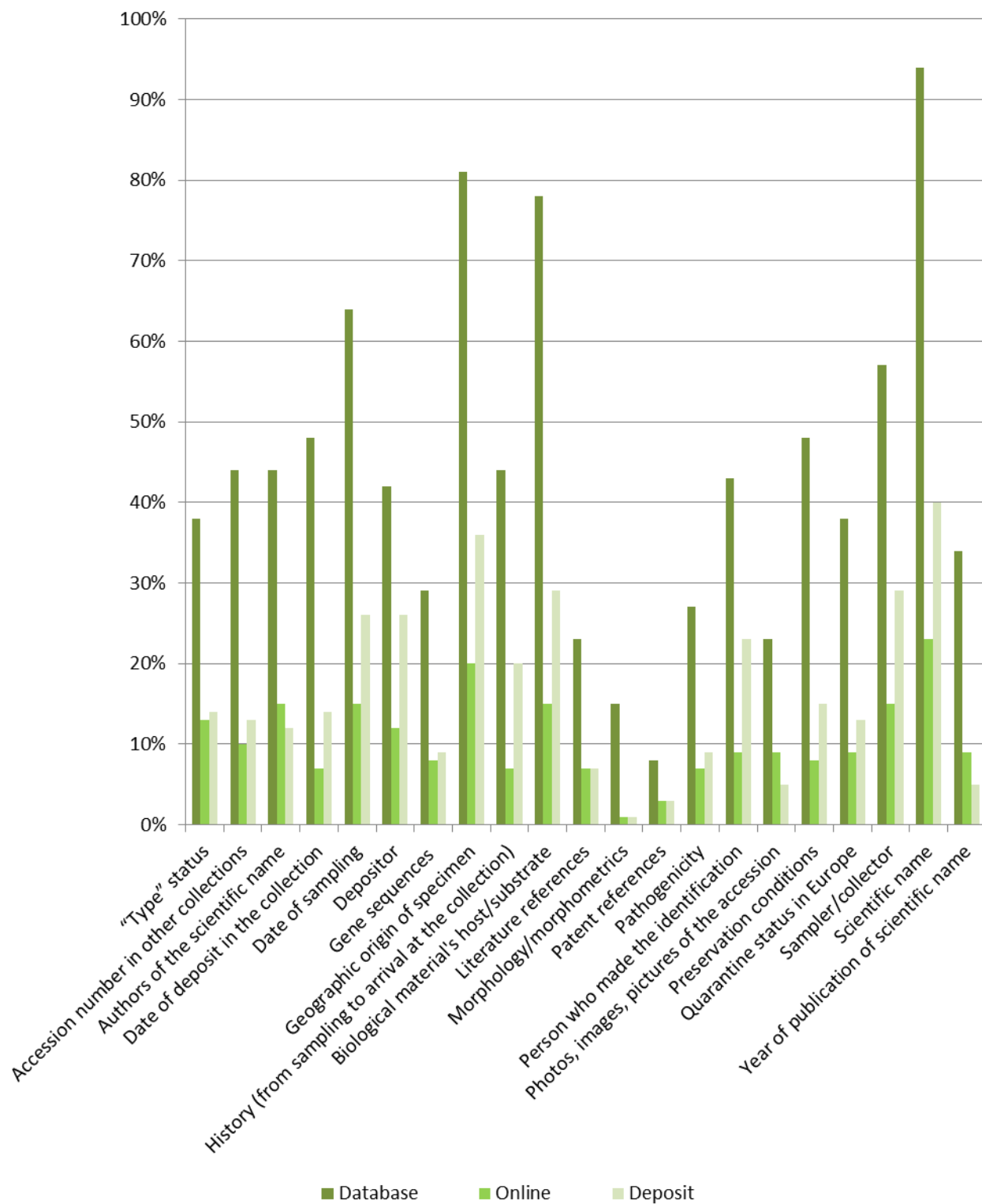
45A2-U2 Percentage of collections that demand each criterion in cases of displaying online



45A3-U3 Percentage of collections that demand each criterion to accept a deposit



4.5 popularity of criteria (% of respondents)

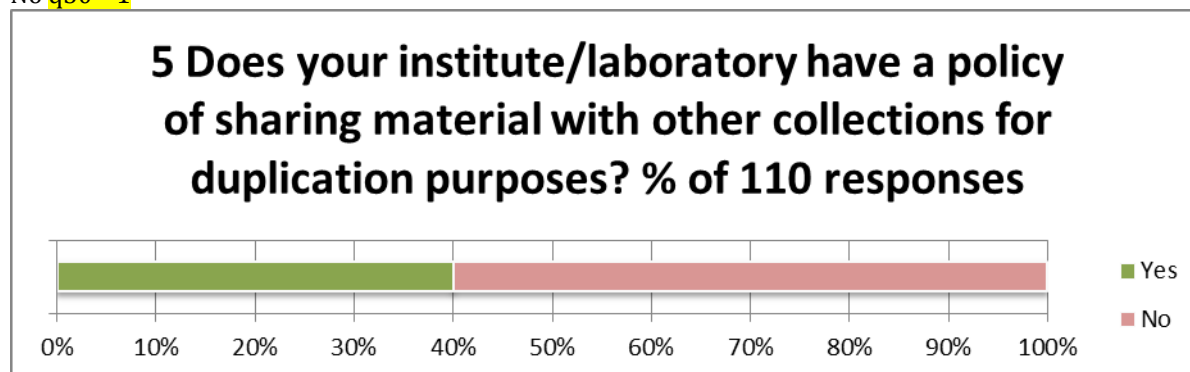


General questions on the collection

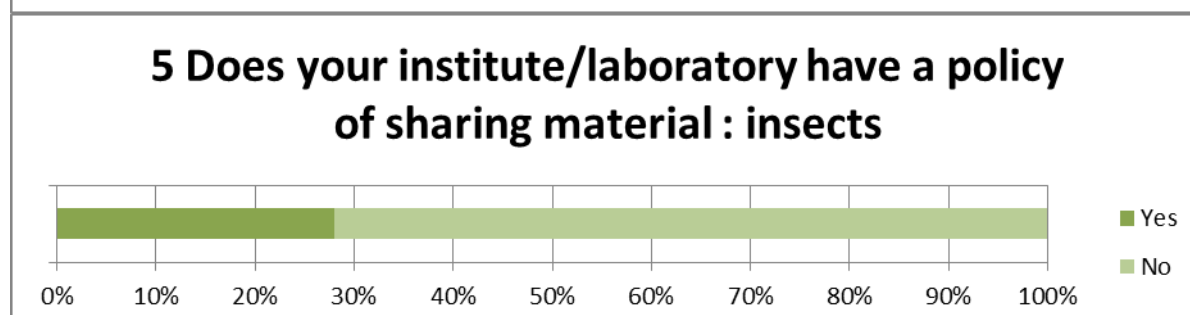
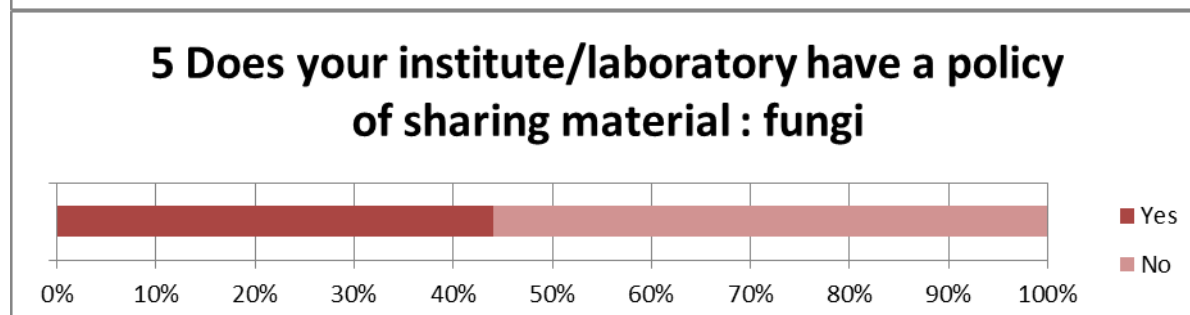
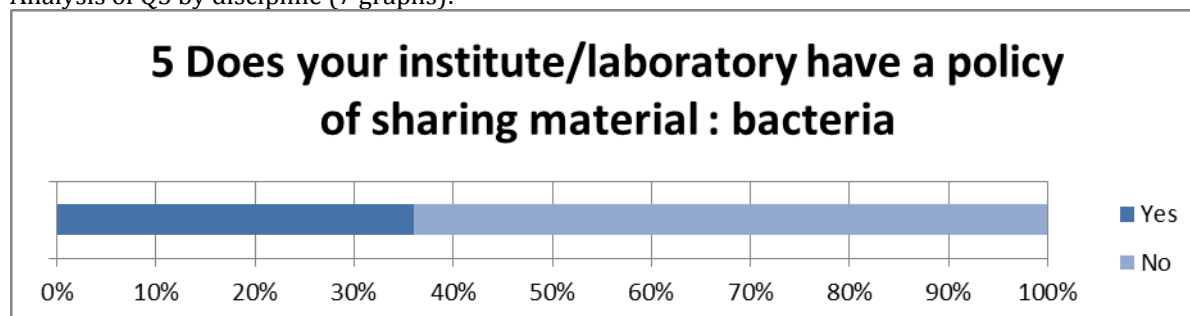
5. Does your institute/laboratory have a policy of sharing material with other collections for duplication purposes?

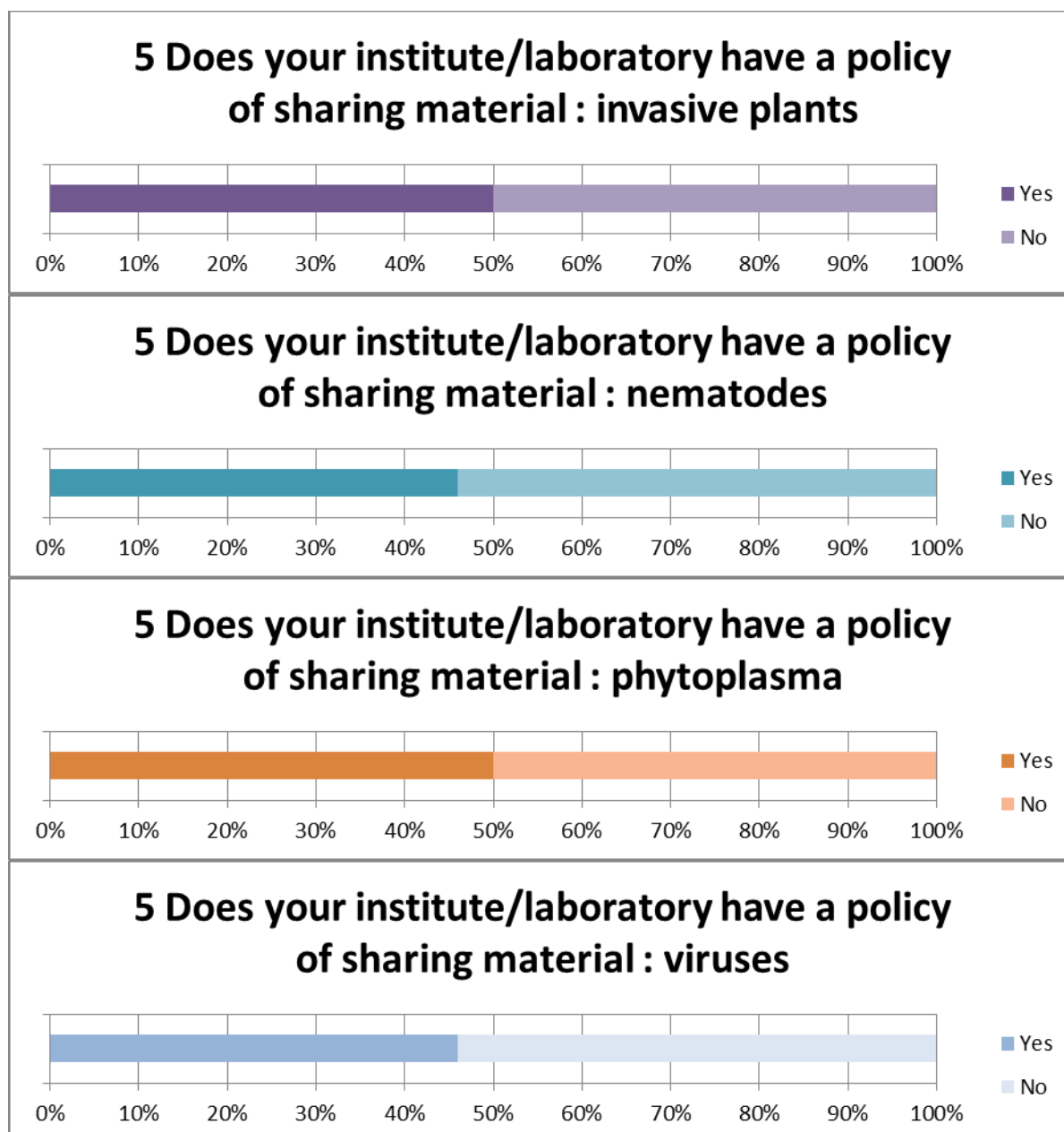
Yes q50=1

No q50=-1



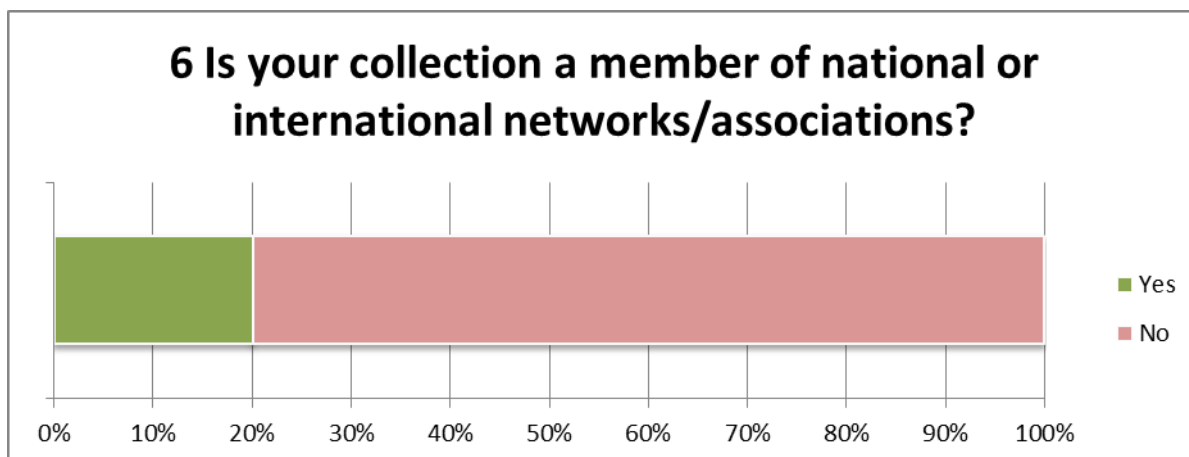
Analysis of Q5 by discipline (7 graphs):





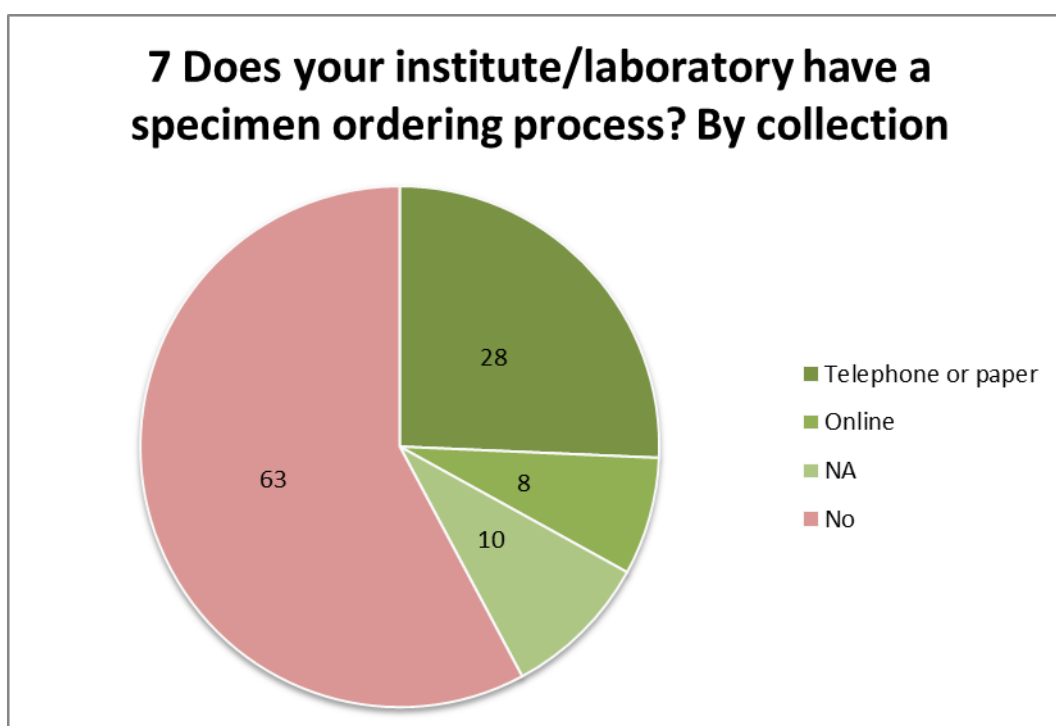
6. Is your collection a member of national /international networks/associations?

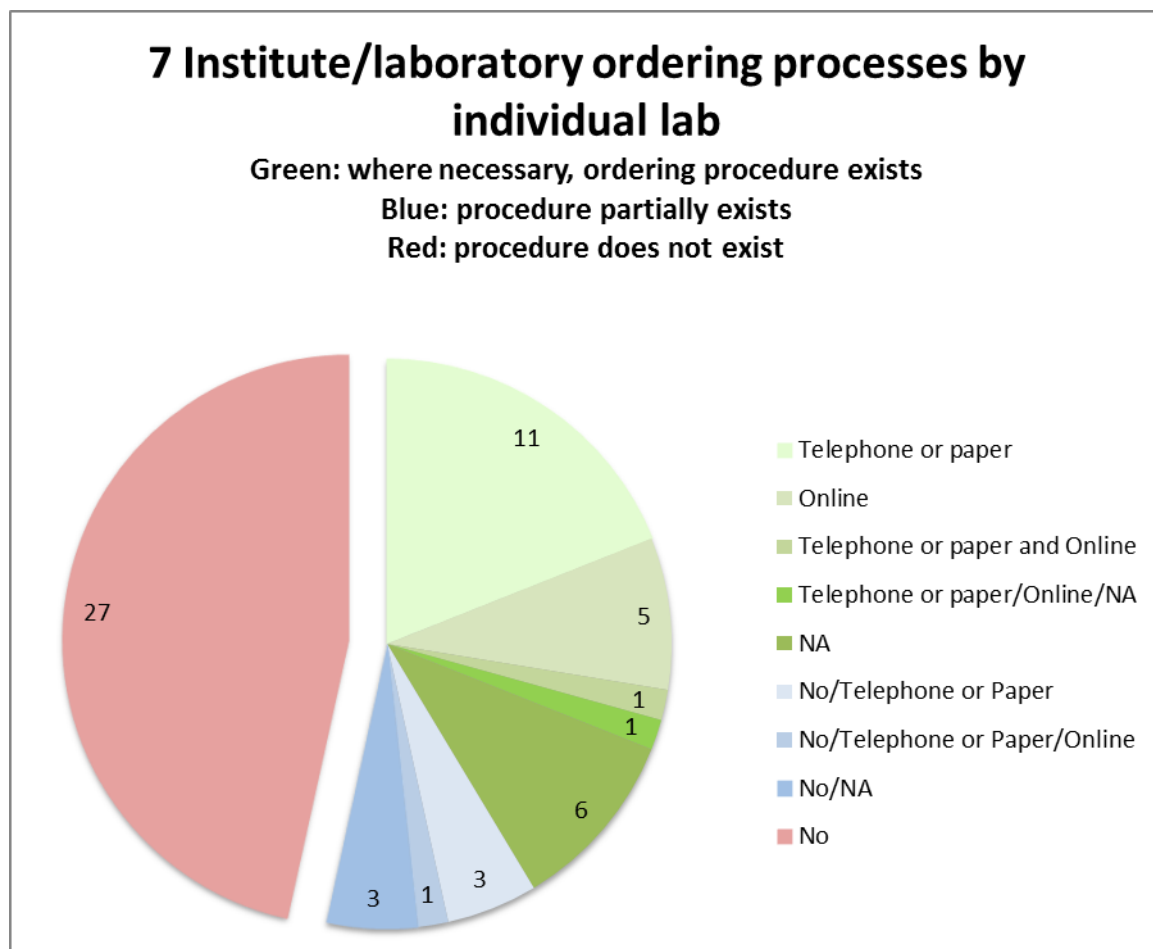
If Yes **q60=1**, please specify (avoid acronyms) **q60d** and, if possible, provide URL **q60u**.



7. Does your institute/laboratory have an ordering process?

No q70=-1
 By telephone or paper q70=1
 Online ordering form q70=2
 Not applicable q70=3

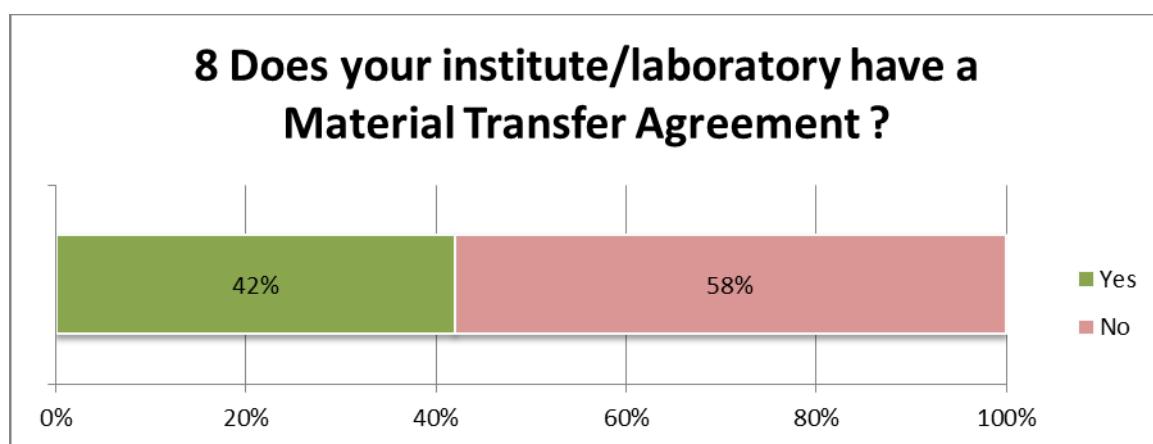




8. Does your institute/laboratory have a Material Transfer Agreement (MTA)?

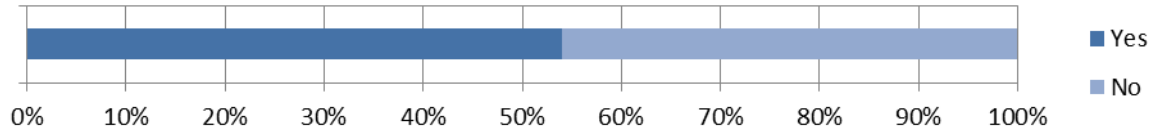
Yes q80=1

No q80=-1

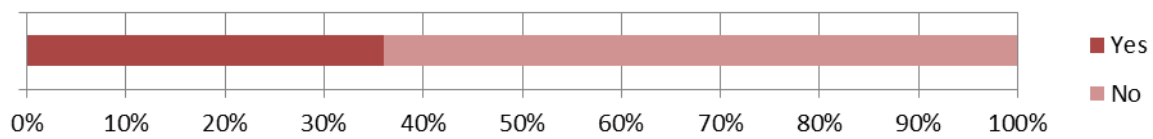


Analysis of Q8 by discipline (7 graphs):

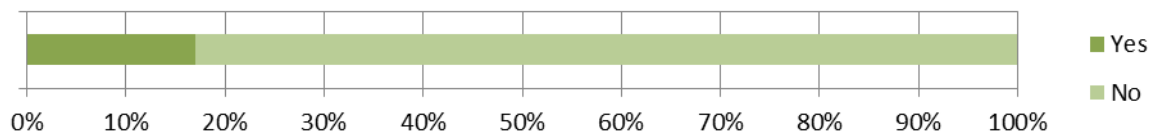
**8 Does your institute/laboratory have an MTA:
bacteria**



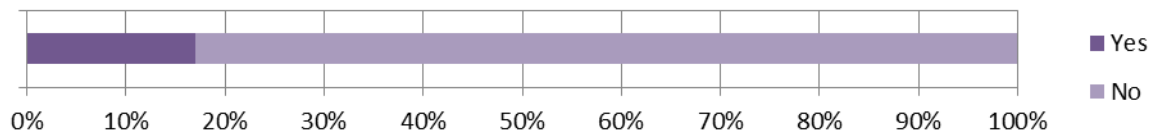
**8 Does your institute/laboratory have an MTA:
fungi**



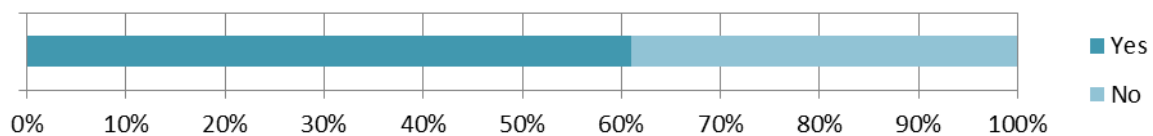
**8 Does your institute/laboratory have an MTA:
insects**



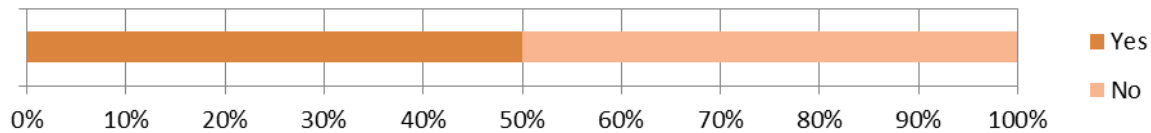
**8 Does your institute/laboratory have an MTA:
invasive plants**



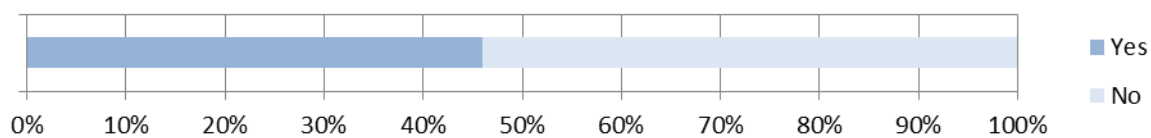
**8 Does your institute/laboratory have an MTA:
nematodes**



8 Does your institute/laboratory have an MTA: phytoplasma



8 Does your institute/laboratory have an MTA: viruses

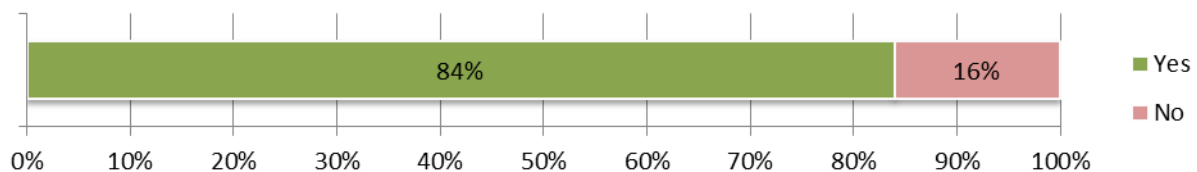


9. Are you aware of the standard EPPO PM 3/64(1) 'Intentional import of organisms that are plant pests or potential plant pests', in particular the appendix on confinement conditions?

Yes **q90=1**

No **q90=-1**

9 Are you aware of the standard EPPO PM3/64(1), in particular the appendix on confinement conditions?



Questions on Quality

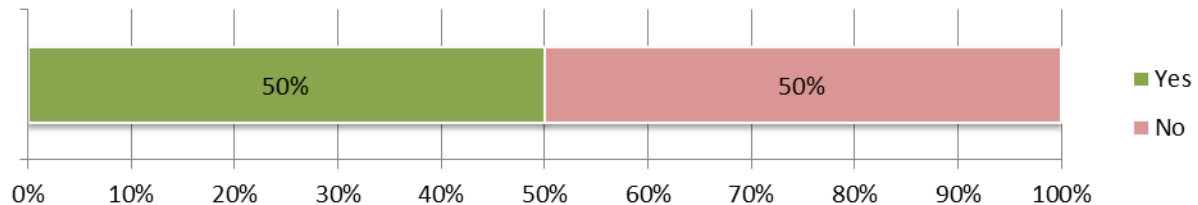
10. Does your institute/laboratory have a formalized quality system covering maintenance and management of the collection?

Yes **q100=1** No **q100=-1**

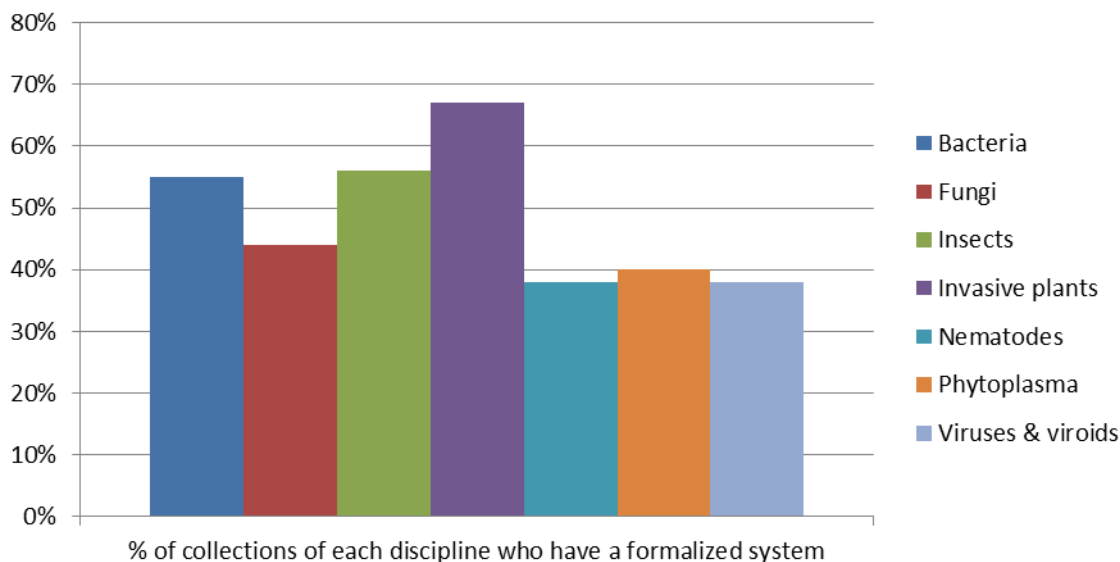
If none, go to 10.2

If Yes go to 10.1.

10 Does your institute/laboratory have a formalized quality system covering maintenance and management of the collection? % of 106 respondents



Formalized quality system by % of discipline



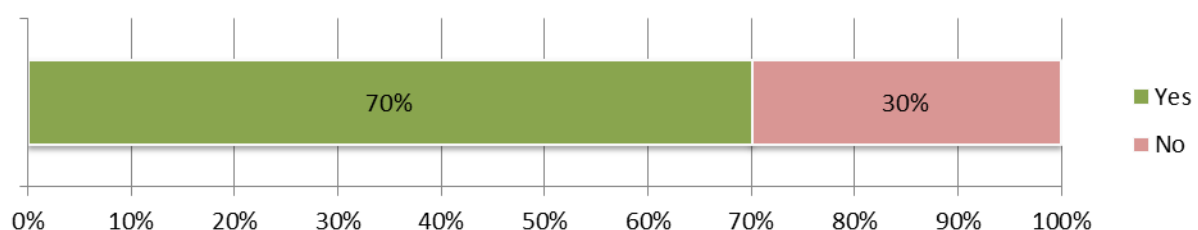
10.1. Is your Quality assurance system certified/accredited?

Yes **q101=1** No **q102=-1**

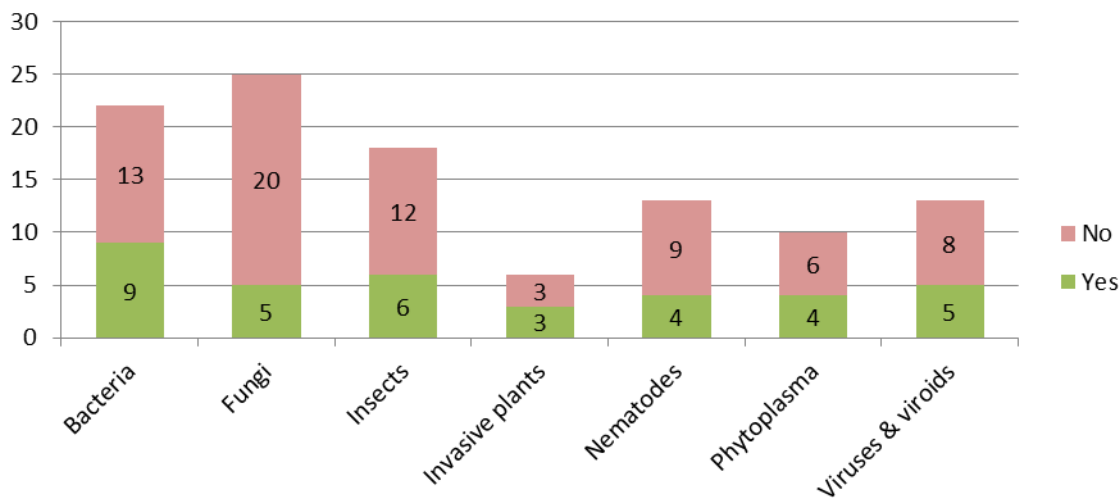
If No , go to question 10.2

If Yes go to question 10.3

10.1 Is your Quality Assurance system certified/accredited? % of the 53 respondents who have one



10.1 Quality system that is accredited/certified, by discipline



10.2. Do you apply any of the following aspects concerning maintenance and management of your collection(s):

Note: answer if appropriate, if not leave empty

Document control

q102=1

Subcontractors

q102=2

Services and supplies

q102=3

Complaints

q102=4

Control of non-conformities

q102=5

Corrective actions

q102=6

Preventive actions

q102=7

Quality and technical records

q102=8

Internal audits

q102=9

Management reviews

q102=10

Training of personnel

q102=11

Identification and handling of equipment used in the production and the identification of the material

q102=12

Monitoring performance of equipment used in the production and the identification of the material

q102=13

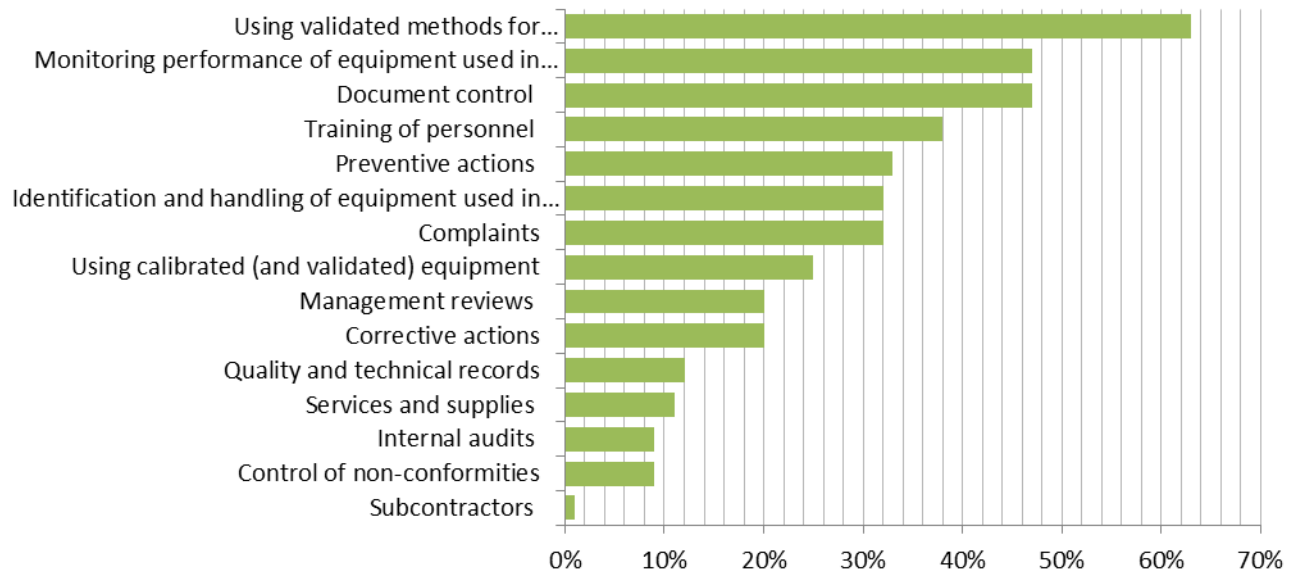
Using calibrated (and validated) equipment

q102=14

Using validated methods/published keys for identification/characterisation

q102=15

10.2 Maintenance and management aspects, as a percentage of 63 responses from those who do not have an accredited QA system



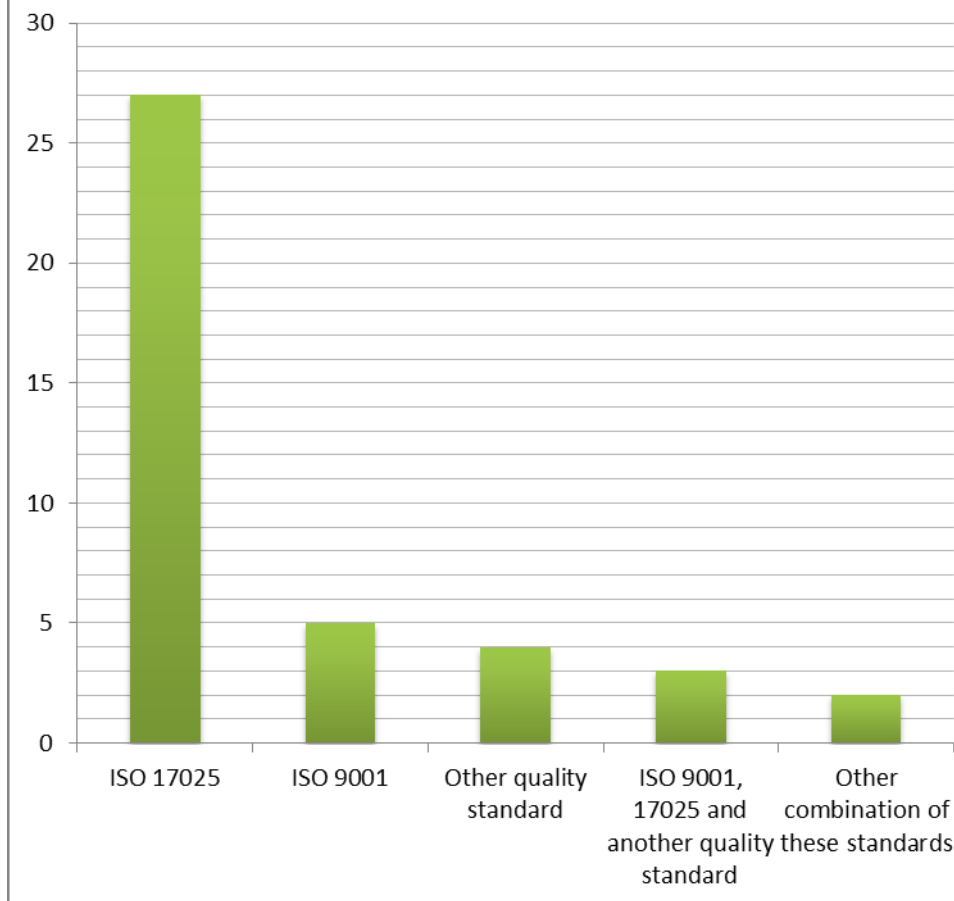
I am willing to provide more detailed information on our activities if contacted

q102=16

10.3. Does your quality system conform to:

ISO 9001	q103=1
ISO 34	q103=2
ISO 17025	q103=3
Other quality standard	q103=4 q103o

10.3 To what standard(s) does your quality system conform? (out of 38 who have an accredited system)



'Other' standards listed

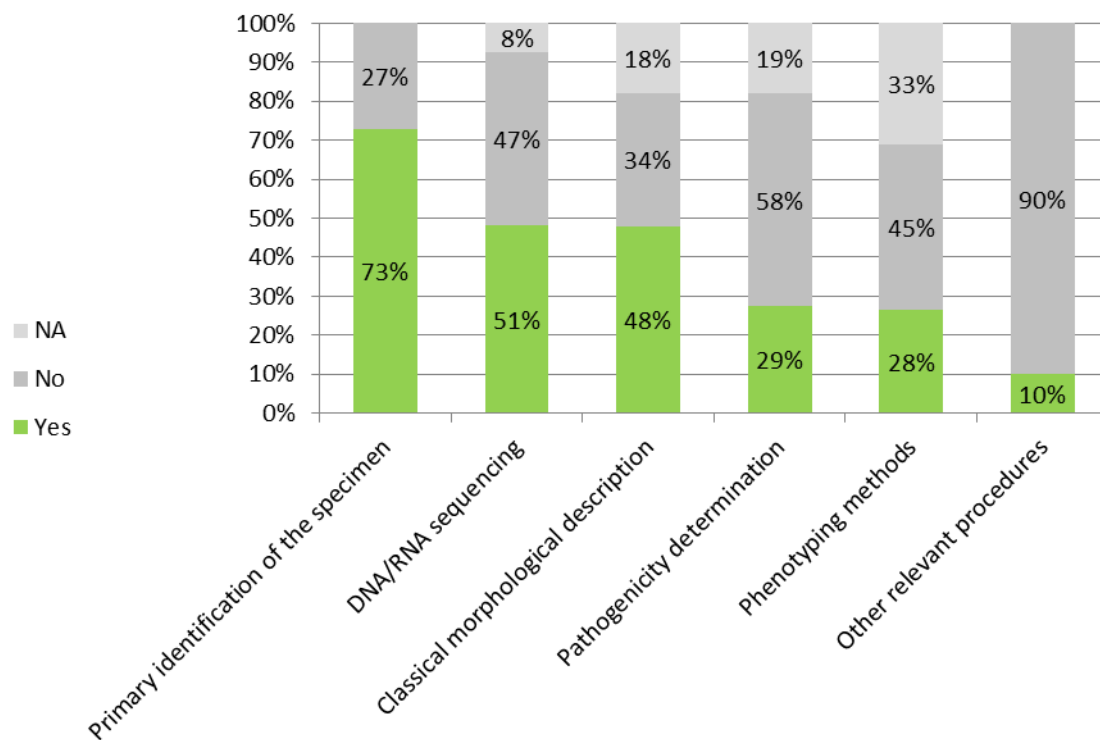
- 485:standard according to NPPO
- 485:Working procedures are defined with Quality Assurance Manual of the Laboratory of Forest Protection at Slovenian Forest Institute, which is surveyed by the Phytosanitary Administration of Republic Slovenia (audits in 2004 and 2009) and is prepared according to requirements of the Slovenian Legislation (Plant Health Act with subsidiary Acts), which are in accordance with the SIST EN ISO /IEC standards. The Laboratory of Forest Protection at SFI is also included in the EPPO and follows the recommendations and guidelines by EPPO.
- 485:see explanation at the other two collections at Laboratory of Forest Protection
- 499:NAPPO rules and regulation

11. Documented procedures and archived records:

11.1. Do you have documented procedures and archived records concerning characterization of specimens, including:

Feature	Yes	No	Other
Primary identification of the specimen	q111a=1	q111a=-1	
Classical morphological description?	q111b=1	q111b=-1	Not applicable q111b=-2
Phenotyping methods?	q111c=1	q111c=-1	Not applicable q111c=-2
DNA/RNA sequencing?	q111d=1	q111d=-1	Not applicable q111d=-2
Pathogenicity determination?	q111e=1	q111e=-1	Not applicable q111e=-2
Other relevant procedures:			Please describe briefly q111f

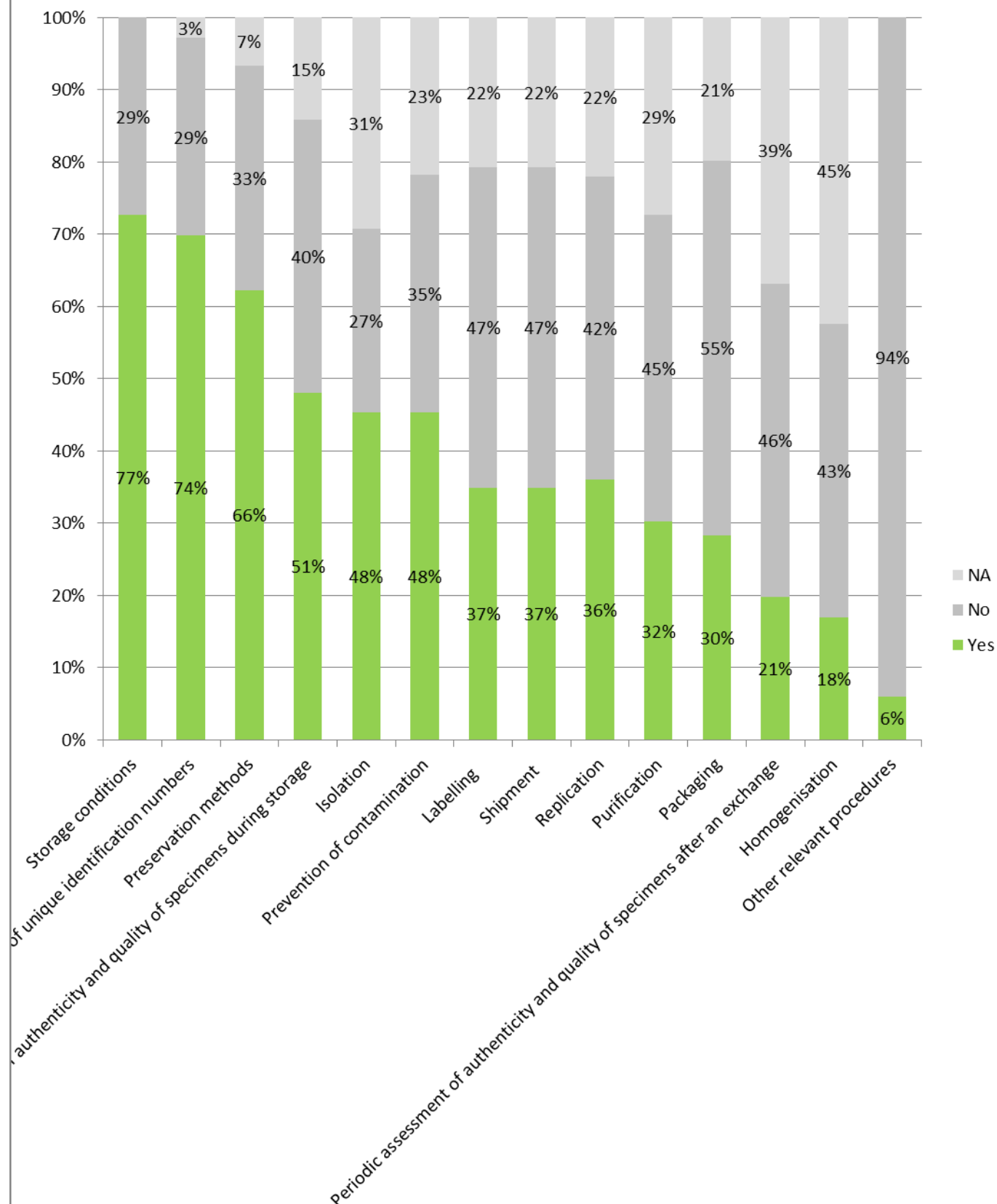
11.1 Procedures and records concerning characterisation of species



Feature	Yes	No	Other
Replication	q112a=1	q112a=-1	Not applicable q112a=-2
Purification	q112b=1	q112b=-1	Not applicable q112b=-2
Homogenisation	q112c=1	q112c=-1	Not applicable q112c=-2
Isolation	q112d=1	q112d=-1	Not applicable q112d=-2
Prevention of contamination	q112e=1	q112e=-1	Not applicable q112e=-2
Preservation	q112f=1	q112f=-1	Not applicable q112f=-2
Storage conditions	q112g=1	q112g=-1	Not applicable q112g=-2
Assignment of unique identification numbers	q112h=1	q112h=-1	
Labelling	q112i=1	q112i=-1	Not applicable q112i=-2

Packaging	q112j=1	q112j=-1	Not applicable q112j=-2
Shipment	q112k=1	q112k=-1	Not applicable q112k=-2
Periodic assessment of authenticity and quality of specimens during storage	q112l=1	q112l=-1	Not applicable q112l=-2
Periodic assessment of authenticity and quality of specimens after an exchange	q112m=1	q112m=-1	Not applicable q112m=-2
Other relevant procedures			Please specify q112n

11.1 Procedures and records in place concerning characterisation of species

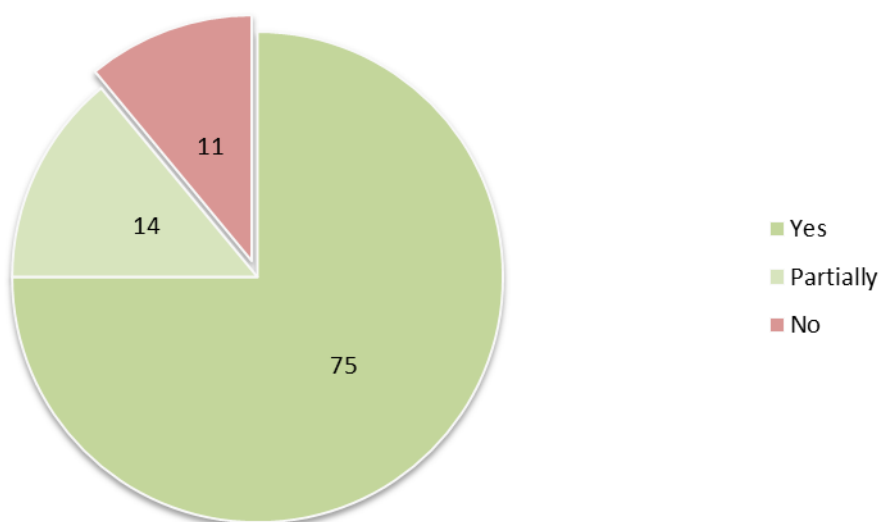


Identification and authentication of material

12. Is your collection of quarantine organisms generally characterized/ identified with a currently recognized method/ published procedure or generally agreed method?

Yes **q120=1** No **q120=-1** Partial **q120=-2**

12 Is your collection of quarantine organisms generally characterized/identified with a currently recognized method/published procedure or generally agreed method?

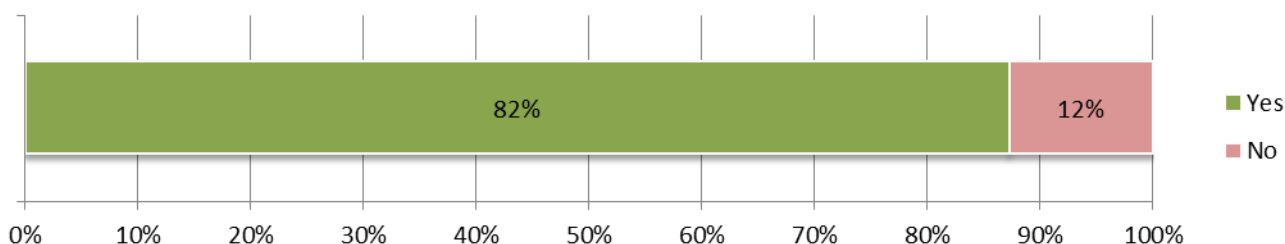


Out of these 11: 8 labs (17, 145, 227, 243, 245, 323, 533, 541)
4 Fungi collections, 2 Nematodes, 2 Viruses, and one each of Phytoplasma, Insects and Invasive plants.
Labs in red appeared more than once as having no method

12.1 Is the characterisation/identification performed by an expert?

Yes **q121=1** No **q121=-1**

12.1 Is the characterisation performed by an expert?



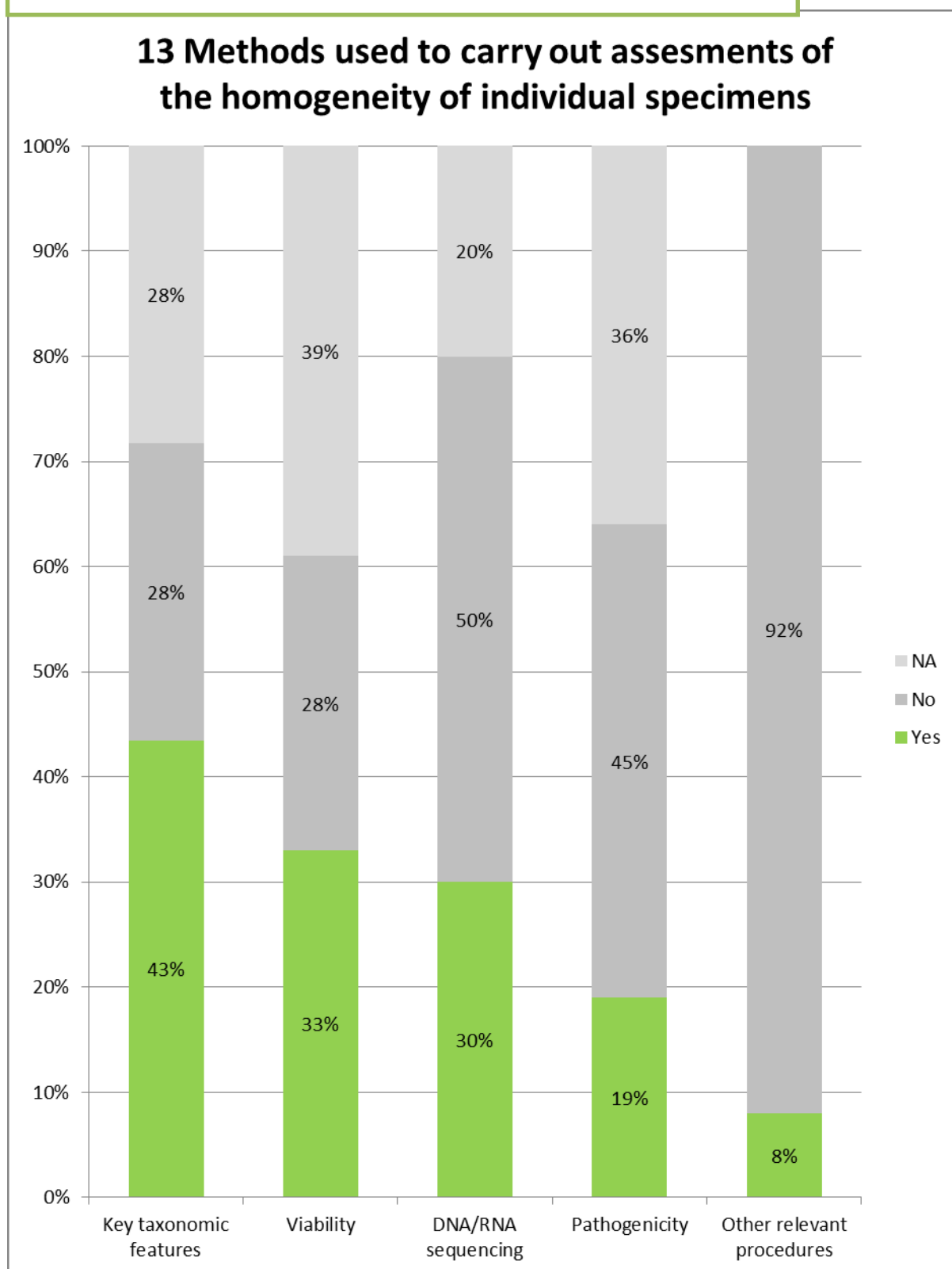
12.1 How did respondents describe their experts?



13. Do you carry out an assessment of the homogeneity of batches of individual specimens, including:

Feature	Yes	No	Other
Key taxonomic features (e.g. morphometry)	q130a=1	q130a=-1	Not applicable q130a=2-
Viability	q130b=1	q130b=-1	Not applicable q130b=2-
Pathogenicity	q130c=1	q130c=-1	Not applicable q130c=2-
DNA/RNA sequencing	q130d=1	q130d=-1	Not applicable q130d=2-
Other relevant procedures, please specify			q130e

NB: In Q11, 37% of respondents said they did not have a homogenisation procedure



14. Do you carry out an assessment of the stability /authenticity of specimens:

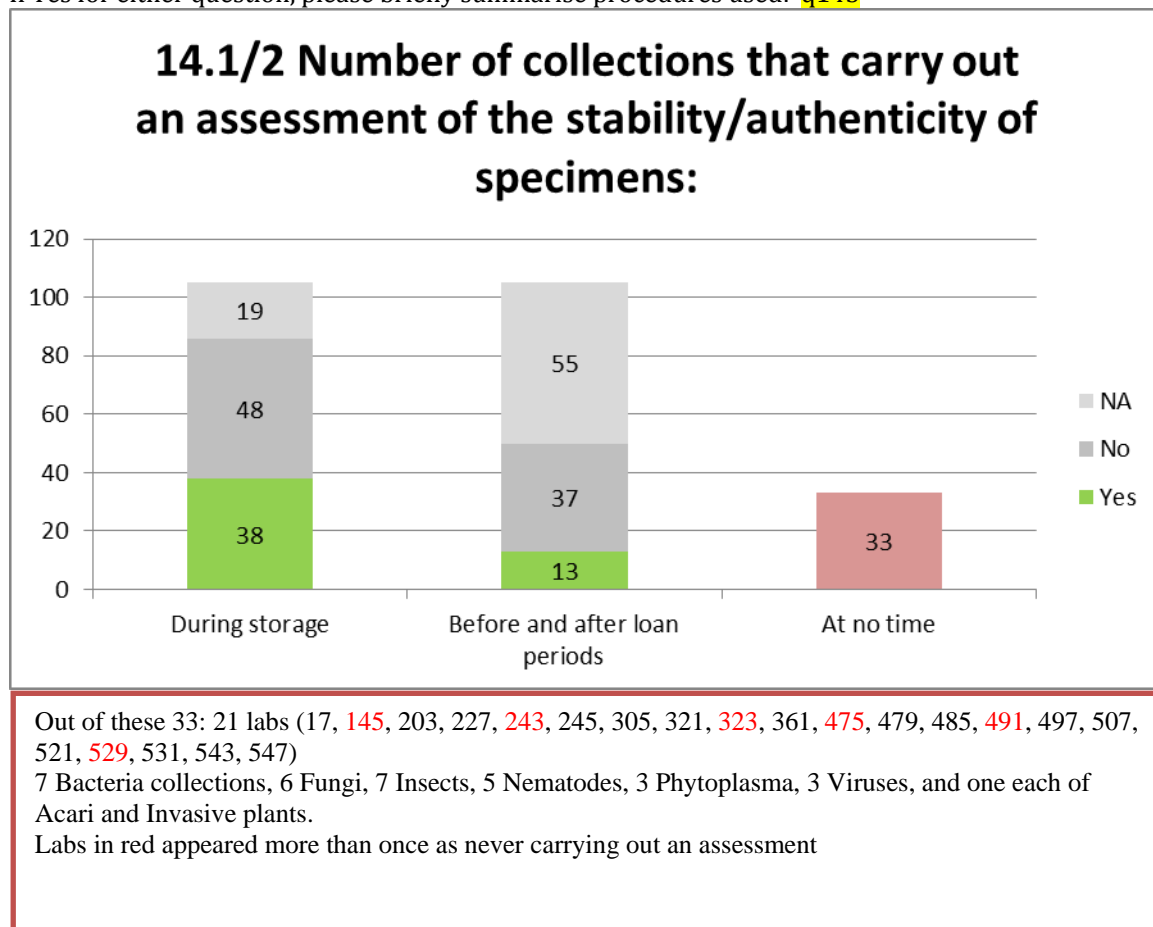
14.1. During storage?

Yes **q141=1** No **q141=-1** Not applicable **q141=-2**

14.2. Before and after loan periods?

Yes **q142=1** No **q142=-1** Not applicable **q142=-2**

If Yes for either question, please briefly summarise procedures used: q143

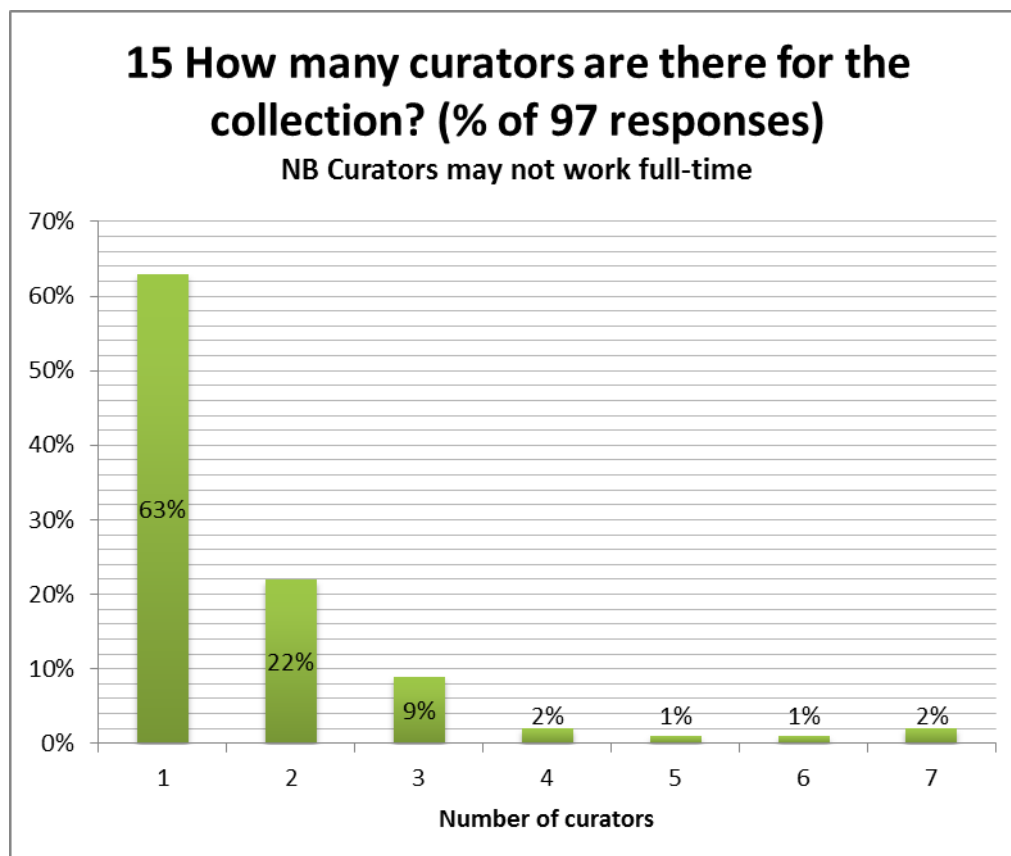


Sustainability

15. What is the number of curators for the collection?

Number of curator(s) q150

Average curators: 163c's/97 answers=1.680



16. How much full time equivalent is dedicated to the collection per year?

Full time equivalent **q160**

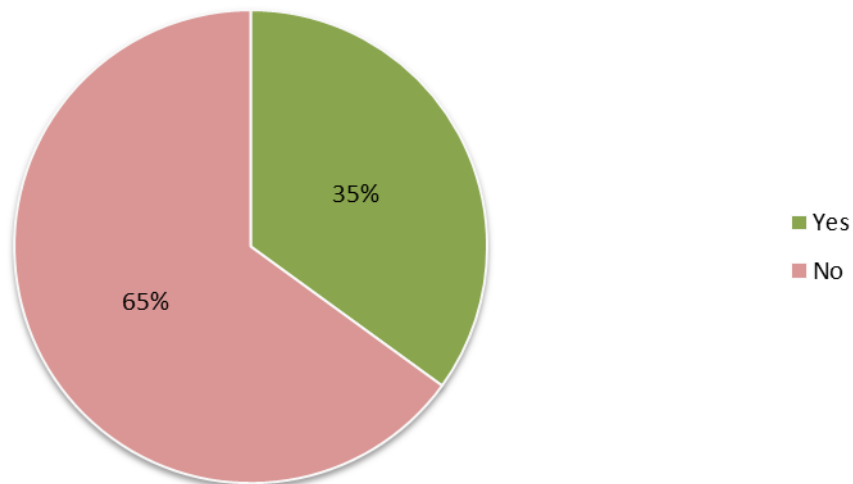
Average annual full-time equivalent spent on each collection was 0.51 years

Total annual full-time equivalent spent on all 110 collections was 56.86 years

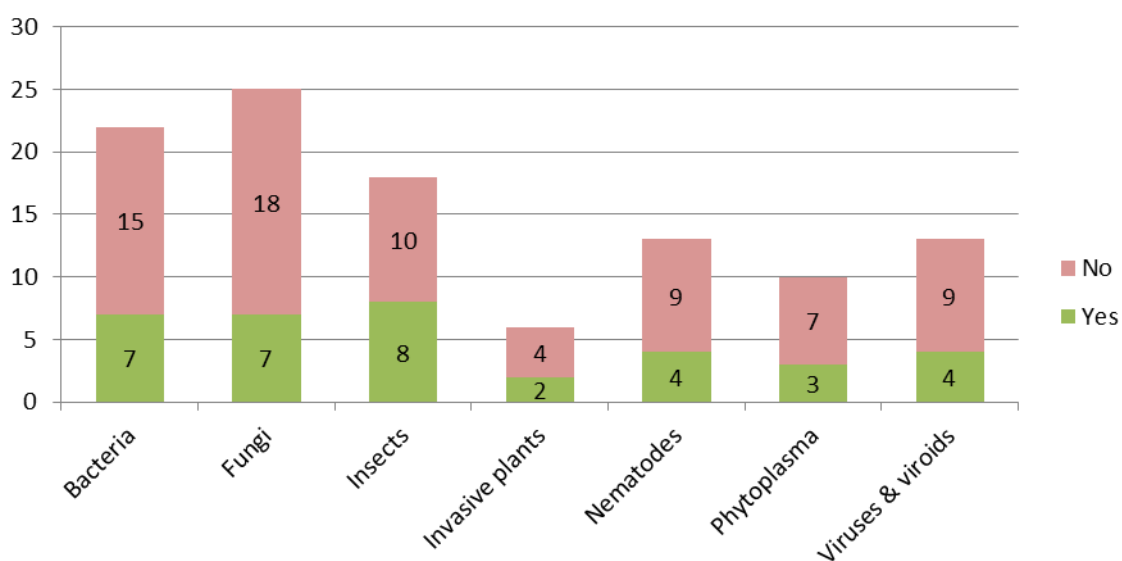
17. Do you have an annually dedicated budget for maintaining the collection?

Yes **q170=1** No **q170=-1**

17 Do you have an annually dedicated budget for maintaining the collection?



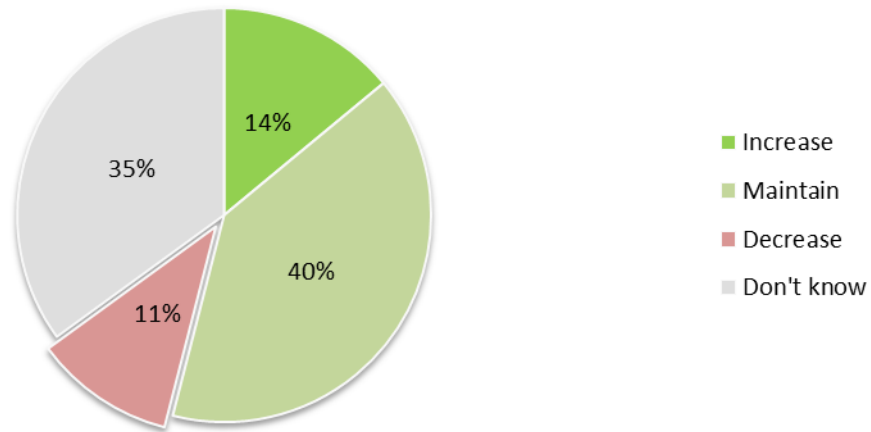
17 Annually dedicated budget by discipline



18. What are your expectations with regard to the evolution of funding for the collection for the coming five years?

Increase	q180=4
Maintain	q180=3
Decrease	q180=2
Don't know	q180=1

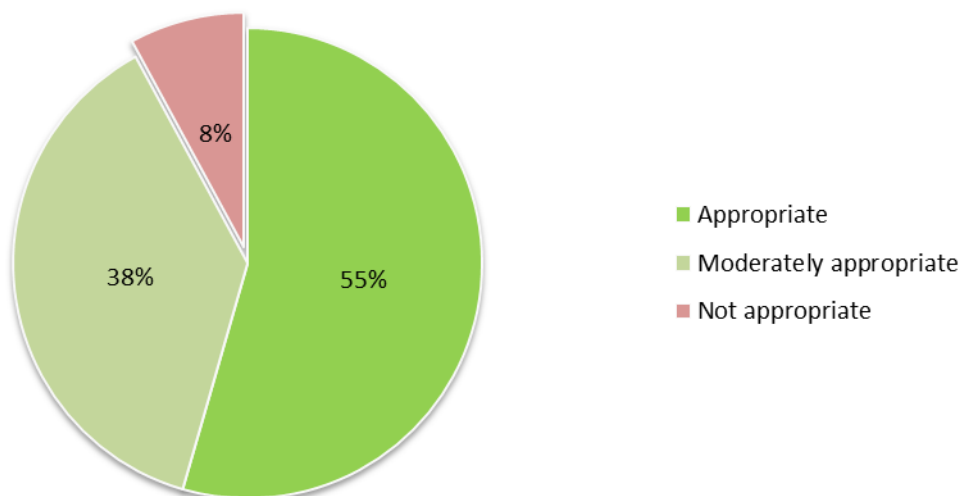
18 What are your expectations with regard to the collection's funding's evolution over the coming five years?



19. How appropriate is the current infrastructure (buildings and equipment)?

Appropriate q190=3
 Moderately appropriate q190=2
 Not appropriate q190=1

19 How appropriate is the current infrastructure to long term conservation of material?



Other services provided by your laboratory/institute

20. Do you offer identification services or tools (e.g. online identification tools)?

None

Identification tools only

Identification service only

Identification service and tools

Comment

q200=1

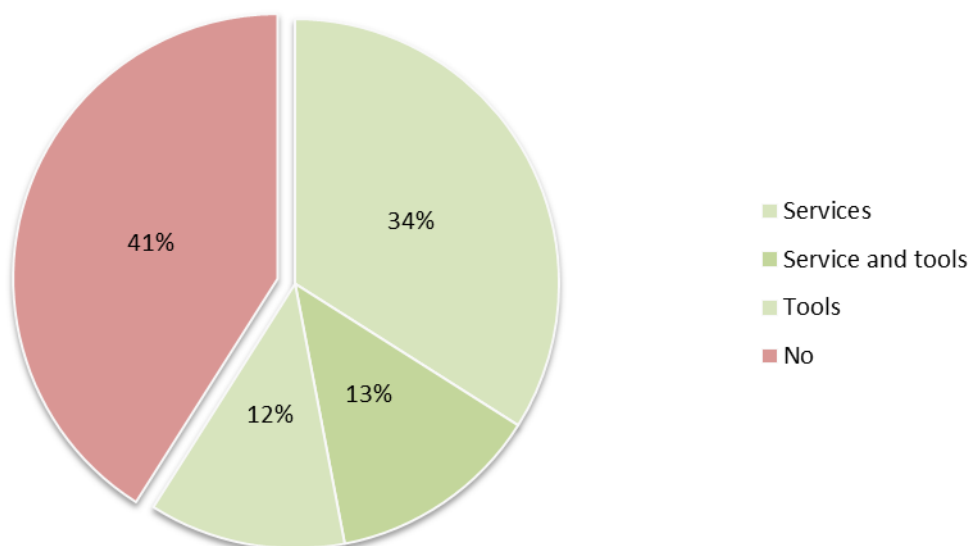
q200=2

q200=3

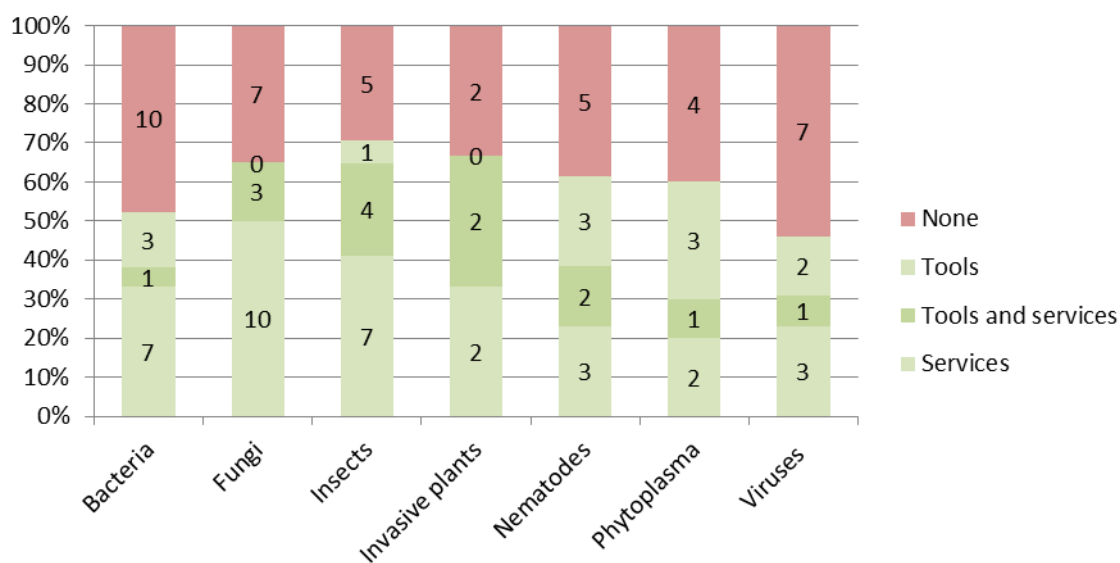
q200=4

q20a

20 Do you offer identification services or tools ?



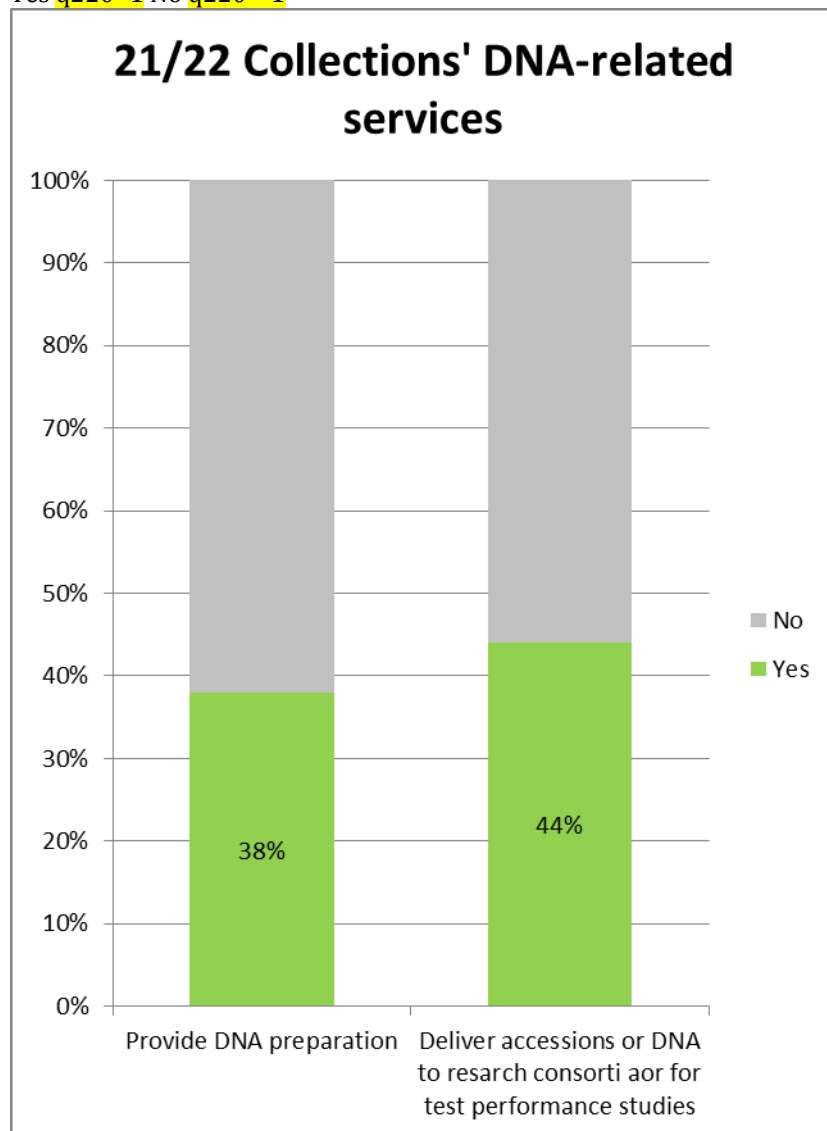
Identification services and tools by discipline



21. Do you provide DNA preparation from the specimens in your collection(s)?

22. Do you deliver accessions or DNA to research consortia or for test performance studies?

Yes **q220=1** No **q220=-1**

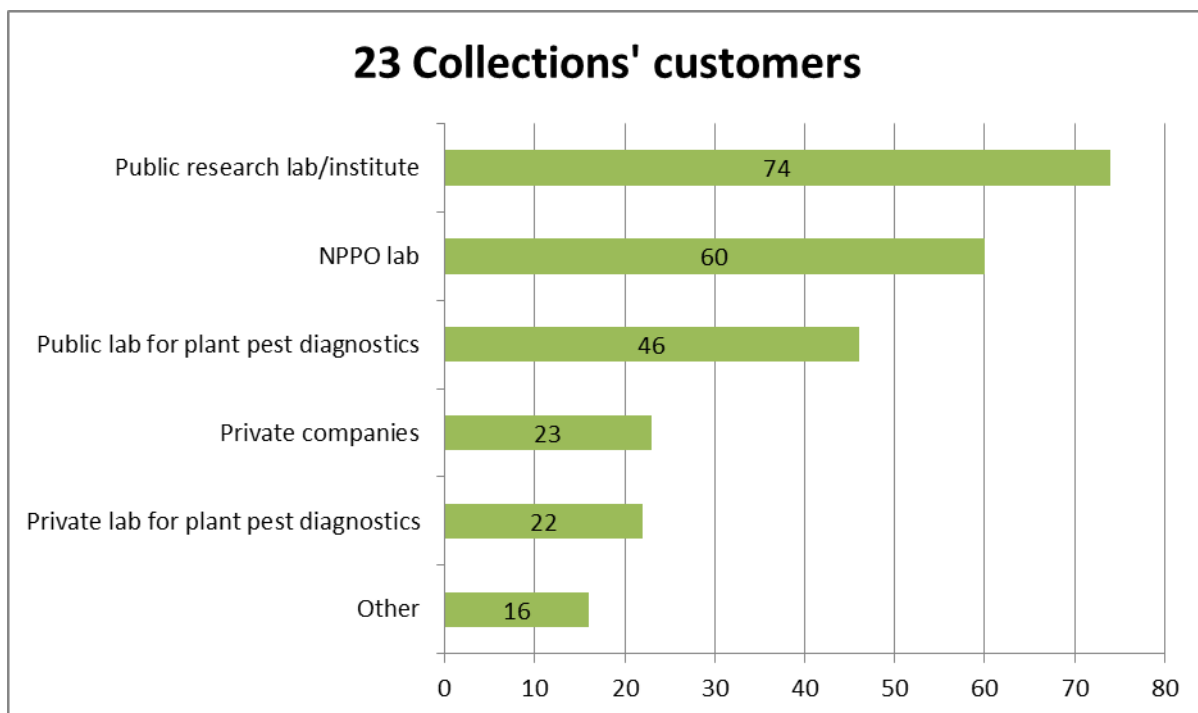


About your customers

23. Who are the customers for your collection?

Private company
 Public research laboratory/institute
 Laboratory from the National Plant Protection Organisation
 Public laboratory for plant pest diagnostic
 Private laboratory for plant pest diagnostic
 Other (please specify)

q230=1
q230=2
q230=3
q230=4
q230=5
q230=6 & q230=7



24. What are your customers most interested in?

Living material

q240=1

Dead material

q240=2

DNA/RNA

q240=3

Other (please specify)

q240=4 q240o

Material	Number of collections (out of 104)	Answer as a %	% of existing collections that contain each material (Q4.4)	'Other'
Living material	65	47%	70%	
Dead material	42	31%	55%	
DNA/RNA	26	19%	50%	
Other	4			<ul style="list-style-type: none"> – The materials for which samples are free – Database access – Tests of samples