

27th Annual Meeting

of the National Reference Laboratories for Avian Influenza
and Newcastle Disease of European Union Member States



Virtual meeting
6-7th October 2021

MEMBER STATE (& THIRD COUNTRIES) REPORTS FOR AVIAN INFLUENZA 2020

**Based on responses to the questionnaire
received**

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EURL (IZSVe)

● Questionnaire 2020 - Response rate

- Invited Laboratories: 37
- Responses received: 28/37 (75,6%) 2019 (96.7%)
 - EU Laboratories 23/27 (85,2%) 2019 (96.4%)
 - Non-EU laboratories 5/10 (50%) 2019 100%

● Responding laboratories

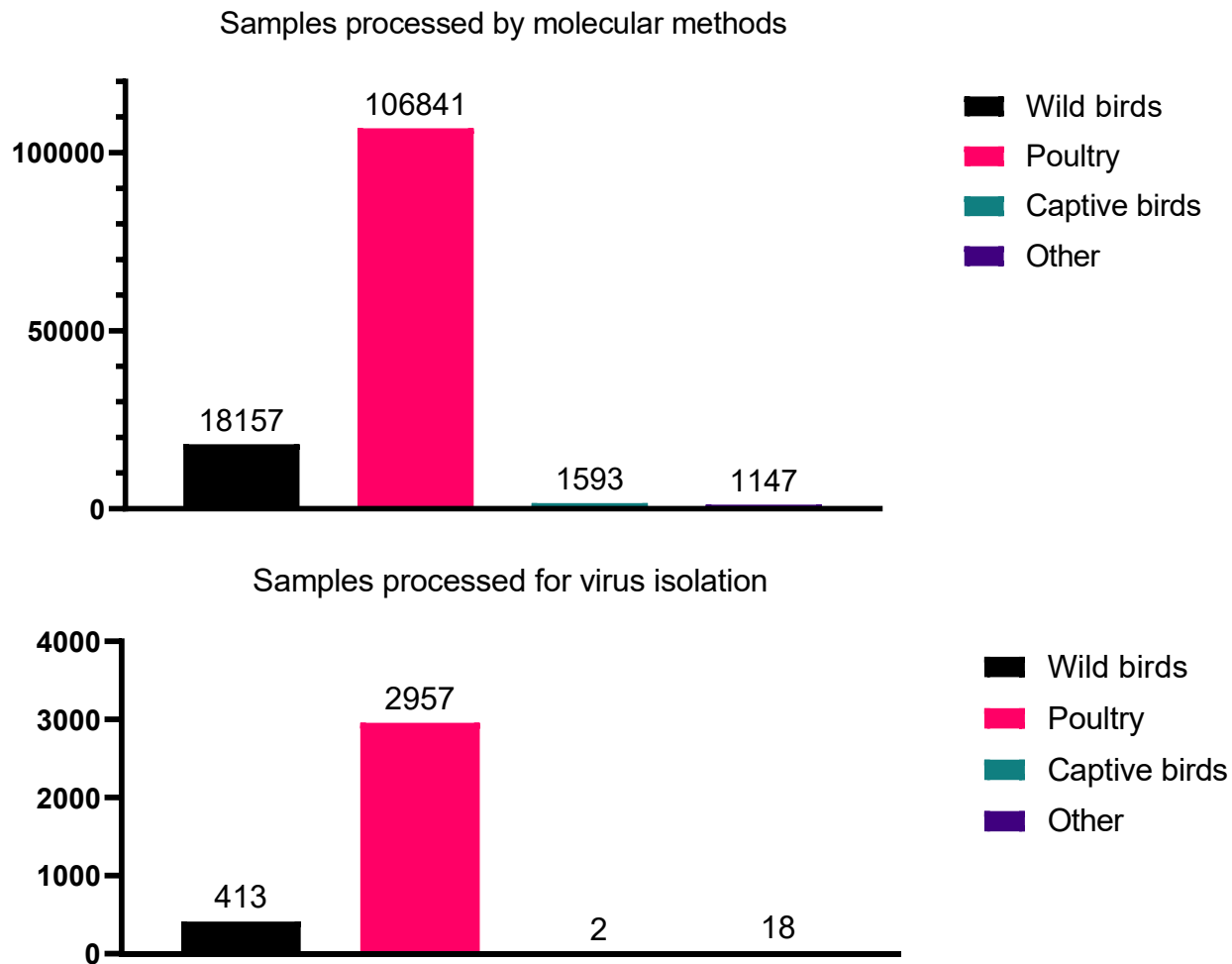
- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Republic of Ireland
- Italy
- Latvia
- Luxembourg
- *Macedonia*
- *Northern Ireland*
- The Netherlands
- *Norway*
- Poland
- *Russia*
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- *Switzerland*

Responding laboratories with no avian influenza viruses isolated or detected

- Greece
- Latvia
- Luxembourg
- Macedonia
- Switzerland

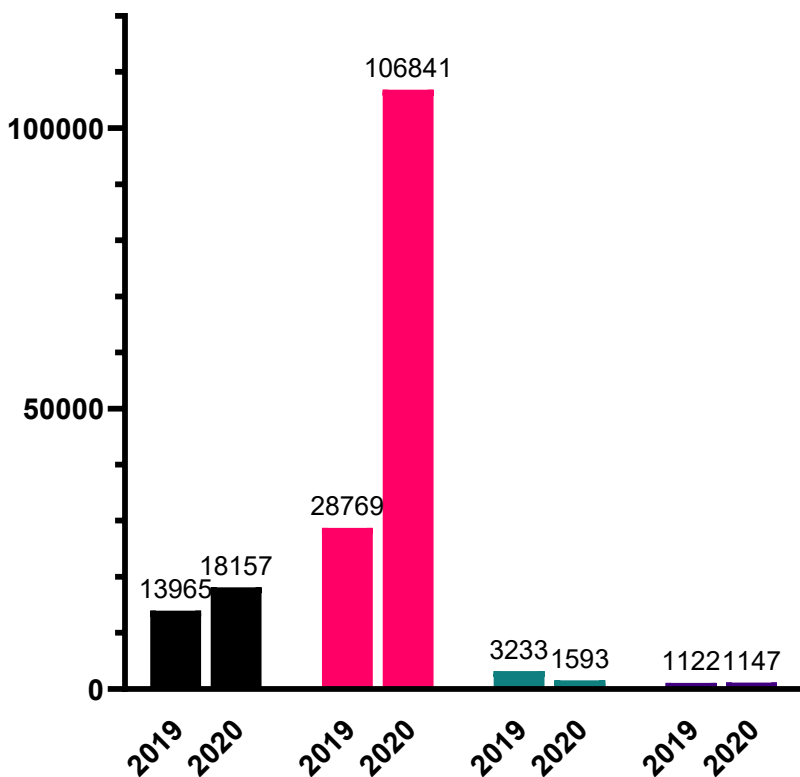
2020 vs 2019 vs 2018 vs 2017:
5 vs 11 vs 10 vs 8

AI 1.1 How many samples from poultry or wild birds were processed by molecular methods (RT-PCR or rRT-PCR) or virus isolation methods?

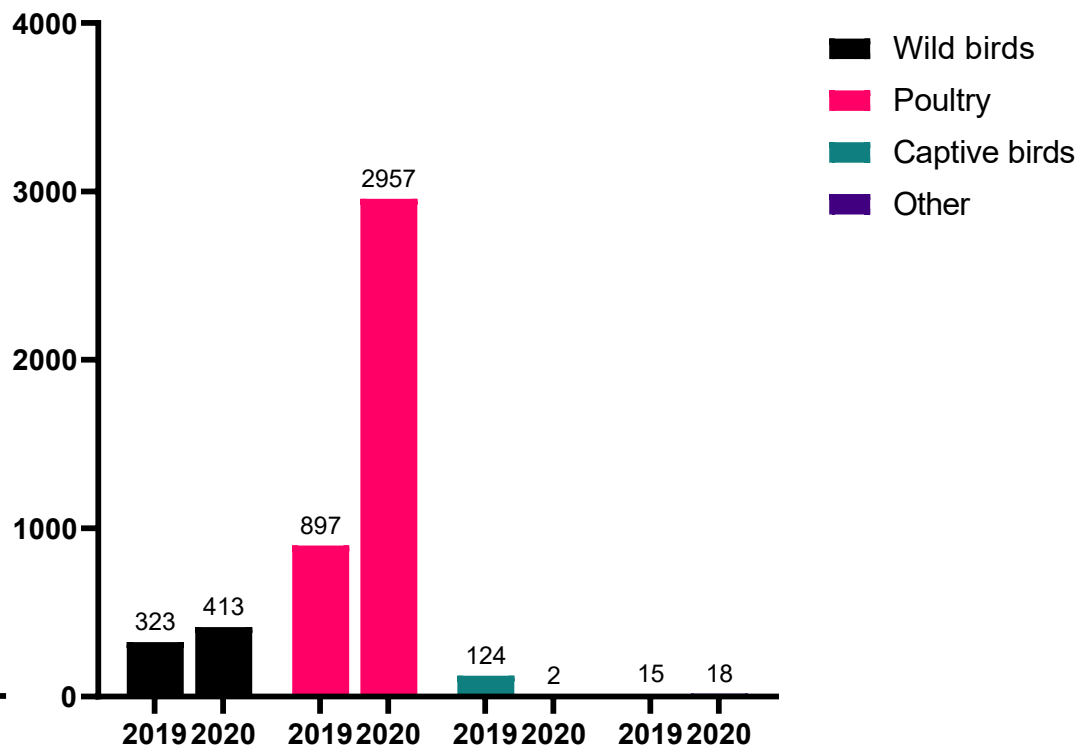


AI 1.1 How many samples from poultry or wild birds were processed by molecular methods (RT-PCR or rRT-PCR) or virus isolation methods?

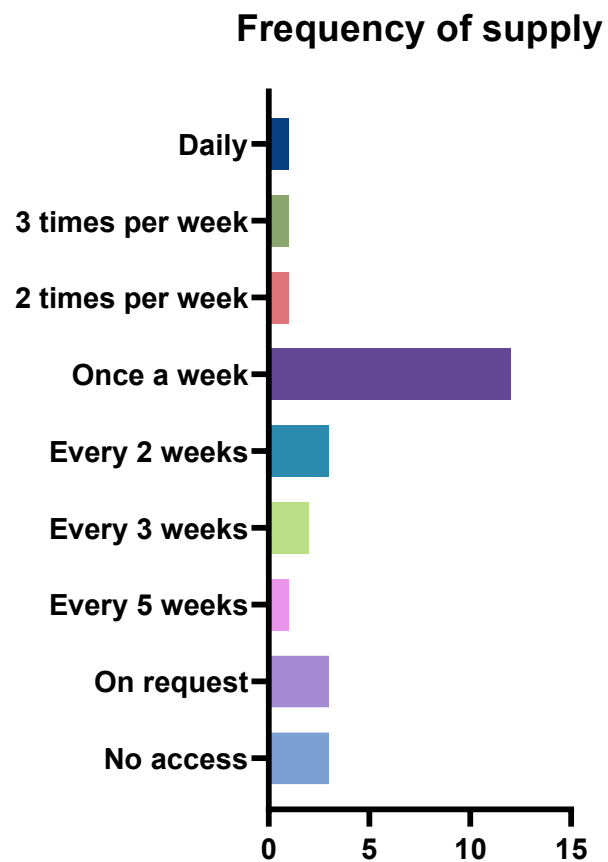
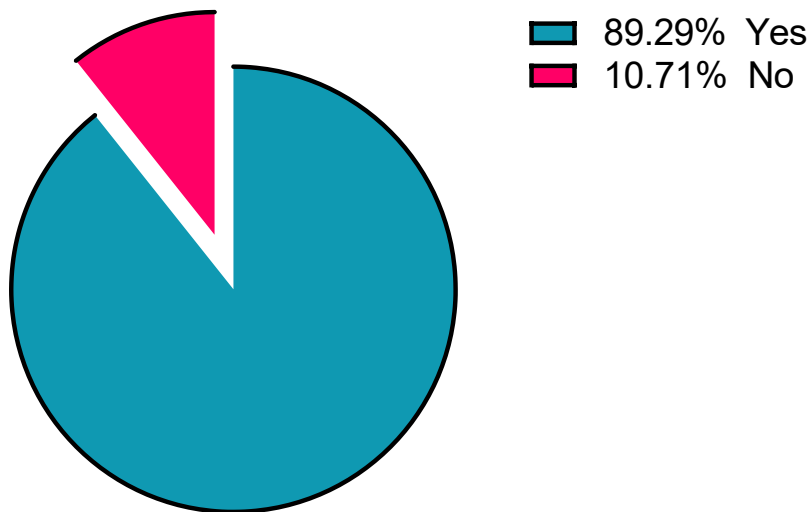
Samples processed by molecular methods



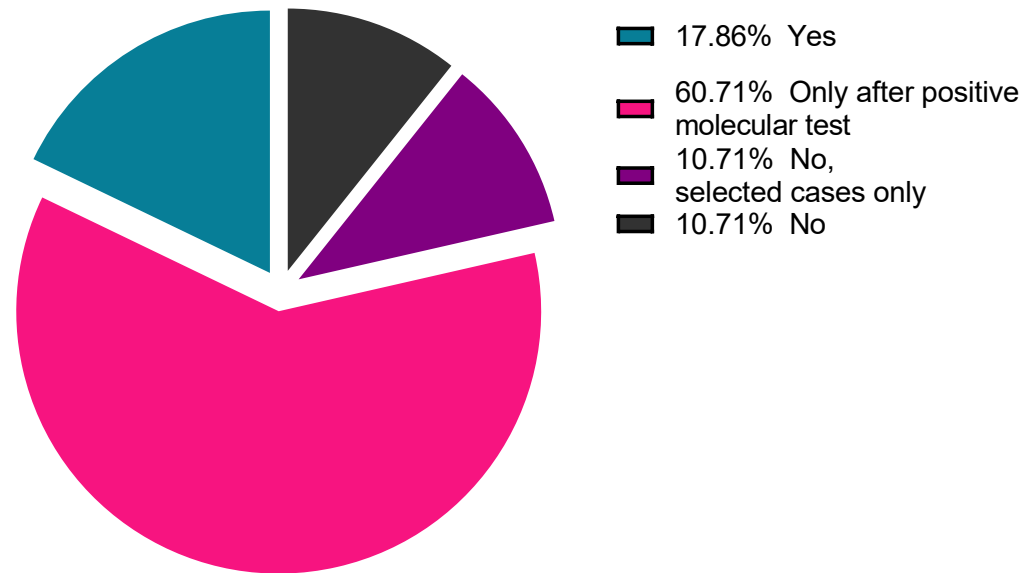
Samples processed for virus isolation



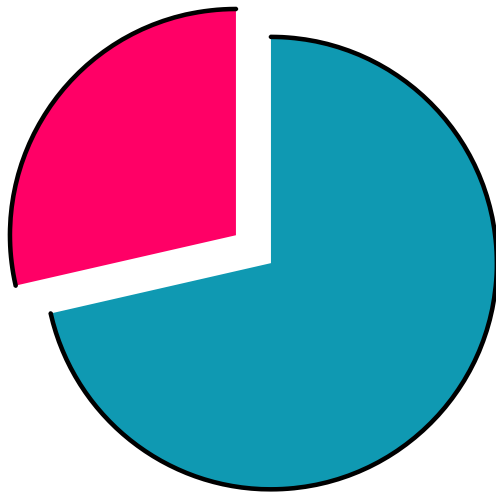
AI 1.2 Do you have access to either embryonated SPF or SAN fowls' eggs?



AI 1.3 Do you routinely inoculate eggs with samples from disease suspicions in poultry in parallel with molecular testing or after positive molecular tests?

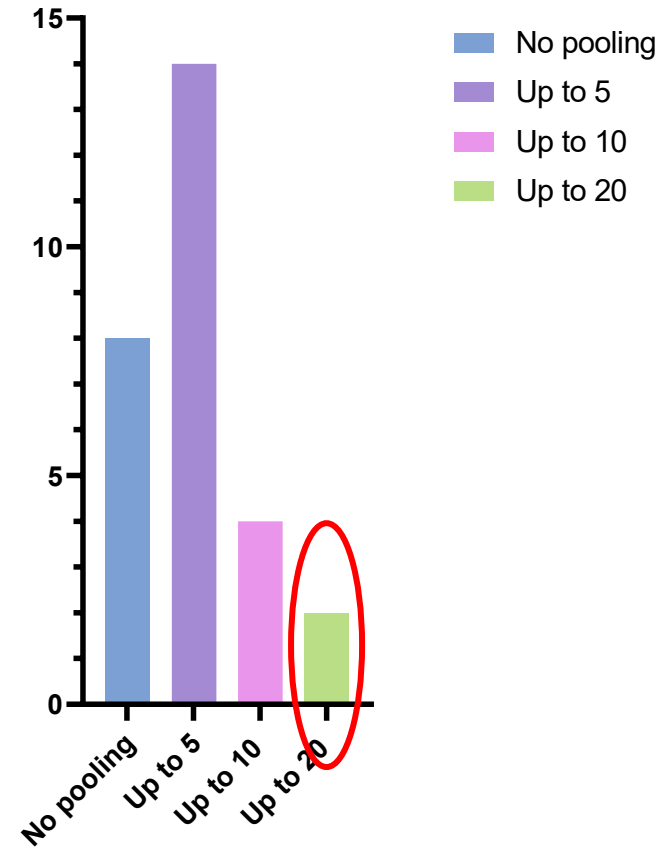


AI 1.4 Do you use swab pooling? If yes, please indicate how many samples are pooled into a single pool for testing.



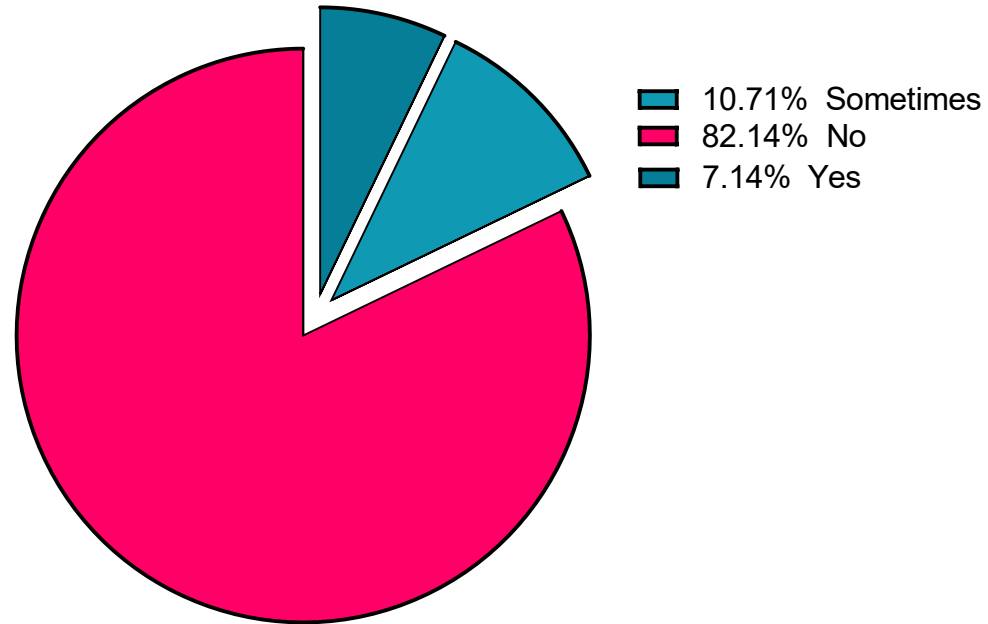
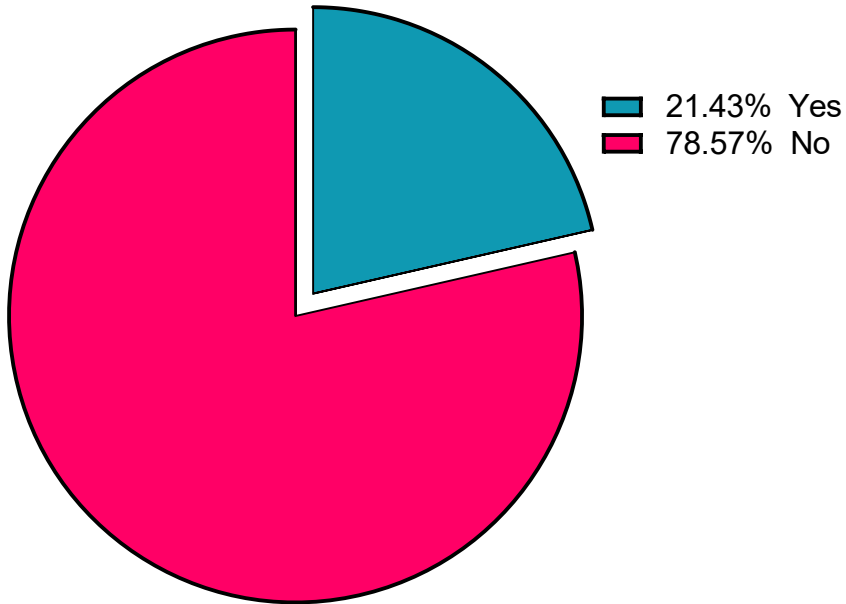
71.43% Yes
28.57% No

Number of pooled swabs

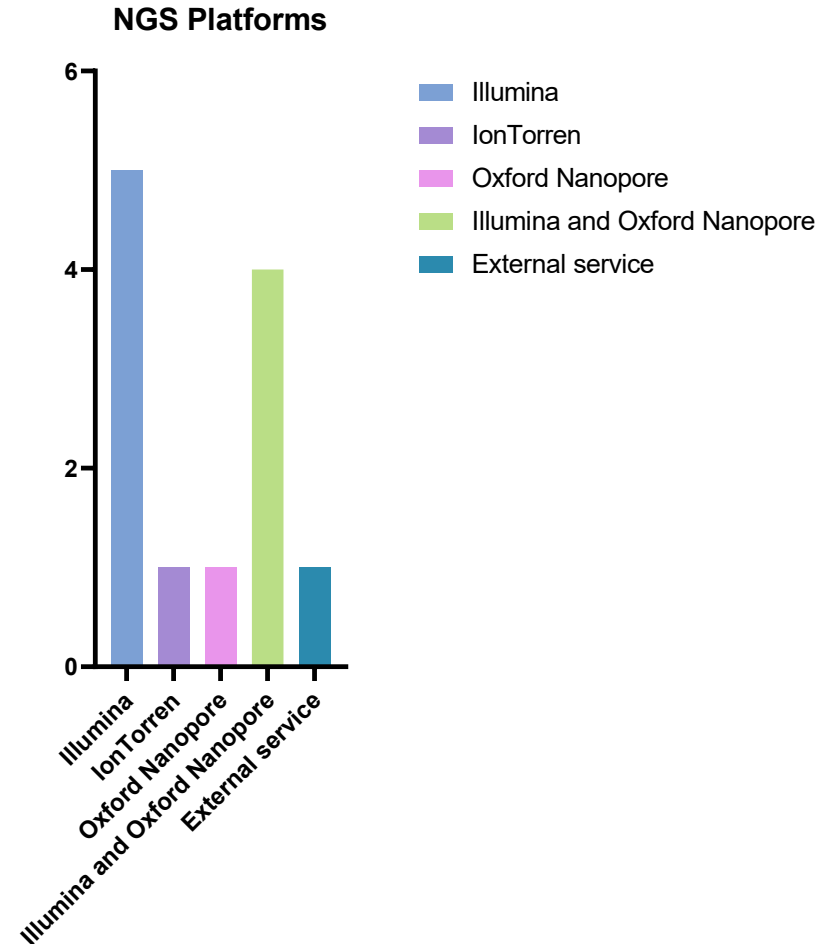
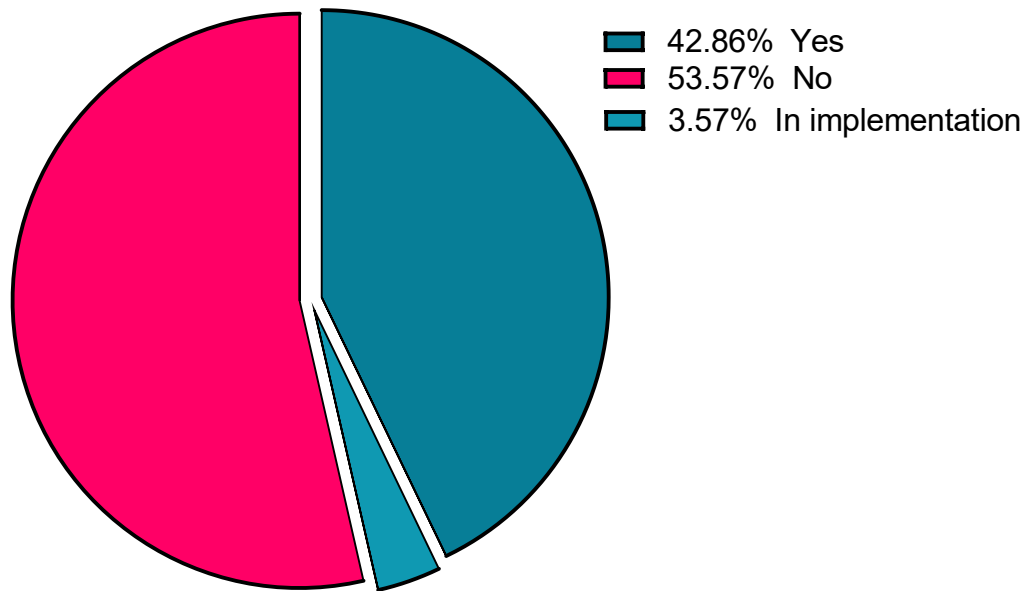


AI 1.5. Do you perform the IVPI test on H5 and H7 isolates?

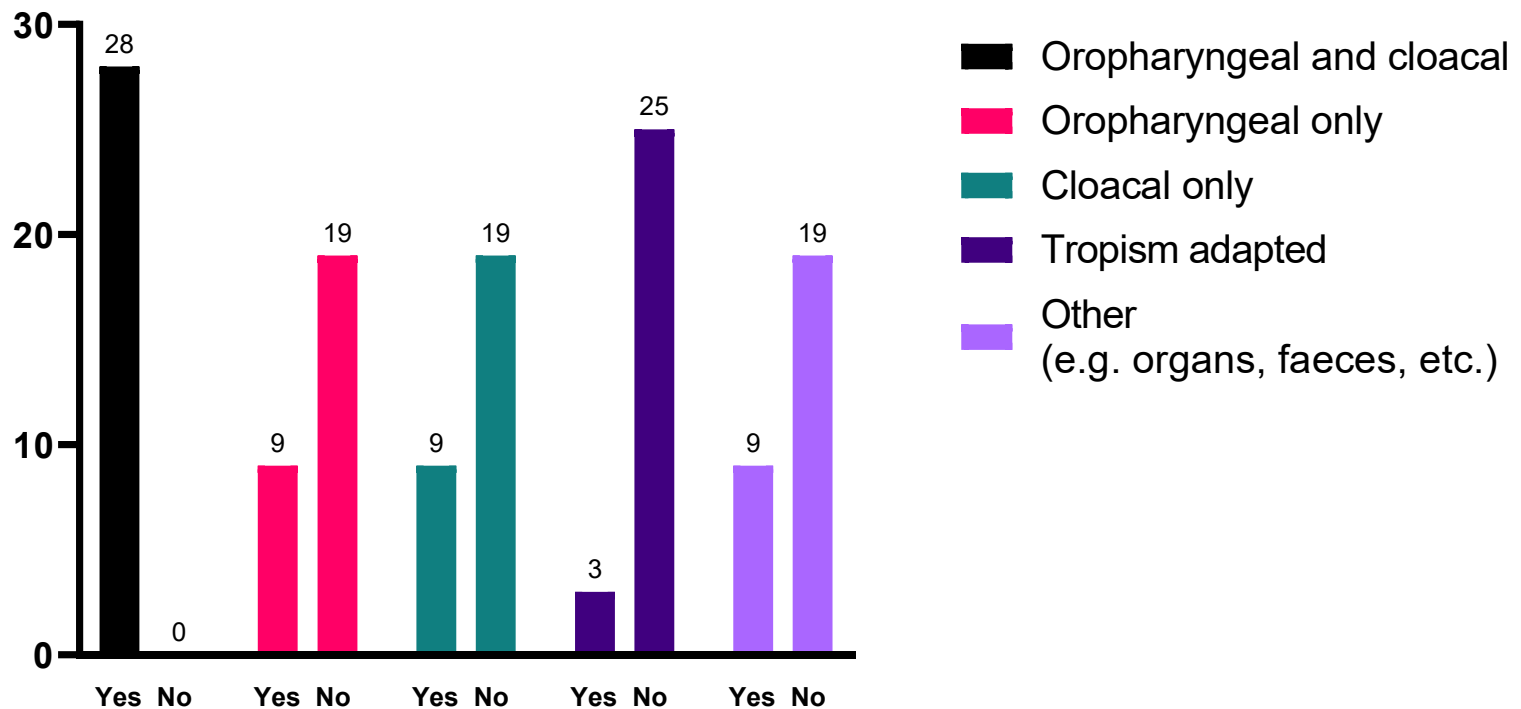
1.5.1 Do you perform the IVPI test also on other subtypes (e.g. H10)?



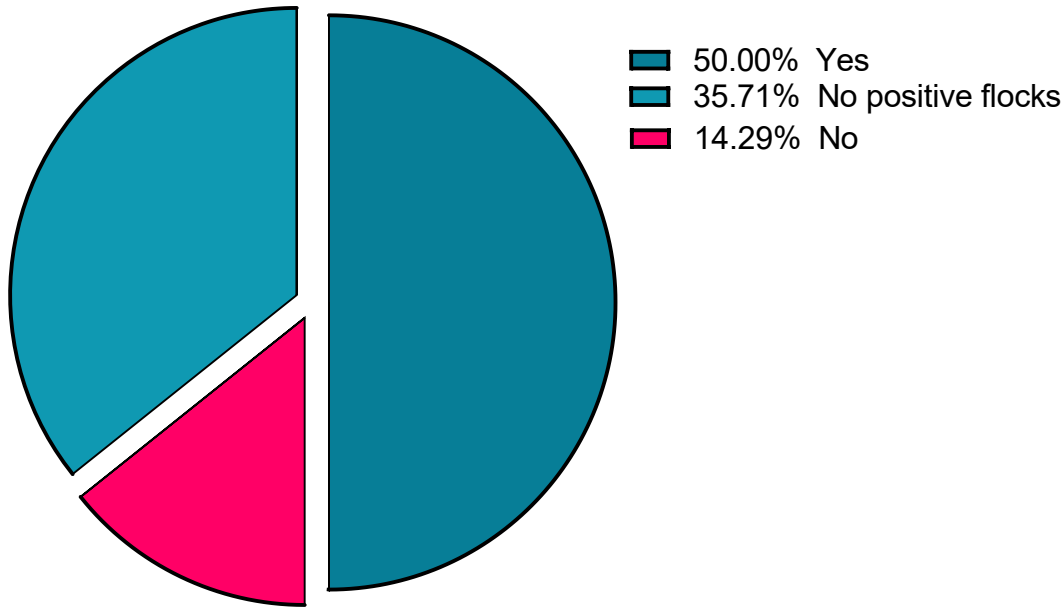
AI 1.6 Do you use Next Generation Sequencing for influenza type A detection and/or characterization? If yes, please indicate used platform.



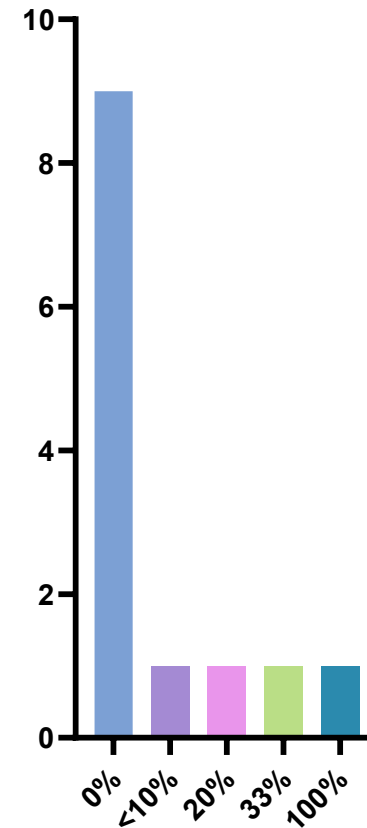
AI 1.7. Which type of swabs are generally submitted to the lab and tested?



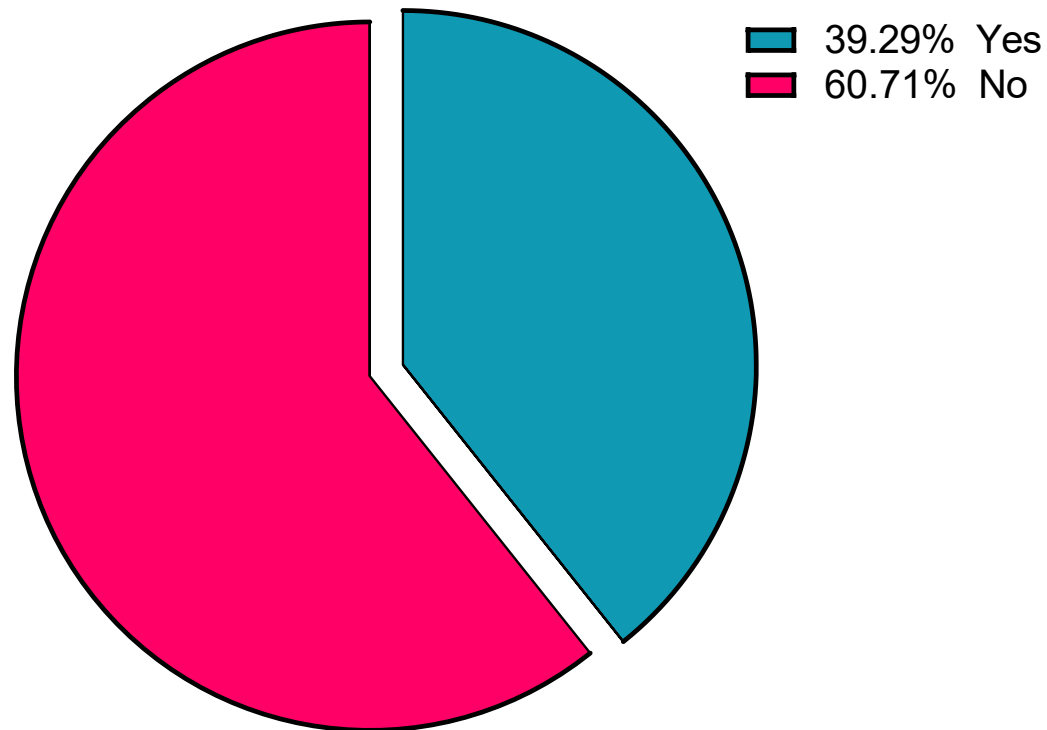
AI 2.3. Do you know the approximate percentage of positive results obtained by PCR or virus isolation after collection of samples in response to sero-positive flocks for H5 or H7?



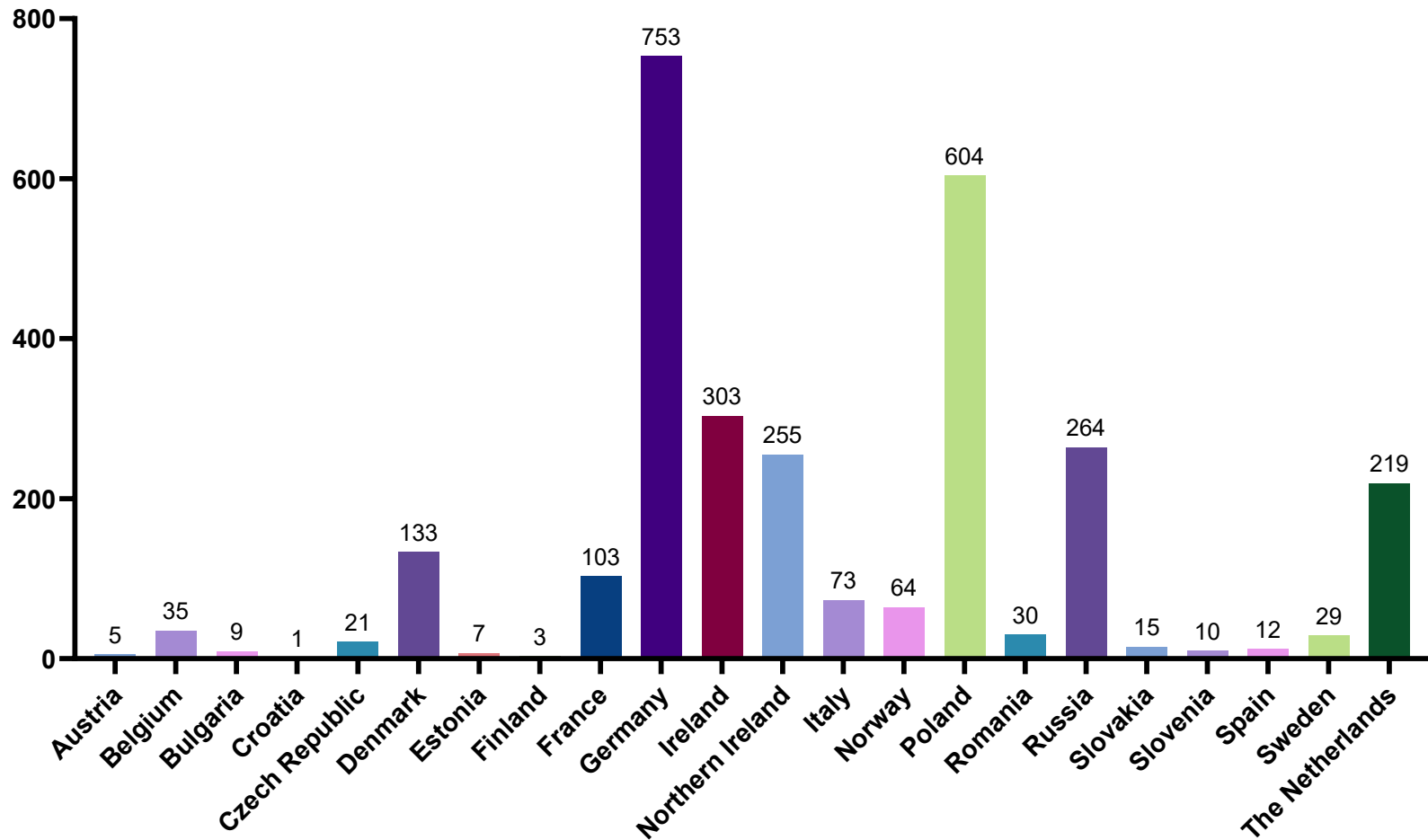
Detection of AI after a positive serology result



AI 2.2. Was any other active surveillance action performed in poultry (e.g. regional surveillance activities in DPPA or monitoring after an AI outbreak) in addition to formal EU programmes?



Avian Influenza virus-positive samples in 2020 per MS



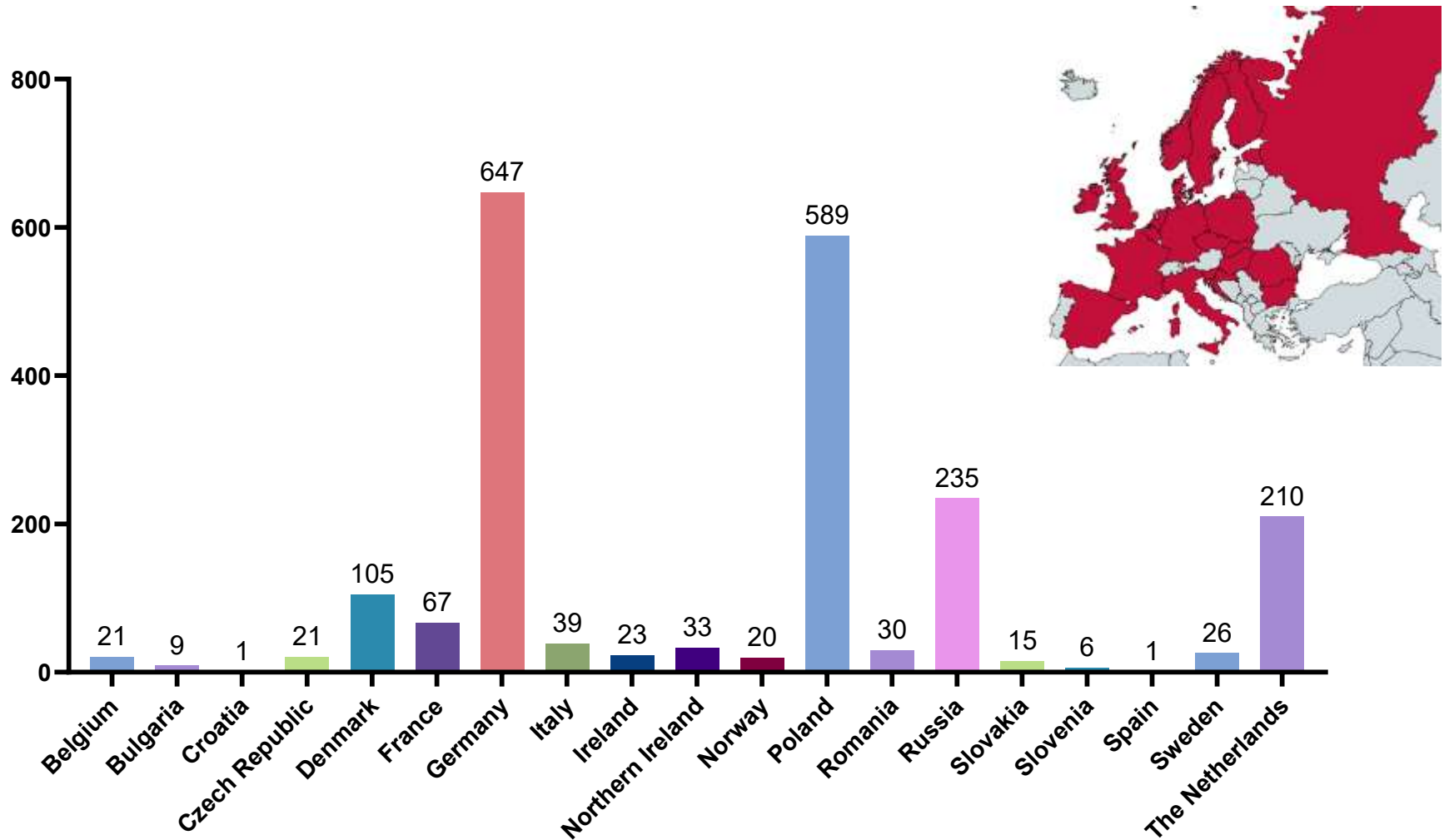
2020 AI positive samples= **2948**

938 in 2019 (314,3 % increase)

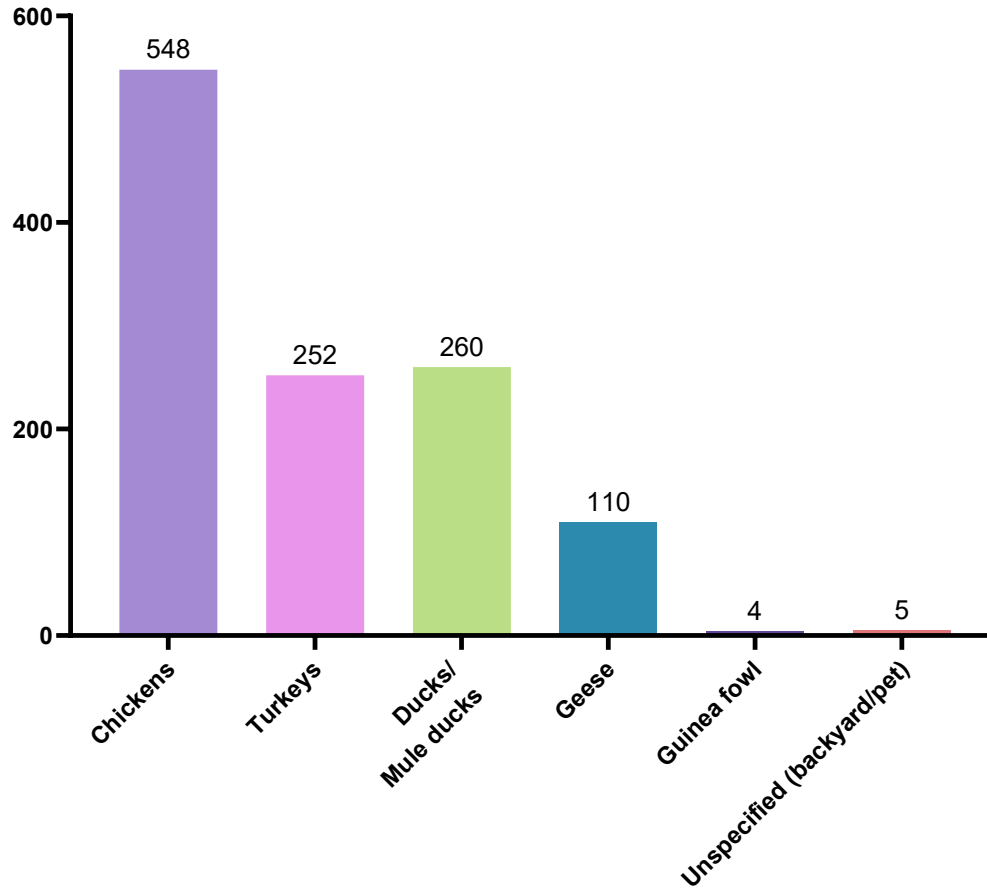
Avian Influenza virus-positive samples in 2020



HPAI H5N* viruses isolated/detected in 2020

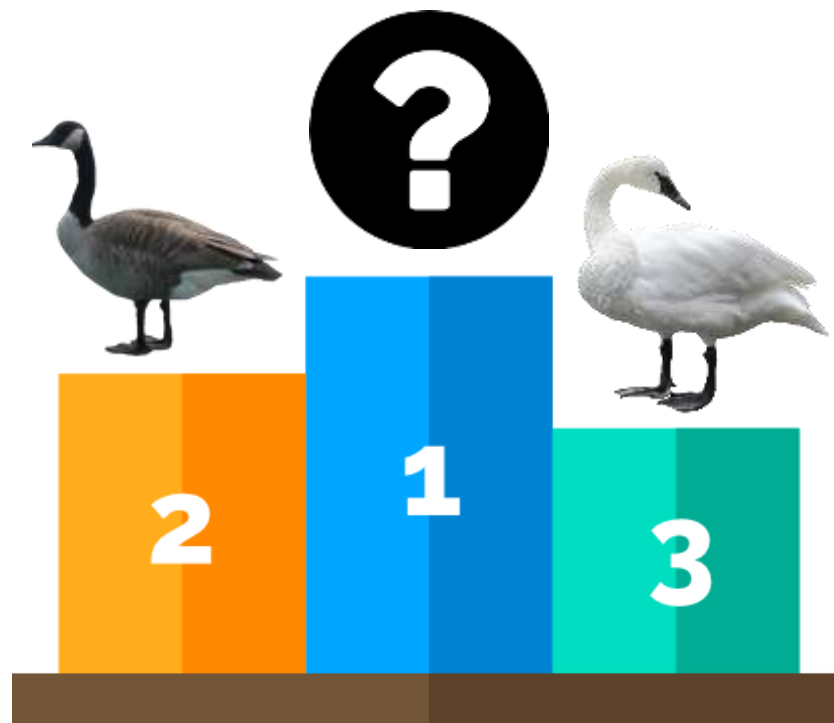


HPAI H5N* viruses isolated/detected in 2020 in domestic birds



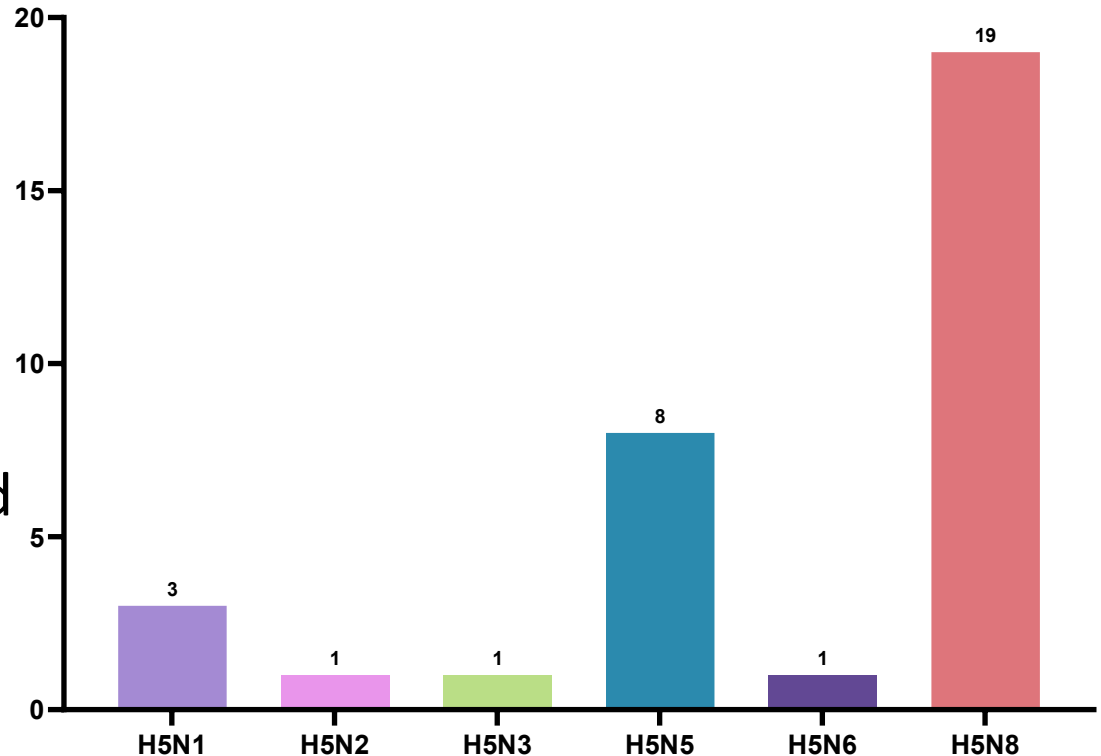
HPAI H5N* viruses isolated/detected in 2020 in wild birds

- At least 43 wild bird species found positive
- The majority of positive samples (652/867, 75,2%) without species identification



● Summary - HPAI situation in 2020

- 6 different H5 HPAI subtypes detected
- H5N8 most widespread subtype
- 19 Countries affected (16 MSs)



H5 LPAI viruses isolated/detected in 2020

LPAI Subtype	Number of detection(s)	MS(s)
H5N*	24	
Mallard	17	Belgium (2), Denmark (1), Italy (8), Norway (1)
Eurasian teal	2	Denmark (1), Italy (1)
Greater White-fronted goose	1	Belgium (1)
Herring gull	1	Belgium (1)
Quail	1	Russia (1)
Wild bird (Unspecified)	2	Germany (1), The Netherlands (1)
H5N1	3	
Chicken	2	Denmark (1)
Wild bird (Unspecified)	1	Germany(1)
H5N2	6	
Mallard	1	France (1)
Chickens	5	The Netherlands (5)
H5N3	3	
Ducks (domestic)	1	France (1)
Mallard	1	France (1)
Wild bird (Unspecified)	1	Germany(1)
H5N8	14	
Turkeys	2	Ireland (2)
Guinea fowl (zoo)	7	Germany (7)
Great skua	1	Norway (1)
Swan	1	Norway (1)
Goose	3	Poland (3)
Total	50	

H7 LPAI viruses isolated/detected in 2020

LPAI Subtype	Number of detection(s)	MS(s)
H7N1	2	
Turkeys	2	Italy (2)
H7N5	2	
Mallard	2	Denmark (2)
H7N7	3	
Wild bird (Unspecified)	3	Germany (3)
Total	7	

Wild Bird species with H5/H7 - RT-PCR positive results



33,5 fold increase from 2019

● Non H5-H7 LPAI viruses isolated/detected in 2020

LPAI Subtype	Number of detection(s)	LPAI Subtype	Number of detection(s)
H*N*	105	H8N4	4
H*N1	198	H9N*	11
H*N6	6	H9N1	1
H*N8	2	H9N2	58
H1N1	16	H10N2	1
H1N2	8	H10N6	2
H1N8	2	H10N7	1
H2N*	1	H11N1	1
H2N5	1	H11N9	4
H3N*	1	H12N*	1
H3N2	2	H12N2	1
H3N6	1	H12N5	2
H3N8	22	H13N2	1
H4N6	11	H13N3	1
H6N*	1	H13N6	1
H6N1	305	H13N8	2
H6N2	13	H16N*	1
H6N8	3	H16N3	1
H6N9	1		

Total= 793

Wild Bird species with **NON-H5/H7** - RT-PCR positive results



Overall numbers stable from 2019

● Concluding remarks

➤ Questionnaire participation!



➤ Species identification is important to update the list of the target species for surveillance activities



➤ IVPI on index cases is recommended

➤ H7 viruses are needed for proficiency tests and molecular methods updates