

# MOSQUITO BEACONS

Meeting 3: Updates!



Southern  
**IPM**  
Center



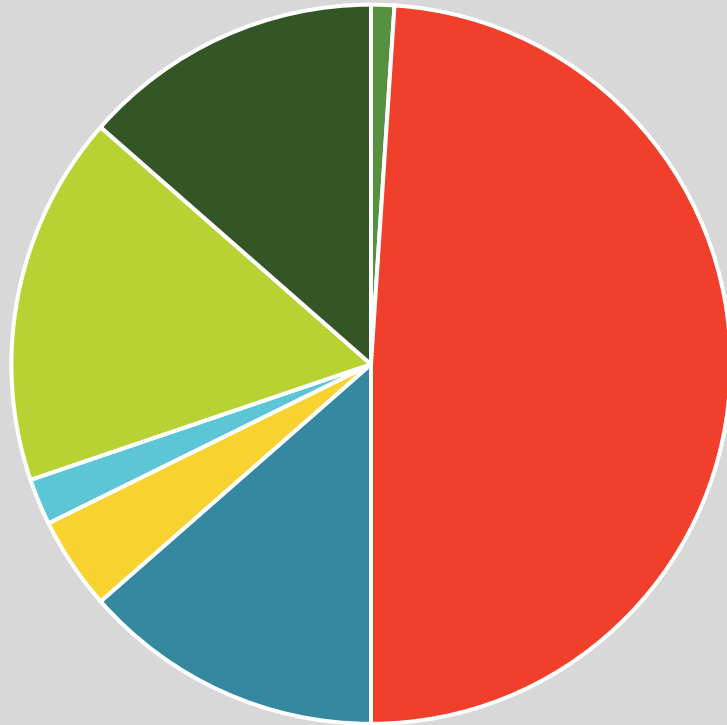
# SURVEY UPDATE

“Capacity for invasive mosquito species surveillance”

IRB Study Number: IRB202101286

The following data are unpublished

# Number of Respondents

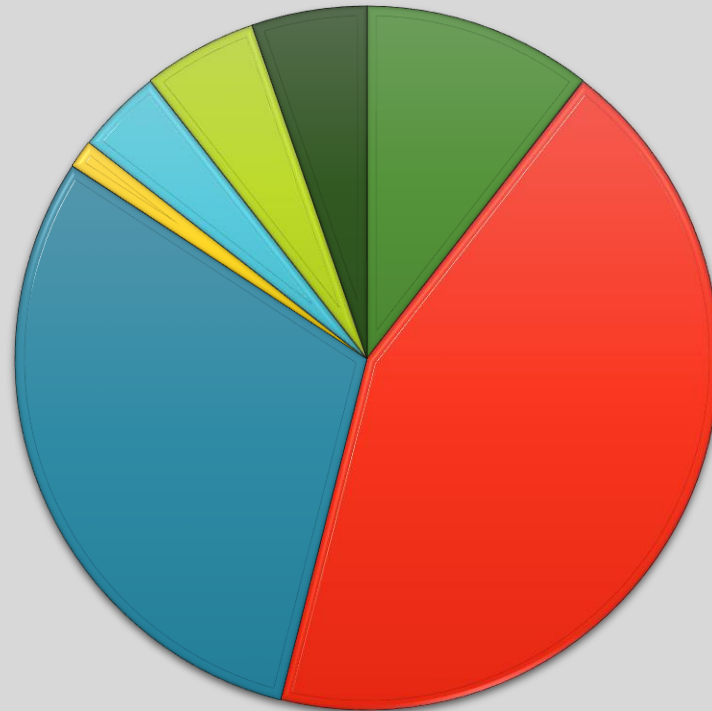


Alabama      Florida      Georgia  
Louisiana      Mississippi      North Carolina  
South Carolina

- N = 75 responses!!!
- 7 out of 7 target states!!!!

**Goal of 100 responses**

Q: My agency is ...

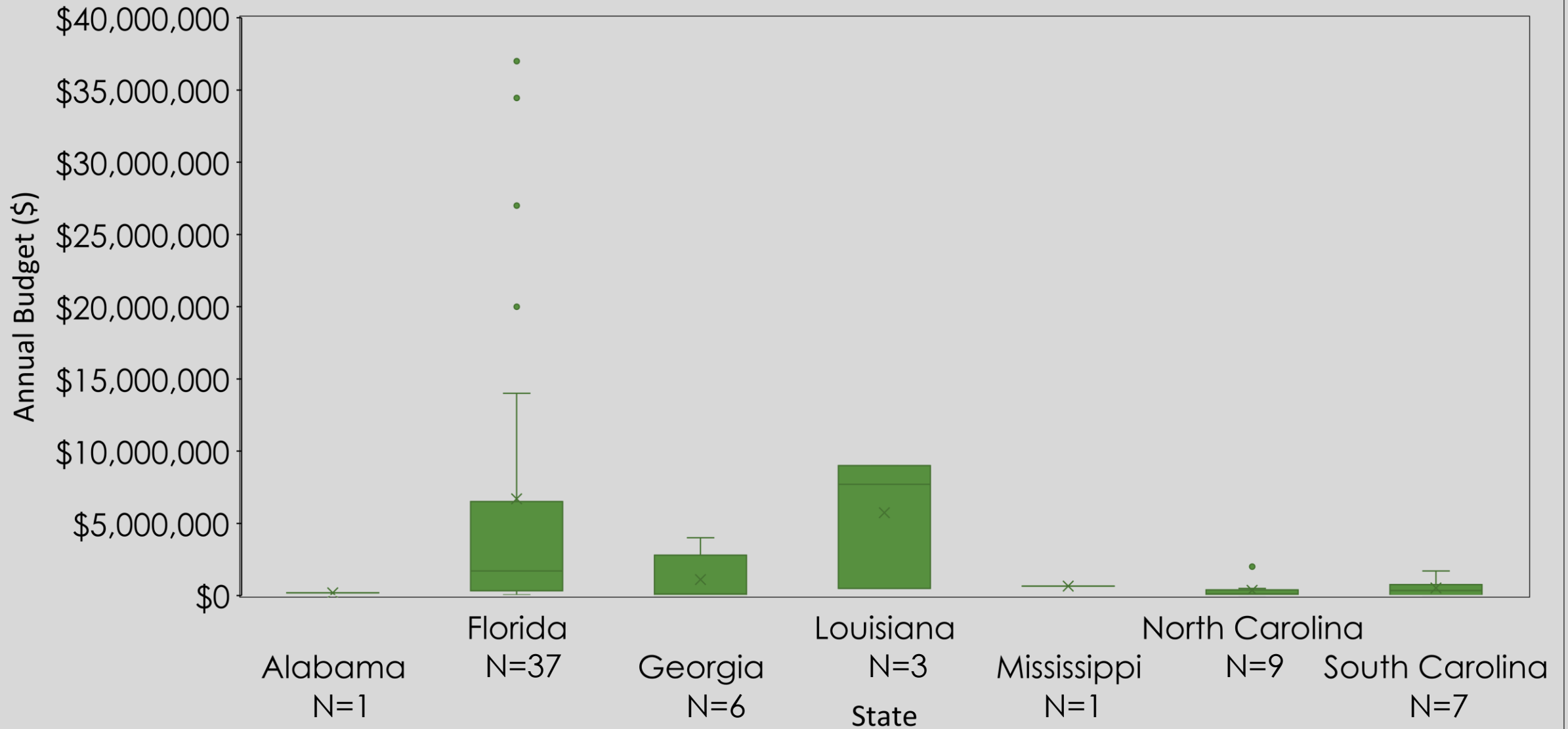


- 43% of respondents are county mosquito programs
- 30% county public health programs
- 3 private pest control

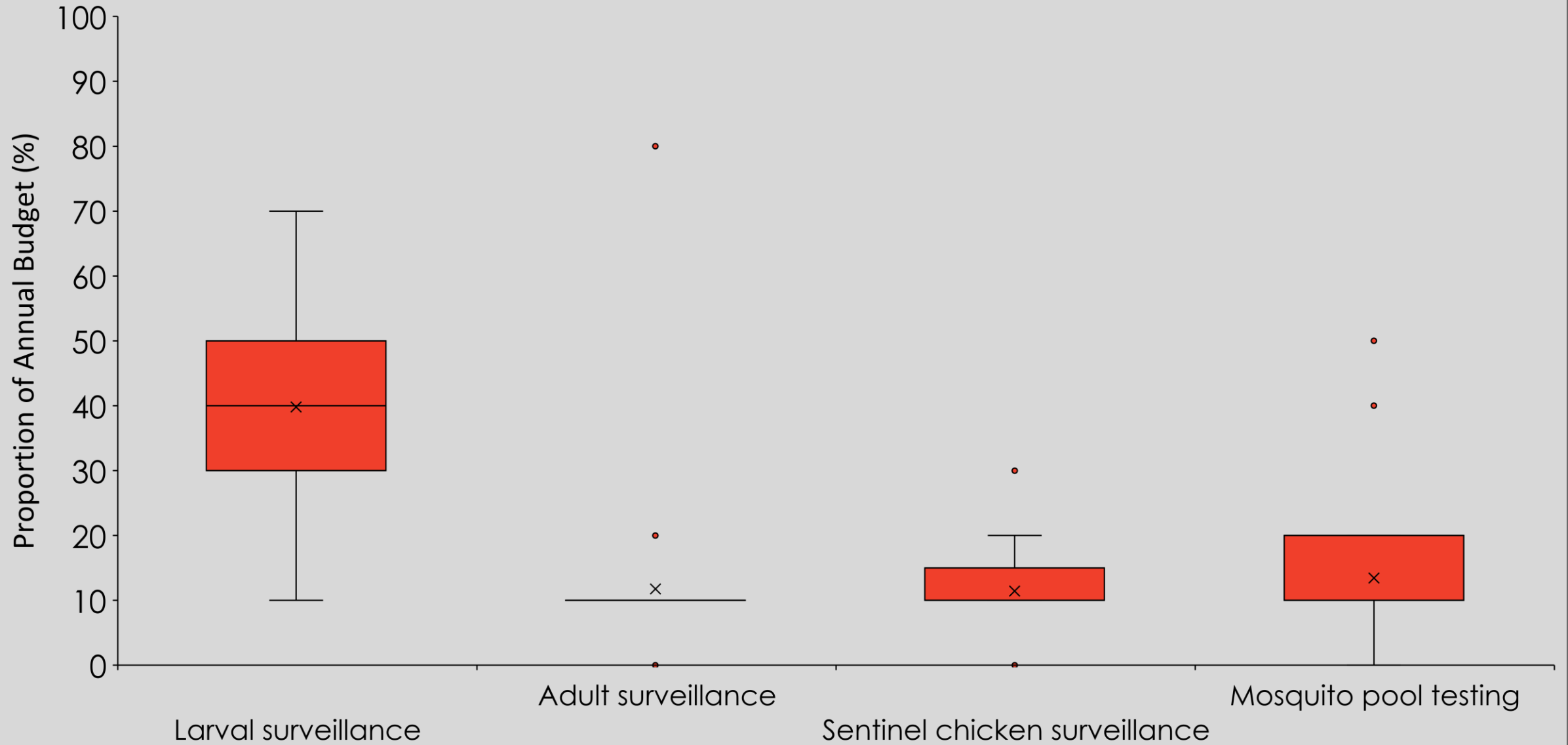
■ City / municipal program  
■ County public health entity  
■ Private pest control  
■ State public health entity

■ County mosquito control district  
■ Other  
■ Regional mosquito control district

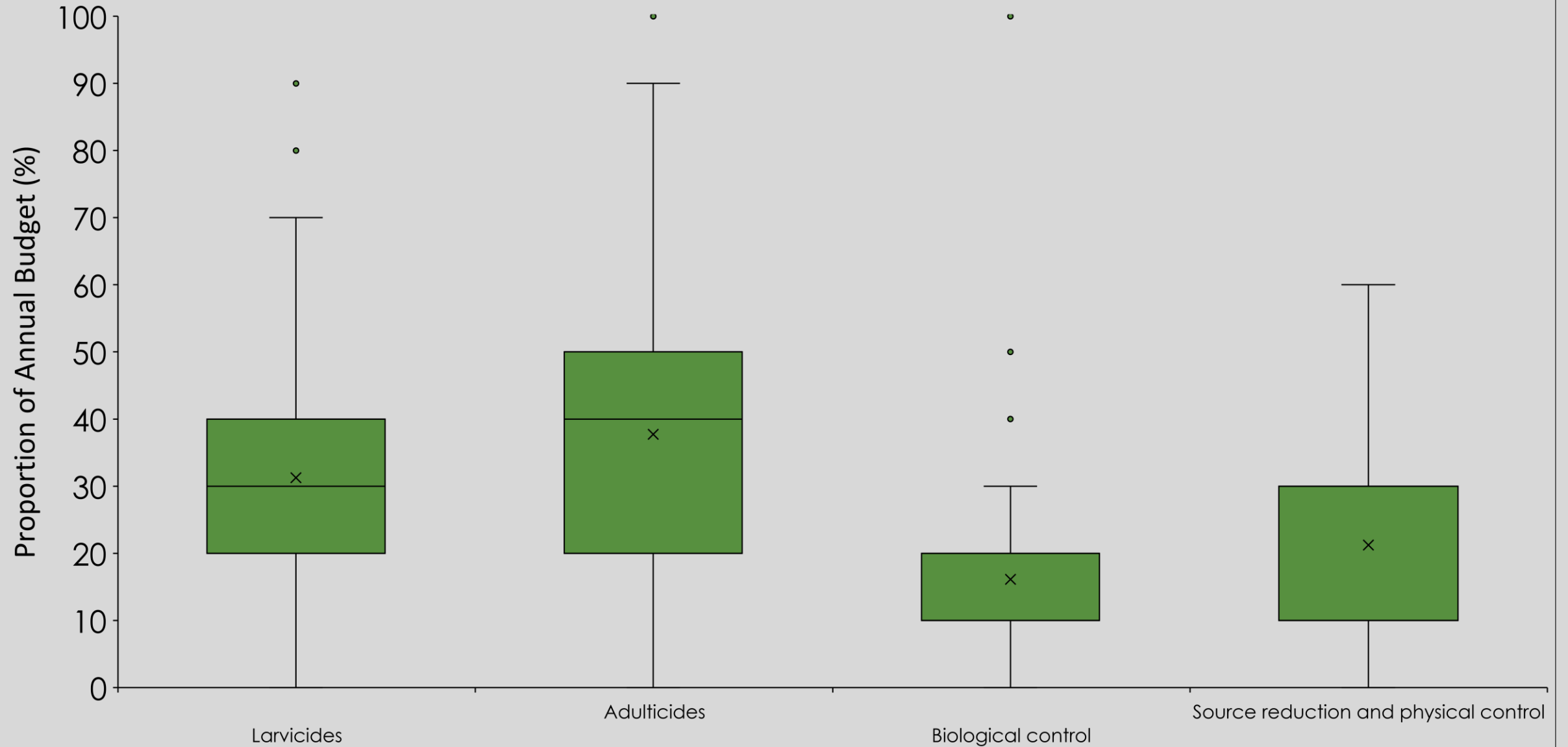
# Q: What is your annual budget?



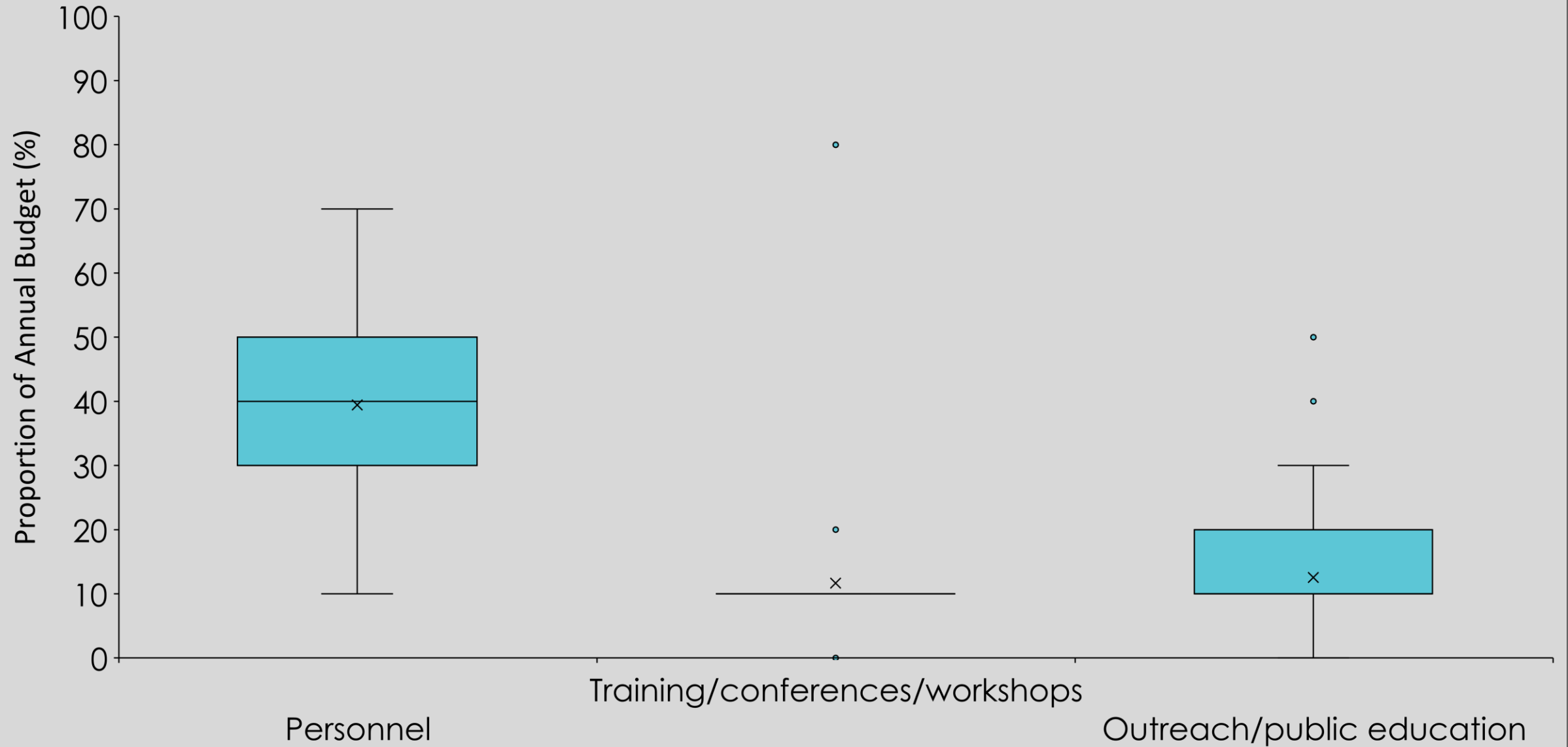
Q: What proportion of annual budget pertains to...



Q: What proportion of annual budget pertains to...

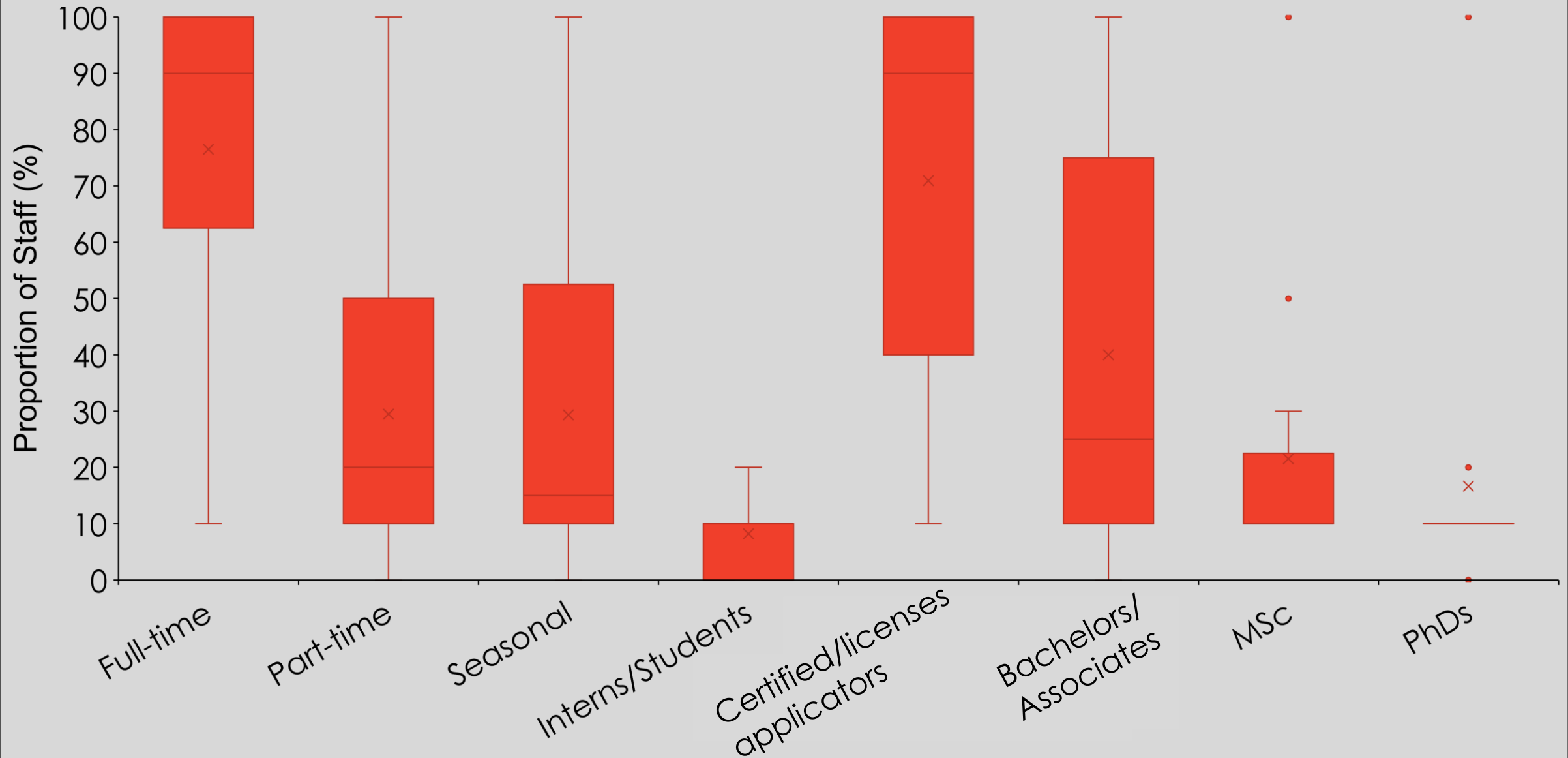


Q: What proportion of annual budget pertains to...

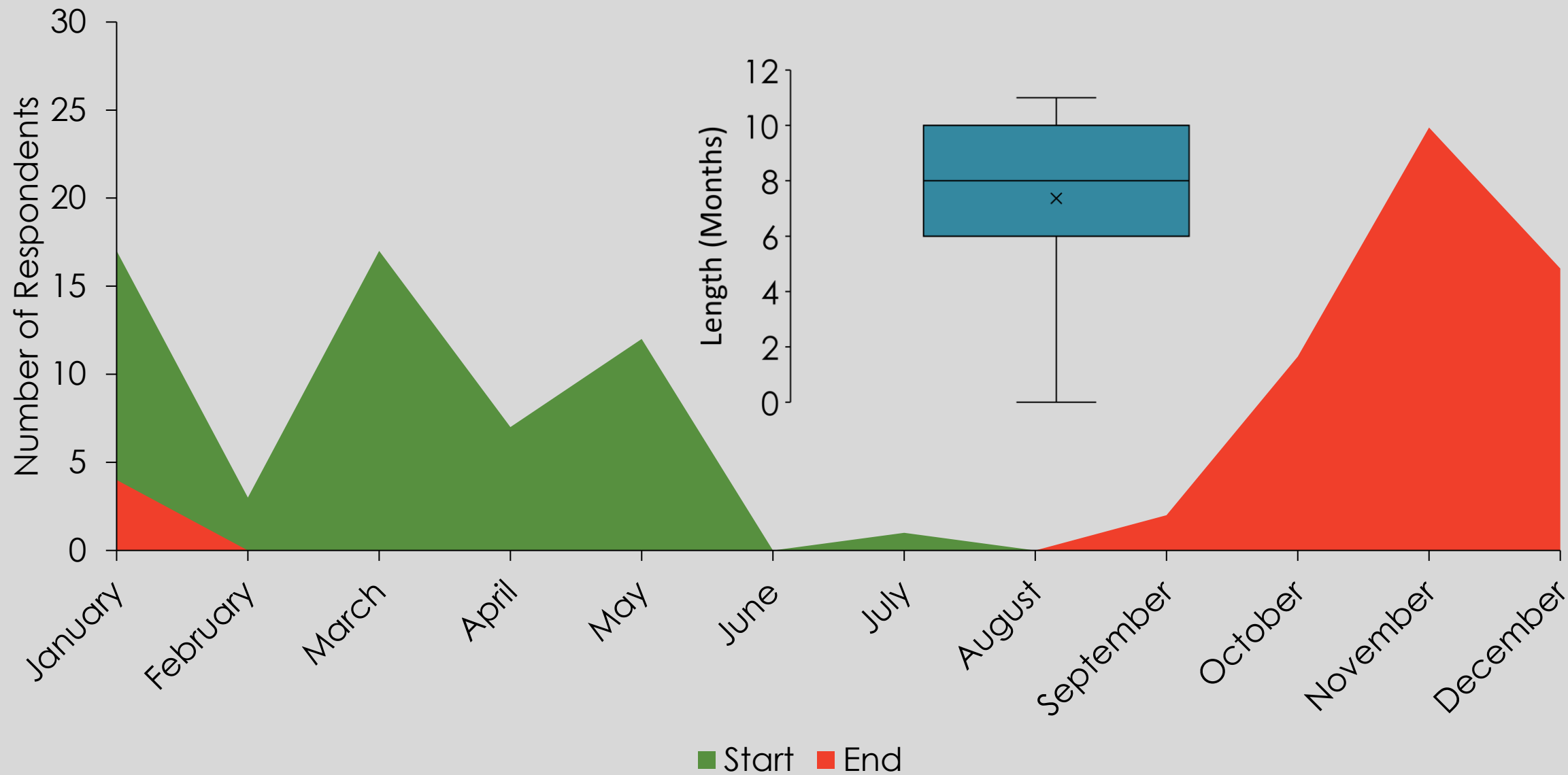




Q: What proportion of staff are...



Q: Please indicate when you start and end surveillance



Q: Please indicate what surveillance tools you use



Biogents Sentinel

Q: Please indicate what attractants you use



CO<sub>2</sub> + octenol

Octenol

Dry ice

Dry ice + octenol

CO<sub>2</sub> + BG Lure

Compressed CO<sub>2</sub>

Q: Please indicate what attractants you use



BG Lure + Octenol

Octenol

BG Lure + Dry Ice

**BG Lure**

BG Lure + CO<sub>2</sub>

Dry Ice

Dry Ice + Octenol

Compressed CO<sub>2</sub>

(BG Lure Aka "stink tubes" according to survey respondent 3k5Jg)

Q: Please indicate what attractants you use



Fish emulsion water

water

Rabbit chow

# Hay Infusion

Water + grass clippings

Oak leaf infusion

# ***Port Authorities, Airports, Shipping Yards and Invasive Species Introductions***





# ***Stakeholder perception of surveillance at ports, airports, and ground shipping yards***

**88%**

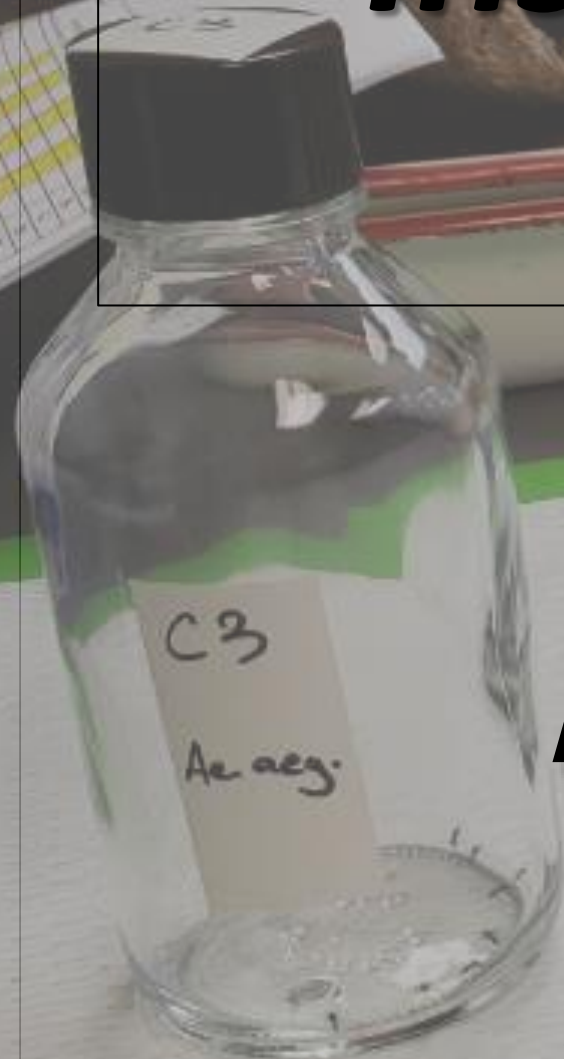
***Of respondents agree surveillance and  
cooperation is important***



# So, who is doing this important work?

- 22 programs of 73 (~ 30%) of respondents serve a region with an active port, airport, or ground shipping yard
- But only 3 programs conduct surveillance in these areas
- Citing Reasons:
  - Lack of communication
  - Security clearance
  - Staffing / budget
  - No reason / precedence to survey

# ***Insecticide Resistance Testing***



↓  
**7**

***programs conduct insecticide resistance surveillance and perform testing on site***



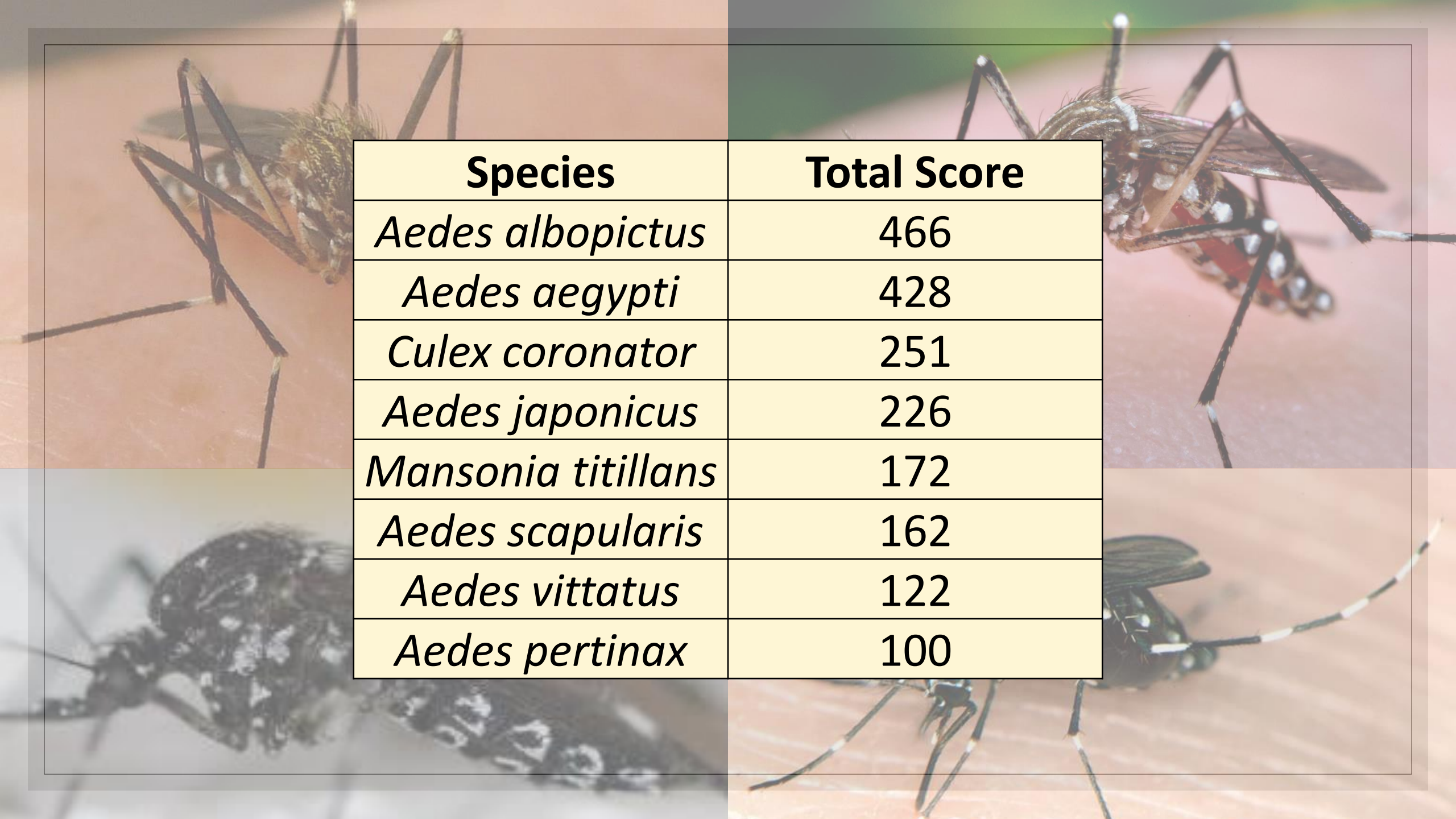
Q: Does your agency conduct insecticide resistance surveillance? Yes or no



***What is the most important  
non-native mosquito species  
in the South?***

Q: Please rank a list of 8 species from 1 being the most important to 8 being the least important





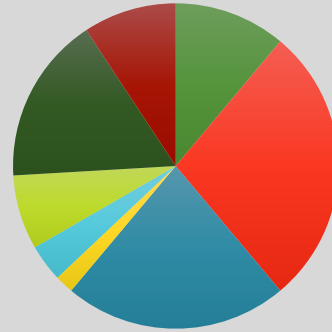
<b>Species</b>	<b>Total Score</b>
<i>Aedes albopictus</i>	466
<i>Aedes aegypti</i>	428
<i>Culex coronator</i>	251
<i>Aedes japonicus</i>	226
<i>Mansonia titillans</i>	172
<i>Aedes scapularis</i>	162
<i>Aedes vittatus</i>	122
<i>Aedes pertinax</i>	100

# Species Scores by State

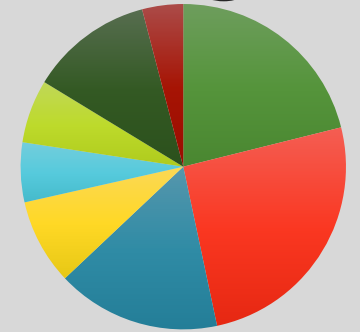
Florida



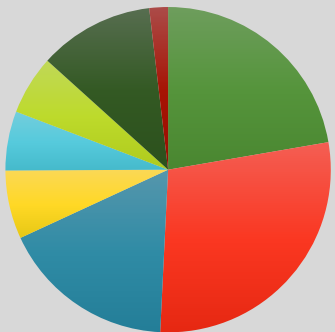
Mississippi



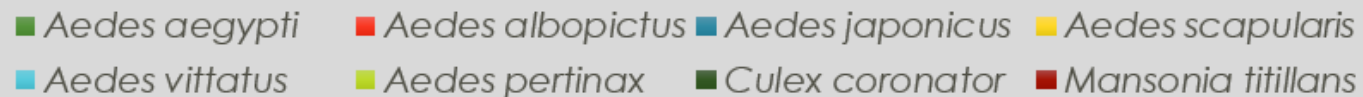
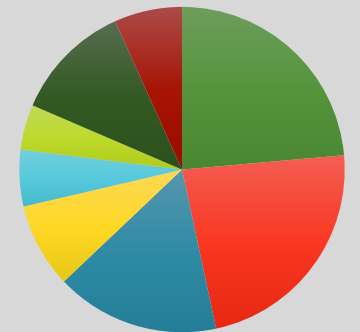
Georgia



North Carolina



South Carolina



Q: I get information pertaining to invasive species from...

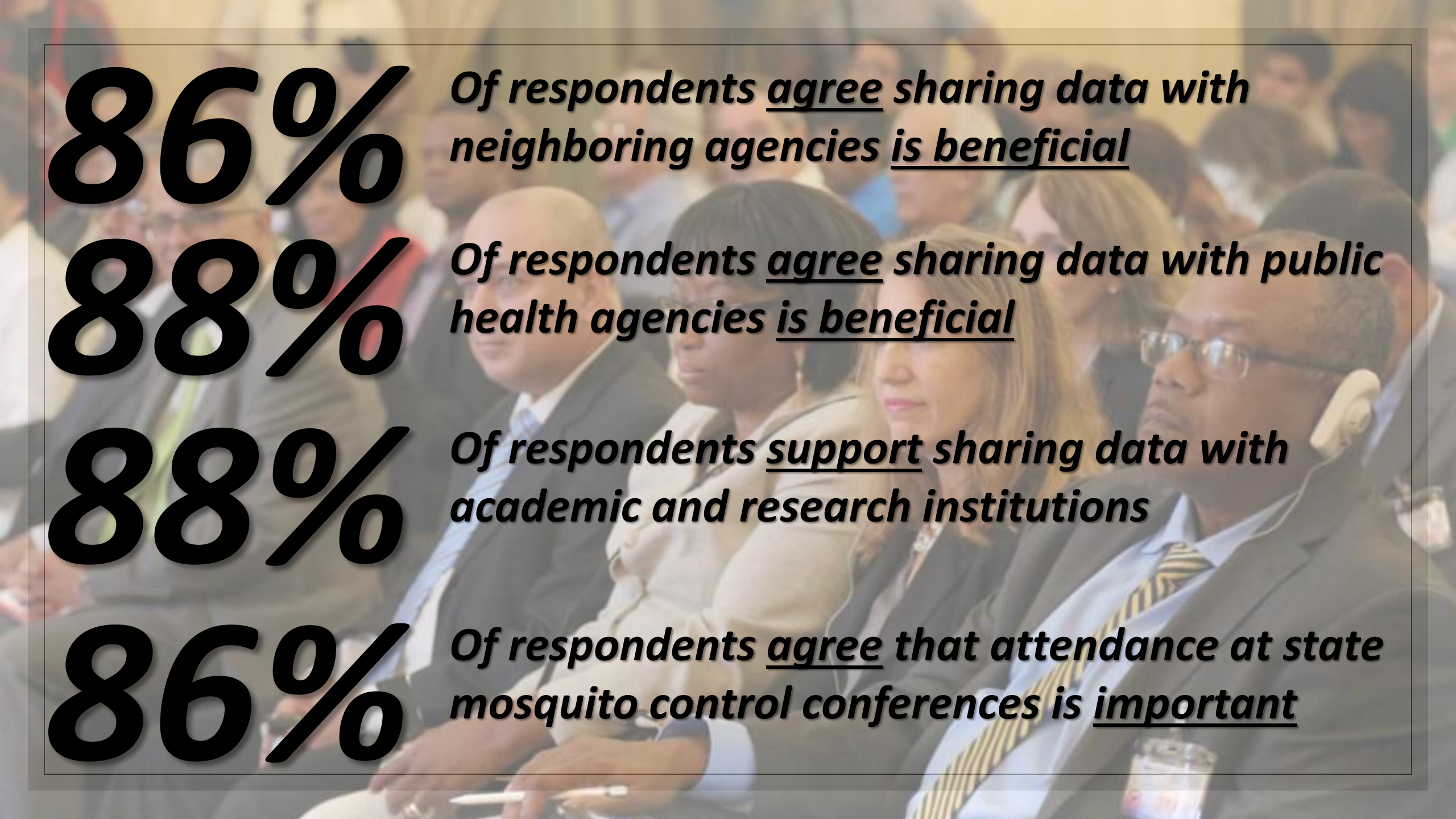
**Agree (+1)**

State mosquito control association (38)  
Peer-reviewed scientific journal articles (33)  
Trade journal articles (32)  
CDC (22)  
Word of mouth (5)

**No opinion  
(0)**

County / state public health agency (-1)  
Cooperative Extension programs (-3)  
Social media (-10)

**Disagree (-1)**



**86%**

*Of respondents agree sharing data with neighboring agencies is beneficial*

**88%**

*Of respondents agree sharing data with public health agencies is beneficial*

**88%**

*Of respondents support sharing data with academic and research institutions*

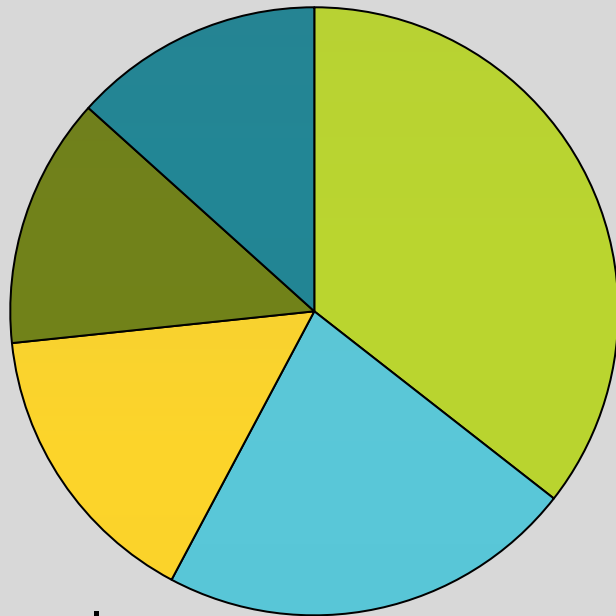
**86%**

*Of respondents agree that attendance at state mosquito control conferences is important*

***What do programs need to  
improve surveillance and  
control capabilities?***



Q: Please describe what is needed to improve your surveillance program.



■ Personnel

■ Funding

■ Training

■ Equipment

■ Viral/Insecticide Resistance Testing

- 35% cited personnel
- 22% funding / increased budget
- 15% training, 15% equipment
- 13% testing capabilities

# ***Funding and Staff Expertise are Critically Important***



***~50%*** ***Surveillance and control programs  
ARE constrained by budget and staff***

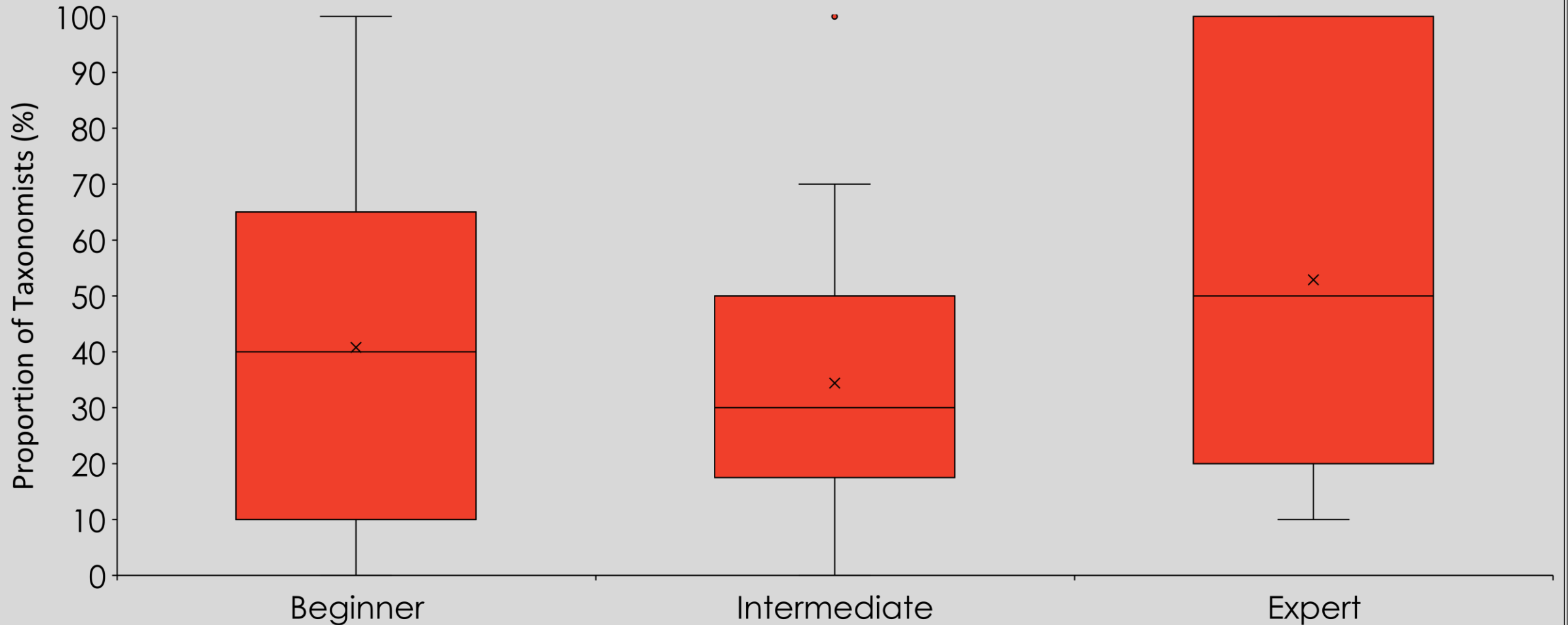
# ***Funding and Staff Expertise are Critically Important***



**70%**

***Of respondents are NOT satisfied with  
the number of training opportunities***

Q: Roughly, what percentage of your staff taxonomists are...



Beginners (e.g., few informal training opportunities, and >2 years of experience)

Intermediate (e.g., some informal and in-person training, and 2-5 years of experience)

Experts (e.g., have attended Advanced Mosquito Identification and Certification or equivalent training, with 5+ years of experience)

**THANK YOU!**

