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## **REPORT**

**Project Specific Aim:** To improve biosecurity education offerings to young exhibitors not directly involved in the 4H system, expanding biosecurity education to a wider population across the Commonwealth.

**Approach:** To reach young exhibitors, we intend to organize hands-on biosecurity education during 3, non-4H sponsored swine exhibitions over the course of the summer 2020 show season. These educational events will be targeted to teach:

- Diseases of livestock and how diseases spread
- How to reduce spread of infection before, during, and after the show
  - Use of clean/dirty lines
  - Personal and equipment hygiene
  - Reducing instances of comingling at the show
  - Quarantine times

**Status: As of September, 2021, the project has been completed through our internet and give-away-based approach for improving understanding of biosecurity practices among youth.** With the extension of funds, promotion of our web-based Flip-grid educational tool (which can be used for future endeavors and can be found here: <https://flip.com/biosecuritychallenge>) and a hand out to youth at events, we reached 99 youth across the Commonwealth. Despite challenges faced by the original proposal with lack of participation, and the original project kicking off in 2020, we believe our efforts have delivered on the original promises to reach youth across the Commonwealth, and independent of 4H outlets, with biosecurity education. Further efforts for education on biosecurity should be supported for both youth and adults, as this remains a pertinent area for active understanding and participation.

To improve our understanding of youth perceived barriers to education, we worked with 4H youth to improve our understanding of youth of perceptions of biosecurity education within their activities, particularly after they had been exposed to education developed in coordination with this grant. Of 85 4H Animal Science Camp participants (ages 14-18 years),

- 83% of youth indicated that they felt they were doing a good job with biosecurity based on their previous education using the same tip sheet.

- 37% of youth indicated most biosecurity practices did not apply to them because they were not a commercial operation.
- 16% specified that disease treatment was easier than disease prevention while only
- 7% suggested biosecurity best practices were too costly and too time consuming compared to the minimal investment in their animals.
- 68% communicated a desire to learn more.

Similar questions were asked to 162 youth (ages 8-18) through on-on-one conversations with youth who were publicly exhibiting livestock,

The same questions were used in one-on-one conversations with youth ages 8 -18 years who publicly exhibit livestock. When asked about biosecurity best practices:

- 66% believed that biosecurity did not apply to them because they were not a commercial operation.
- 37% of youth indicated they did not have enough animals to make biosecurity a priority and
- 40% indicated the terminal status of their animals reduced the need for biosecurity.
- 38% suggested disease treatment was easier than disease prevention.
- 90% indicated they had some form of education related to biosecurity prior to the survey and
- 66% were interested in learning more.

As of this survey and the completion of the project, we believe that there are some barriers to youth understanding and practice of biosecurity. This may be related to adult understanding and perceptions of biosecurity, as was found in work conducted by Dr. Chris Gambino with Delaware Valley University and Penn State Extension under the CPLE funded project:

**Understanding motivations to biosecurity acceptance and practice among pig producers,**

where producers were found to have significant gaps in understanding as compared to expert.

We believe this project has both increased the available biosecurity tools for education (outside of 4H) and allowed us to explore potential barriers to biosecurity education and application.