

BOVINE TUBERCULOSIS MOLOKA'I 2021-2023

HAWAII DEPARTMENT OF AGRICULTURE – ANIMAL INDUSTRY DIVISION



Bovine Tuberculosis

History of bTB on Molokai – 1940-1985

- Known to exist on Moloka'i since 1940
- Multiple outbreaks in livestock **1940-1985** mainly on the East End
- Axis deer, feral pigs and mongoose have also been found with bTB infections
- Infections in mongoose and feral pigs were found in close association with infected cattle herds. 1960 through 1981 only five infected axis deer were detected on the East End.
- **1985** bTB infection detected in Central Molokai
- Complete island depopulation occurred between 1985-1986, >9000 head depopulated
- Molokai remained free of cattle for one year after, then repopulated with steers in the 2nd year. After all the steers were slaughtered and found free of bTB, restocking breeding cattle that tested negative for bTB were allowed.

Bovine Tuberculosis

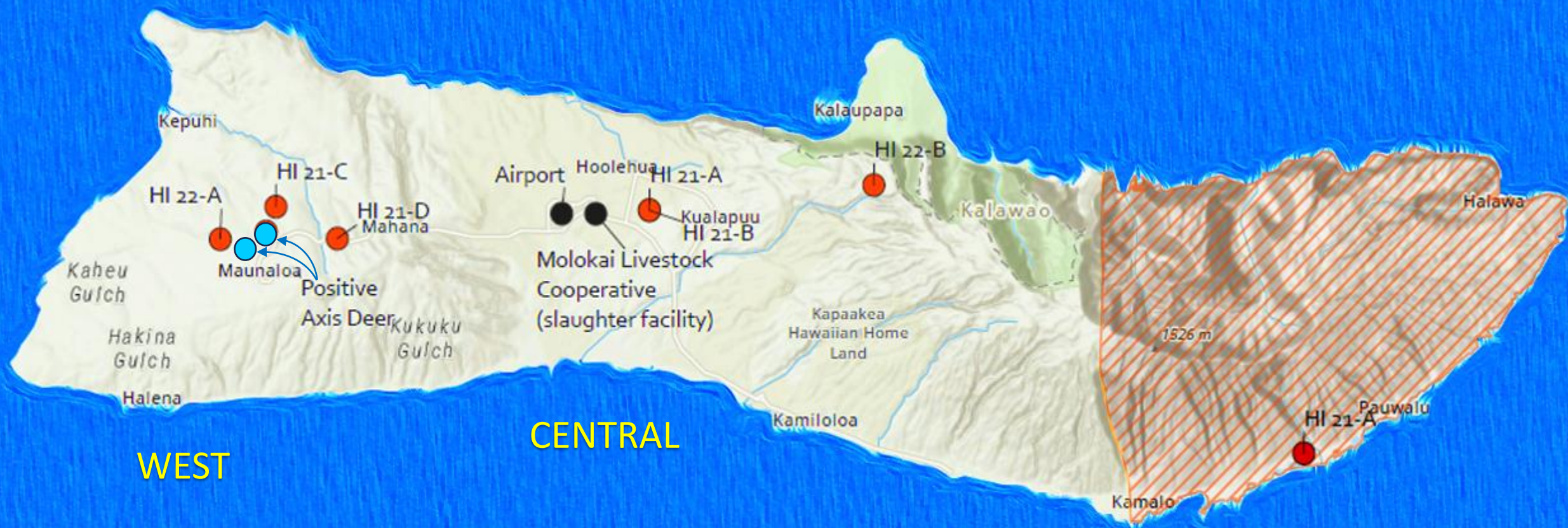
History of bTB on Molokai - 1997

- Molokai remained free of bTB from 1985 **until 1997** when a single cow from Ualapue (East End) was found infected at slaughter.
- The infected herd was depopulated, no additional animals with lesions were detected.
- 5000 head from the East, Central Molokai and Maui were tested and all found negative in this investigation
- Subsequently, under agreement with USDA, all herds on the East end of island were tested annually.

Bovine Tuberculosis

June 2021 - 2022

- **21A** herd moved from Central Molokai to Mapulehu due to drought (December 2020 through March and June 2021)
- CFT required to return to Central Molokai from Mapulehu began in March but was aborted because of bad weather and inability of State Veterinary Medical Officer to fly back into Molokai to complete the test.
- **21A** herd retested in **June 2021**. One reactor detected and sacrificed. Lung lesion found and diagnosed as bovine tuberculosis by NVSL.
- 5 other infected herds subsequently identified through 2022.



- Affected Herds
- Other Locations
- ▨ Eastern Molokai Surveillance Zone

Bovine Tuberculosis

Summary

- Quarantine Order No. 158 - Island of Molokai in place since April 2022.
- 2021 bTB Outbreak the most significant on Molokai since the late 70s – 6 Herds Infected
- Historically bTB found in feral swine and mongoose around infected beef cattle operations on the East End of Molokai
- Historically bTB also found in Axis deer, in very low numbers, in various locations on the East End of Molokai.

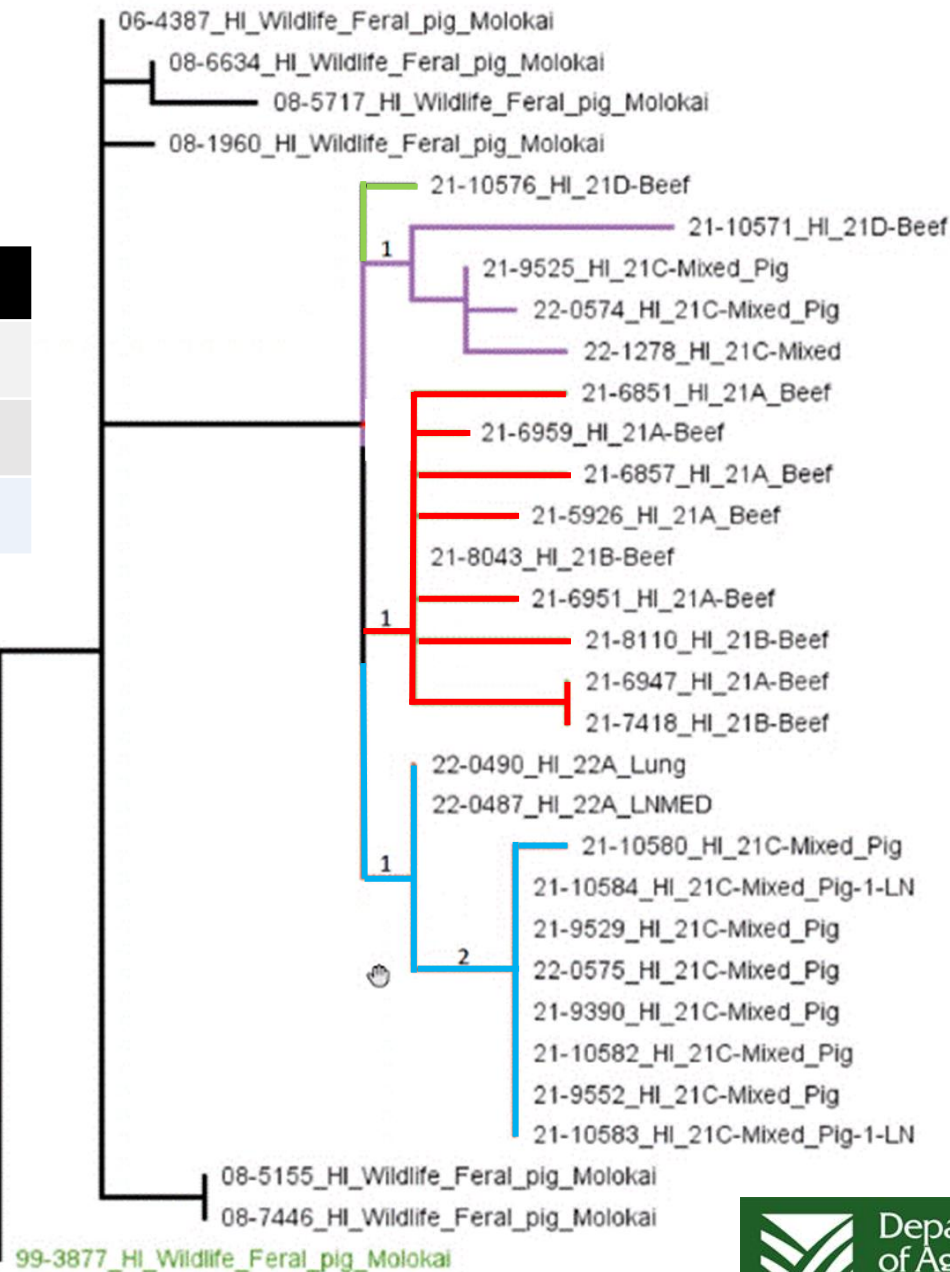
Bovine Tuberculosis

Whole Genomic Testing

Herds Sharing SNPs

Herd	Shared SNPs
21 A	21 B
21 C	21 D
22 A	21 C

99-3877_HI_Wildlife_Feral_Pig_Molokai



Bovine Tuberculosis Update

2023

- Infection found in this outbreak is related to bTB previously found in feral swine on the East End of Molokai
- No new detections in Livestock since 2022
- MOU executed with USDA requiring annual testing. First annual (6 months) review by USDA completed.
- Annual herd testing continuing with ~4 herds remaining for 2023. Feed during testing continued concern by producers.
- 2nd detection in axis deer February 2023 West Molokai.
- USDA Wildlife Services study fall 2023 to determine wildlife populations.

Bovine Tuberculosis Update

2023 continued...

On Island positions under recruitment:

- Livestock Inspector
- Veterinary Medical Officer

Equipment Procured For State Office:

- Storage Container
- Container Office
- Truck
- Portable Chute/ Tub

In Process:

- Update MOU USDA
- Additional supplies/equipment
- Electrical service (MECO/HECO)



Kilauea 9/13/2023



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