

Axis Deer Impacts in Maui County

Strategies for Mitigation & Long-Term Management



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Agenda



Management Options

- Commercial Harvesting
- Meat Donation
- Hunting



Mitigation & Recommendations

- Mitigation & Long-term Management
- Population Assessment
- Area-Wide Management Plan
- Policy
- Small Scale Processing
- Population Control

Commercial Harvest

Federal Laws & Regulations

Federal Meat Inspection Act (FMIA) (2022) - Axis deer are considered non-amenable species under the FMIA, thus, inspections are *voluntary* and the processors must pay for inspection out of pocket. Ante- and post-mortem inspection required. Allows states to establish their own meat inspection services “at least equal to” Federal law, but those meats may only be sold intrastate.

FSIS Directive 1200.1 - Provides guidance on the requirements for voluntary inspection services of exotic species.

Barriers:

- **High cost of voluntary inspection:** As non-amenable species, inspection is voluntary, and therefore must be paid for out of pocket - Maui Nui Venison: upwards of \$10,000 / week for inspections
- **Shortage of USDA inspectors** locally: chicken and the egg problem

Commercial Harvest

Federal Laws & Regulations

Humane Methods of Slaughter Act (1978) - Defines that a **single shot or blow to the head** that instantly renders livestock incapacitated is a method of humane slaughter.

Barriers:

- Only venison that has been slaughtered via a clean, single shot to the head may enter commerce
- USDA Inspector must observe each and every kill

Federal Food, Drug, and Cosmetic Act (FFDCA) Current Good Manufacturing Practice (2018)

Requirements for sanitation and process control for all human food products. Appears to allow for the **intrastate sale of game meat** under the Food and Drug Administration's enforcement when in compliance with this Act.

Commercial Harvest

State Laws & Regulations

Hawai'i Revised Statutes Section 159, Hawai'i Meat Inspection Act - Similar in language to the Federal Meat Inspection Act, defining voluntary inspection of non-amenable species.

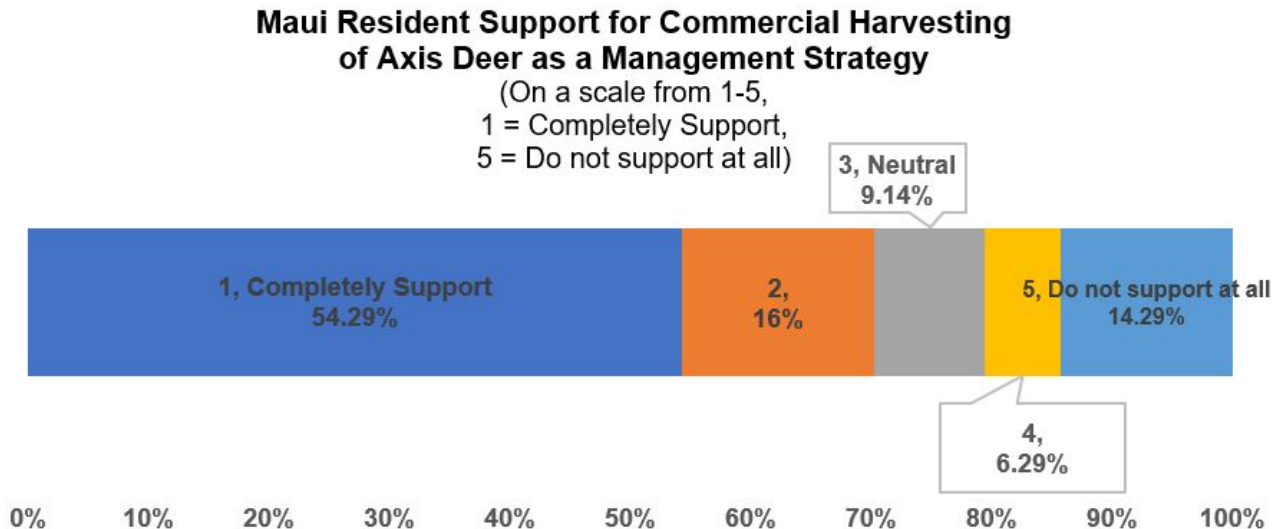
Barriers:

- Defunct since 1995 due to a lack of funding
- 2024 legislative session: SB2794 / HB2142 was introduced. Would have funded 4 FTE positions at the HDOA for meat inspection. (A similar bill was also introduced in 2023)

Hawai'i Administrative Rules Section 11-29-8 - Adopts the Food and Drug Administration's current Good Manufacturing Practices, essentially making the sales of **non-amenable meats** legal intrastate.

Commercial Harvesting

Source: Authors using data from Rubino and Williams, 2022.



Commercial Harvest and Processing

- A 2022 survey of Maui residents found that **54.29%** of individual resident survey respondents **“completely support”** commercial harvesting as a management action for axis deer on the island
- Mobile slaughter units seem to be the most economical option, estimated at **\$250,000** for a trailer facility (Wagoner, 2021). Added equipment, waste disposal, chill/storage units and shipping can easily triple the start-up costs. Mobile units must meet the same federal inspection requirements as brick-and-mortar facilities, with less output

Meat Donation

Federal Laws & Regulations

Bill Emerson Good Samaritan Food Donation Act - Abolished

liability for those who donate foods in good faith and belief that those foods are safe for human consumption.

State Laws & Regulations

H.B. 1382: Relating to Meat Donation (2023),

Act 054 - Allows for the donation of game meat that is harvested in a food-safe manner.

Barriers:

- Seems to direct that harvesting be done in accordance with the Humane Methods of Slaughter Act, unclear whether voluntary inspection under the FMIA is required, or if FDA's Good Manufacturing Practices suffices
- 2025 legislative session HB1334 was introduced- Would have provided exemptions for hunters donating wild game to nonprofits or religious organizations from HI meat inspection Act.

Hunting Regulations

Hawai'i Administrative Rules

13-123-8, allows for hunting on private lands with landowner permission and a valid hunting license (Game Mammals, 2015). However, lacks **liability protections for landowners** who allow hunters on their lands.

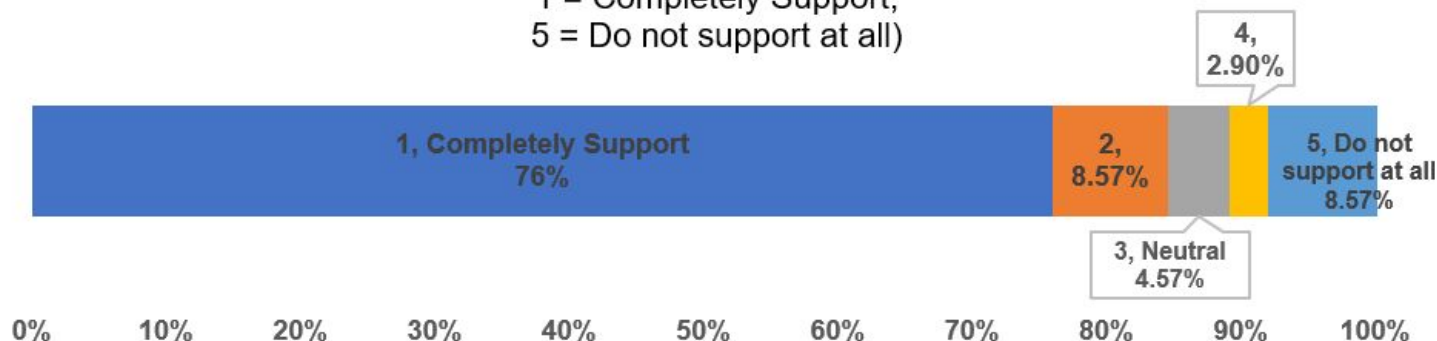
In light of the reproduction rate of axis deer, harvesting restrictions based on the sex of axis deer should be explored further and perhaps **codified**, with consideration also given to the preferences of hunters.

Current population estimates suggest that female deer comprise **60%-70%** of the population (Hess et al., 2021).

Recreational Hunting

Maui Resident Support for Recreational Hunting of Axis Deer as a Management Strategy

(On a scale from 1-5,
1 = Completely Support,
5 = Do not support at all)



Recreational Hunting

Source: Authors using data from Rubino and Williams, 2022.

- **Most preferred** management strategy as compared to commercial harvesting, fencing, hired sharpshooting, contraceptives, trap and transfer, and taking no management action with **76%** of survey respondents **"completely supporting"**. (Rubino and Williams, 2022).
- "Earn-a-buck" program requires hunters to harvest young or antlerless deer before being allowed to harvest an adult male.

Long-Term Management

Policy

- Maui County's local ordinances. Gaining public support for controlling axis deer is paramount for implementing change. More investigation is needed to assess opportunities for the Maui County Department of Agriculture to create local ordinances that incentivize citizens and large landowners to work towards mitigation efforts
- Maui County Department of Agriculture, in collaboration with federal representatives, may consider introducing legislation in U.S. Congress to create a carve-out for Hawai'i agriculture that allows more freedom in production and processing for wild game meats including axis deer.

Short Term Recommendations

Conduct regular population assessments

Introduce statutory amendments that align with federal guidelines or clearly acknowledge the presiding authority with jurisdiction over axis deer mitigation.

Prioritize policies aimed at hunting female deer, which will be crucial to achieving long-term population control. Establish liability protections for private landowners who allow hunters on their lands.

Long-Term Recommendations

Establishment of a comprehensive **Area-Wide Management Plan** incorporating mitigation measures for both public and private lands.

Reinstate the Hawai'i meat inspection program and include non-amenable species.

Invest in small scale processing

Opportunities for collaboration: Te ara ki mua framework for adaptive management.

New Zealand's Approach to Wild Deer Management

- Flexible hunting regulations that are assessed annually
- Free hunting permits
- Coordinate stakeholder organizations
- Defend existing deer-free areas
- Target critical areas
- Allow commercial operations to harvest, process and sell venison meat

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Report:**



Mahalo Nui!

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ADEPT Committee

From: Carly Wyman <Carly.Wyman@asu.edu>
Sent: Wednesday, August 6, 2025 5:13 PM
To: ADEPT Committee
Subject: Invitation to Maui County Council ADEPT Committee meeting on August 7, 2025
Attachments: Short ADEPT Committee Presentation Aug. 2025.pdf

Aloha ADEPT committee,

Please see the attached slides for my opening remarks during tomorrow's meeting.

Mahalo,

Carly Wyman, M.S. (She/Her/Hers)

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