Feral Boar: A Potential Serious Threat to Domestic Pig Producers

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Domestic

Feral
Feral Boar (*Sus scrofa*) Current Populations: United States

(Corn, 2013; Southeastern Cooperative Wildlife Disease Study, University of Georgia)
Feral Boar Current Population: Canada
Feral Boar Current Populations: Saskatchewan

- 111 of 296 rural municipalities surveyed in Saskatchewan in 2013 cited boar presence
- 70% of rural municipalities in Saskatchewan have a high probability of boar presence based on RSPF analysis

Brook and van Beest, 2014
Feral Boar Resource Selection at the RM Level

Issues and Concerns Associated with Feral Boar

- Highly invasive species
- Socioeconomic damage
- Environmental damage and degradation
- Disease reservoirs and vectors
Feral Boar Diseases: Risks and Concerns

- Susceptible to many diseases and parasites

- Hosts to numerous viral and bacterial diseases (>30) and parasites (>37), which can be transmitted to wildlife, domestic livestock, and humans

- Feral boar serve as the most important wildlife host for many diseases
Feral Boar Diseases: Risks and Concerns

- Much concern regarding the introduction or reintroduction of diseases to livestock via transmission from feral boar to domestic swine.

- Concern due to high economic costs associated with the introduction or reintroduction of foreign and eradicated diseases to disease-free livestock.
### Bacterial and Viral Diseases

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Present in the U.S.</th>
<th>Known Routes of Transmission</th>
<th>Feral Boar Reservoir Role</th>
<th>Effects</th>
<th>Risk to Industry (Economic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swine Brucellosis</td>
<td>X</td>
<td>Oral and Venereal Contact</td>
<td>Known</td>
<td>Infertility, Weight Loss, Mortality in Young</td>
<td>High</td>
</tr>
<tr>
<td>Pseudorabies</td>
<td>X</td>
<td>Oral and Venereal Contact</td>
<td>Lack of Evidence</td>
<td>Sow Fertility, Mortality in Young</td>
<td>High</td>
</tr>
<tr>
<td>PRRSV</td>
<td>X</td>
<td>Unclear</td>
<td>Lack of Evidence</td>
<td>Reproductive Failure</td>
<td>High</td>
</tr>
<tr>
<td>Bovine Tuberculosis</td>
<td>X</td>
<td>Consumption of Contaminated Feed, Aerosol Dispersal</td>
<td>Lack of Evidence</td>
<td>Persistent Infection</td>
<td>High</td>
</tr>
<tr>
<td>Porcine Epidemic Diarrhea Virus</td>
<td>X</td>
<td>Fecal-Oral Route</td>
<td>Known</td>
<td>Acute Diarrhea</td>
<td>Moderate-Low</td>
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<tr>
<td>Swine Fever Virus</td>
<td></td>
<td>Oral Contact, Contaminated Feed</td>
<td>Known</td>
<td>High Mortality Rates in Young</td>
<td>High</td>
</tr>
<tr>
<td>Porcine Pavovirus</td>
<td>X</td>
<td>Direct Contact</td>
<td>Known, but Not Significant</td>
<td>Reproductive Failure</td>
<td>Moderate-Low</td>
</tr>
<tr>
<td>Trichinella Species</td>
<td>X</td>
<td>Consumption of Contaminated Meat</td>
<td>Known</td>
<td>Numerous-Dependent on Species of Parasite</td>
<td>High</td>
</tr>
<tr>
<td>Leptospirosis</td>
<td>X</td>
<td>Direct Contact</td>
<td>Potential-Lack of Evidence</td>
<td>Reproductive Failure, Numerous Effects in Young</td>
<td>High</td>
</tr>
<tr>
<td>Vescular Stomatitis</td>
<td>X</td>
<td>Direct Contact, Contaminated Feed</td>
<td>Unknown</td>
<td>Lameness, Lesions</td>
<td>Moderate-Low</td>
</tr>
<tr>
<td>Foot and Mouth Disease</td>
<td></td>
<td>Direct Contact, Contaminated Feed</td>
<td>Known</td>
<td>Lameness, anorexia</td>
<td>High</td>
</tr>
<tr>
<td>Swine Influenza</td>
<td>X</td>
<td>Oral Contact, Aerosol Dispersion</td>
<td>Known</td>
<td>Fever, Cough</td>
<td>Moderate-Low</td>
</tr>
<tr>
<td>African Swine Fever</td>
<td></td>
<td>Unclear</td>
<td>Not significant</td>
<td>High Rates of Mortality</td>
<td>High</td>
</tr>
</tbody>
</table>
Disease Transmission between Feral Boar and Domestic Livestock

Common Routes of Disease Transmission:
- Direct contact through fencing or when fences are breached
- Contamination of feed and water
- Inhalation
- Venereal contact
- Aerosol distribution

The most significant routes of transmission vary by disease and are often poorly understood
Mitigation of Disease Transmission

- Double fencing
- Construct barriers to reduce contact
- Technology to disrupt or prevent contact at night when human presence is low
- Maintenance and adherence to strict biosecurity procedures
- Reduction or eradication of local populations
Management Implications

- Cooperation between government agencies, the private sector, and industry
  - Monitoring and management of feral boar
  - Determine presence and distribution
  - Monitoring and surveillance of disease presence and transmission
  - Effective eradication and population management strategies
Management Implications

- Long-term research programs in order to reduce or eradicate diseases in feral and domestic populations
  - Determine species susceptibility, transmission routes, and interactions between wildlife and livestock
  - Develop management and emergency response plans with provincial agencies
  - Develop and evaluate population and disease control and risk reduction strategies
  - Design and conduct biohazard management strategies
Current Management of Feral Boar in Western Canada

- Little and Not Effective
- No national strategy, coordination, or discussion
- Sporadic and unique efforts in each province.
- All western provinces:
  - little/no funding for feral boar monitoring/research
  - domestic wild boar farms still allowed
  - virtually no disease monitoring
  - outstanding legal issues- not wildlife but not livestock
  - (incorrect!!!) assumption that hunting alone will control populations
Challenges Associated with Feral Boar Management and Monitoring

- Primarily nocturnal
- Widespread across prairies (Canada?) yet often ‘rare’ locally
- Elusive -> use cover and avoid humans, often in remote areas
- Extremely high reproductive rates
- High capacity for dispersal

- Conventional monitoring approaches are not effective
Feral Boar Control Methods
Feral Boar Control Methods
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Current Feral Boar Research

- Determine feral boar presence and distribution across Canada
- Obtain information from telephone surveys and public observations
- Map feral boar distribution within Canada
- Predict feral boar probability across Canada using resource-selection function models
- Feral boar collaring in South-Eastern Saskatchewan and South-Western Manitoba to determine movement and dispersal patterns
We need three more LIKES to get a full thousand!!!

http://gadling.com/2013/09/18/Australian-pig-steals-beer/
If you have any information regarding feral boar sightings please contact:

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