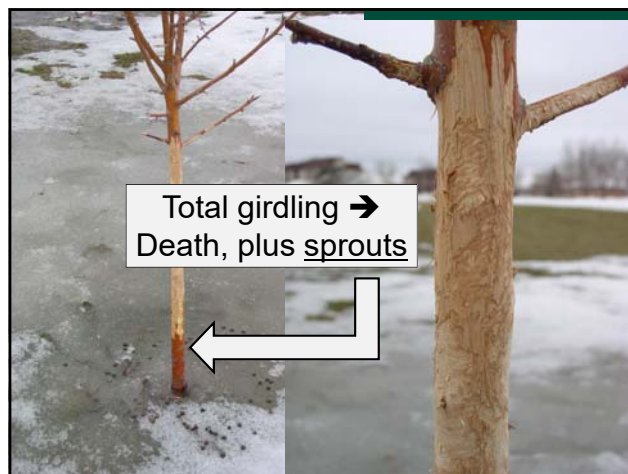


Winter Injury and Damage

- Conifers – Pines, spruces, others

Take home message
How much damage was there?

NDSU | EXTENSION



Management

- Biology → treatment timing
- Both species – larval timing approx. equal

- **Control when young/small**

**~148 GDD (base 50)
(same as corn)**

NDSU | EXTENSION

Cankerworm - Management

Active Ingredient	Trade Name
Acephate	Orthene, Isotox
Bifenthrin	BifenthrinPro, Talstar
Carbaryl	(Sevin)
Cyfluthrin	Tempo
Deltamethrin	DeltaGard
Lambda-cyhalothrin	Scimitar
Malathion	Malathion
Permethrin	Astro
Zeta-cypermethrin	(Sevin)

Fireblight – Treatment

- Preventative – sort of
 - Early season, and after wounds/damage
 - Streptomycin, copper-based fungicides

Fireblight – Treatment

- Preventative – sort of
- Pruning out cankers
 - Dry weather
 - 8-12" (12-18"?) below canker margin
 - “Ugly stub”
 - Remove ugly stub in winter
 - Clean pruning tools between cuts

In general

- Treatments – timing is critical →
- Scout – look for pests
- Not all damage needs (chemical) treatment ...

Resources

- Cankerworms – E999
- Spruce diagnosis – F1818
- Needlecast diseases – F1680
- Flooding – H1592
- Iron chlorosis – F1868