

Christmas tree production represents a significant contribution to Nova Scotia with growers throughout the entire province. Typically, Nova Scotia experiences cool fall seasons and moderate summer temperatures. The relatively low temperatures in these seasons help to create a higher quality product. Warmer fall seasons, more rainfall and milder winters can increase pressures on needle retention, insect cycles and overall tree lot management.



Remote Sensing addresses:

Remote sensing provides data to decision makers on the farm. Typically, the data is much higher resolution and timelier than what is generally available. Currently the most readily available option is to use a drone fitted with regular and/or multi-spectral cameras to survey the lot. Drones can map anywhere from 50-500 acres/hour depending on the settings – though higher resolutions require more time.



Once complete, the dataset can help:

- Determine tree densities
- Find road networks
- Determine elevation changes and ground cover
- Show areas of weed pressure
- Generate spray prescription maps

It may also help identify disease pressures in the future.



Key climate change impacts

As the province experiences more precipitation and more intense rainfall events it will be important to understand tree lot topography to better layout drainage ditches, roads and culverts.

Milder winters may lead to increased insect pressures, which can damage tree health. Being able to survey entire lots and use software to identify issues will save labour, though it shouldn't be assumed that this will replace visual inspections.

Spray programs are also an integral component of some tree lot management. Spraying by backpack sprayer can be costly and time consuming so having a better idea of where weed pressures are can create efficiencies.

Key Adaptation Strategy

Using real time and landscape level data to make more informed decisions about tree lot infrastructure and spatial management.

The Christmas Tree Council of Nova Scotia currently has capacity to conduct remote sensing operations. If this interests you please contact them.