

**Workshop Title:**

Climate Adaptation - Preparing farms, communities, and bioregions for climate change

**Speakers:**

Connor Stedman

**Executive Summary:**

Connor Steadman spoke about the coming effects of global climate change and how they may affect farms in Atlantic Canada. He introduced concepts that could be integrated into farms to help them be resilient in the face of these changes.

**Main Notes:**

Preparing and mitigating climate change through agriculture.

3 ways to respond to CC: emission reduction, carbon sequestration, and adaptation to changes.

'We are not powerless'

We have a lot of agency in our communities

Lots we can do plant seeds for a liveable future.

Spirit to coming to this topic.

Pluralistic process.

Relationship building.

What's coming?

There is an impact that will happen to us. It's ok to have feelings about this.

More storms are coming. Unpredictable weather extremes.

Increased temperature change.

Floods.

Droughts.

Unpredictable extremes.

Sea level rise.

Fragile < Resilient > Antifragile

Book:

Antifragile: Things That Gain from Disorder

by Nassim Nicholas Taleb

Beyond resilience. Ability transforms shocks into something productive.

Use disturbance to make something beautiful happen.

Eco-Mimicry.

Make our built human world work like nature. Natural systems.

Complex linked systems, rather than isolated.

Design principles.

Redundancy. Loss of crop biodiversity. Resilient when there are many things providing the same function. Vulnerability when there are monoculture and varieties.

Vulnerability when there is one critical element, which does important work.

Multifunctionality. Characteristics of species fill multiple roles. Solving multiple problems with 1 element.

Interconnection. Yields of one element are feeding another element. Waste can be looked at as a resource for another system.

Global knowledge, locally adapted. Book: Growing food in a hotter dryer land by.... Changes that we are going to face have been faced elsewhere already.

Challenges and responses.

Heat and Drought.

Climate change is not a light switch problem. It is a spectrum problem.

Increased temperatures will cause new problems that will have to be dealt with on farms.

Building design to be adaptive to weather extremes.

Building topsoil. High water storage. Drought-proofing.

Choosing varieties and crops that are drought-tolerant.

Tree based agriculture.

More trees add shade and have water retention properties.

Keyline water management.

Storing water. Less frequent rainfall.

Moving water slowly through the landscape.

Floods.

Increased precipitation. Will happen more in events.

Potential damage to infrastructure.

Plants need to be studied to deal with extreme weather events.

Otter Creek Watershed.

Riparian and wetland zones and buffers make a big impact in terms of mitigating flood damage.

Biodiversity stress.

Variation. Less dependability on seasonal variance.

Farms as sanctuaries for biodiversity.

Old varieties have built in resilience through having lived through extremes in weather.

Diversified farming systems.

Biodiversity in insects and predatory insects.

Banks, buffers and corridors.

Having wild areas provides checks and balances for an ecosystem.

Cultivated and the wild. Balance between the two.

Sea level rise.

Sea level rise predicted to be moderate here.

Storm surges increase significantly.

500 M climate refugees.

Biggest task of climate adaptation is keeping cultural biodiversity alive.

Lots of migration will happen.

Reflections.

Social adapting. We will have to deal with a lot of climate justice issues in a short time.

Permaculture vs. cultivated farming.

Pessimistic approach to farm planning. Plan for worst-case scenarios.

How to breach these issues to people who would rather not accept these issues.

Building the village.

Meeting people across differences is a different skill set.