

# ANALYZING BEEKEEPING IN AOTEAROA NEW ZEALAND: CHANGES IN CLIMATE, CALENDARS, AND CULTURE

## Three CALENDARS Project Questions Presentation



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# Research Questions



1. How have beekeeping practices and technological tools that support beekeeping changed?
2. What climate change indicators and vulnerabilities are reported?
3. What is the future outlook for beekeeping as described now by beekeepers?



# Climate Change Vulnerabilities

**“What we used to do in the past, we cannot do anymore. We need to adjust to what the weather is bringing us. Now it’s unpredictable”**

*Carlos Zevallos Comvita*

**“There was no indication that it would flood. Well, 27 hives disappeared overnight”**

*Beekeeper Barry Foster*

**“Over the past few years, the winters have been milder (warmer) than in previous years. This has resulted in brood being in the hives all through the year”**

*Beekeeper Janine Davis*

**“If there is one stark lesson for all beekeepers in New Zealand ... it is that past benchmarks on where it is safe to locate apiaries no longer apply”**

*Beekeeper Barry Foster*

**“It’s flowering too early. It’s kind of out of balance”**

*Dr. Michelle Taylor Varroa Mite Researcher*

**“Having your hives next to a stream is not a great idea anymore”**

*Dr. Michelle Taylor Varroa Mite Researcher*

**“Years ago, we knew exactly where the honey flow kicked off. Now its unpredictable”**

*Carlos Zevallos*



# Technology and Practices

**“Beekeeping used to be an art but now it's more of a science”**

*Rae Butler  
Bee Smart Breeding*

**“The biggest change is with farmers changing to irrigation systems. Everything's wetter, so nothing's yielding as much honey”**

*Rae Butler  
Bee Smart Breeding*

**“Before Mānuka was valuable, it was considered a rubbish honey”**

*Beekeeper Alastair Little*

**“The biggest technological change that's happened in my time has been the invention of Mānuka honey and the research behind that”**

*Bill McDonald  
CEO Bee Fresh Farms*

**“The biggest change is with farming. Farmers don't grow as much clover”**

*Rae Butler  
Bee Smart Breeding*

**“We then had to understand more about the lifecycle, the whole dynamics of the hive and how it was interacted with the mites”**

*Rae Butler  
Bee Smart Breeding*

**“Varroa is probably the biggest problem facing the bee industry around the world”**

*Prof. Phil Lester*



# Future of Beekeeping

**“We may lose some colonies in the interim, but we will find a way. We need to have bees”**

*Dr. Michelle Taylor  
Varroa Mite Researcher*

**“We vitally need them, so there's no question about that”**

*Beekeeper Barry Foster*

**“It's bright. And we're always going to say that because New Zealanders tend to be a find a way people”**

*Dr. Michelle Taylor  
Varroa Mite Researcher*

**“What else can you do with honey? What are the other products you can use it for? I think we have to find ways to be smarter”**

*Bill McDonald  
CEO Bee Fresh Farms*

**“It'll keep going. But just with a lot less hives. It'll balance itself out eventually. There's going to be a bit of tragic sort of stories in the meantime”**

*Beekeeper Alistair Little*

**“another couple of years and then we'll be back to normal”**

*Beekeeper Frank Lindsay*

**“It is going to do a bit of a dive, there is going to be less and less beekeepers”**

*Queen Breeder Rae Butler*



# Who's in charge: the bees or the beekeeper?



**“Beekeepers are still in charge. But operating under more constraints and parameters”**

*Beekeeper Barry Foster*



**“As a hobbyist, probably the bees. Commercialized, the beekeepers”**

*Beekeeper Alistair little*



**“The bees are. So, you can determine that I'm going out to do this. And when you get to the apiary and startup opening hives, it's totally different”**

*Beekeeper Frank Lindsay*

**“Oh, the bees are in charge. Definitely”**

*Queen Breeder Rae Butler*

