

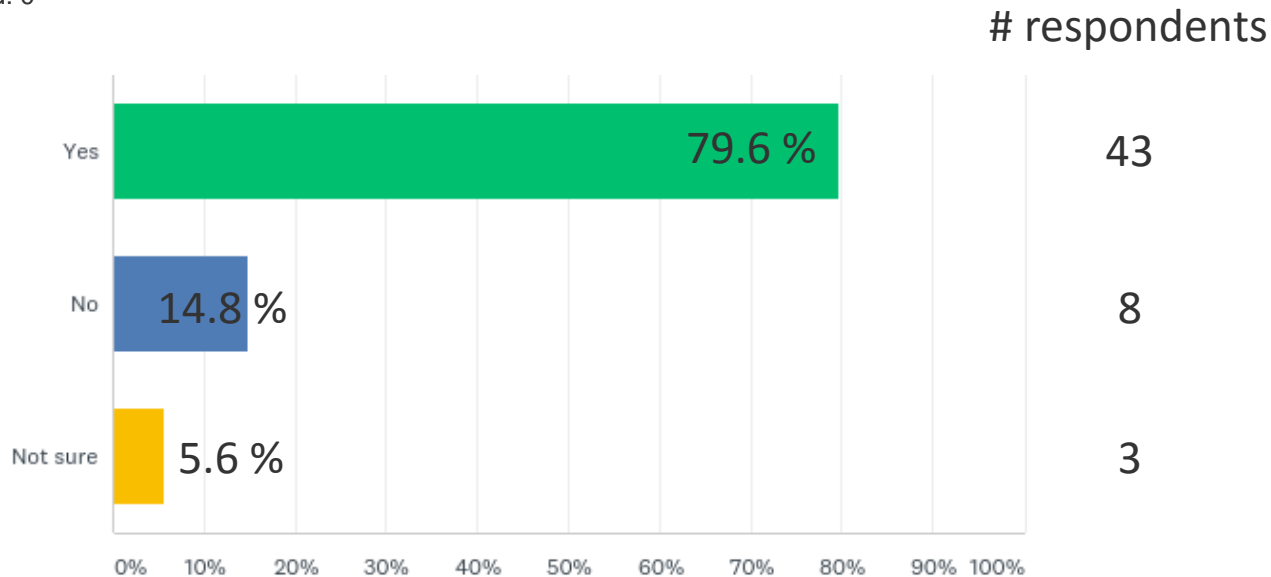


How is giant willow aphid affecting you?

Wednesday, August 01, 2018

Q1: In recent years, my bees have suffered from an increase in numbers of wasps, which have been seen robbing hives, preying on bees, or both.

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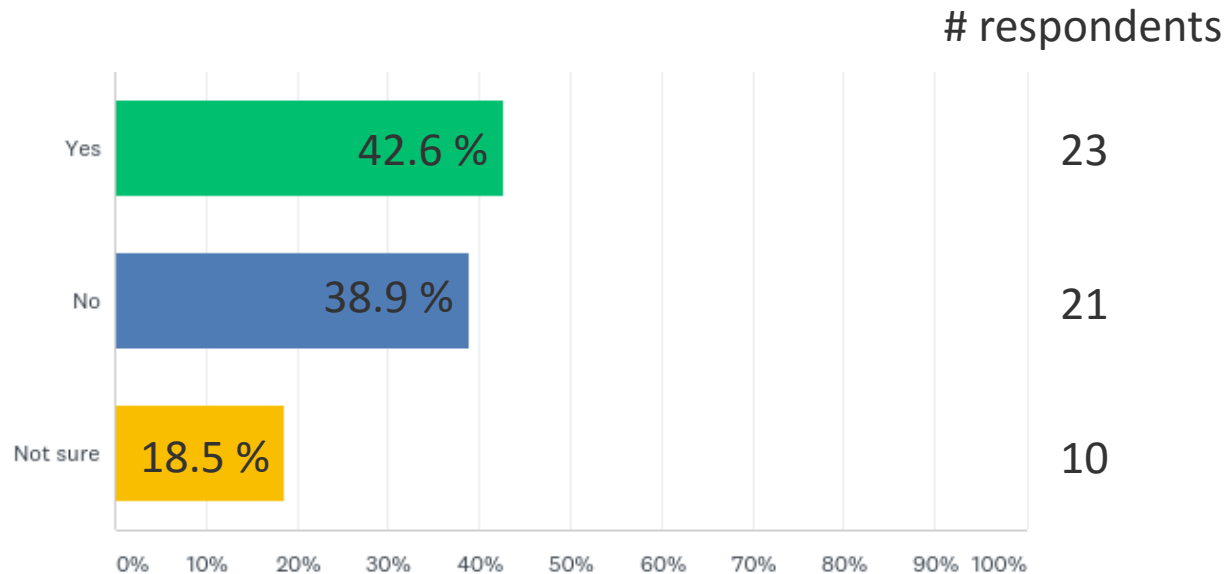


Q1: In recent years, my bees have suffered from an increase in numbers of wasps, which have been seen robbing hives, predating on bees, or both.

- Wasp nests seem to be overwintering in areas where willow trees are growing.
- A major increase in wasp activity / Varies every year. Particularly bad 2017.
- Larger vespid and paper wasp nests as a result of the increased availability of honey dew from giant willow aphid.
- *We have learned to control wasps around our apiary sites as wasp numbers increase.*
- The areas where my bees come under wasp pressure have few willows.
- In most cases beehives can cope with wasp nuisance. however wasps have been observed 'cleaning out' beehives that are already dead or weakened by other causes.
- Strong hives can defend wasps.
- My MV trees are adjacent to a beekeeper's overwintering site. Hives are about 100m from the willows. I have seen both bees and (vespid) wasps searching the willow stems during the day. They don't seem to disturb each other, both lap up shiny honeydew patches.
- The previous season there was less robbing at the extraction plant, because bees were down at the river instead!

Q2: I have seen crystals underneath my hives in spring, that have been cleaned out by bees.

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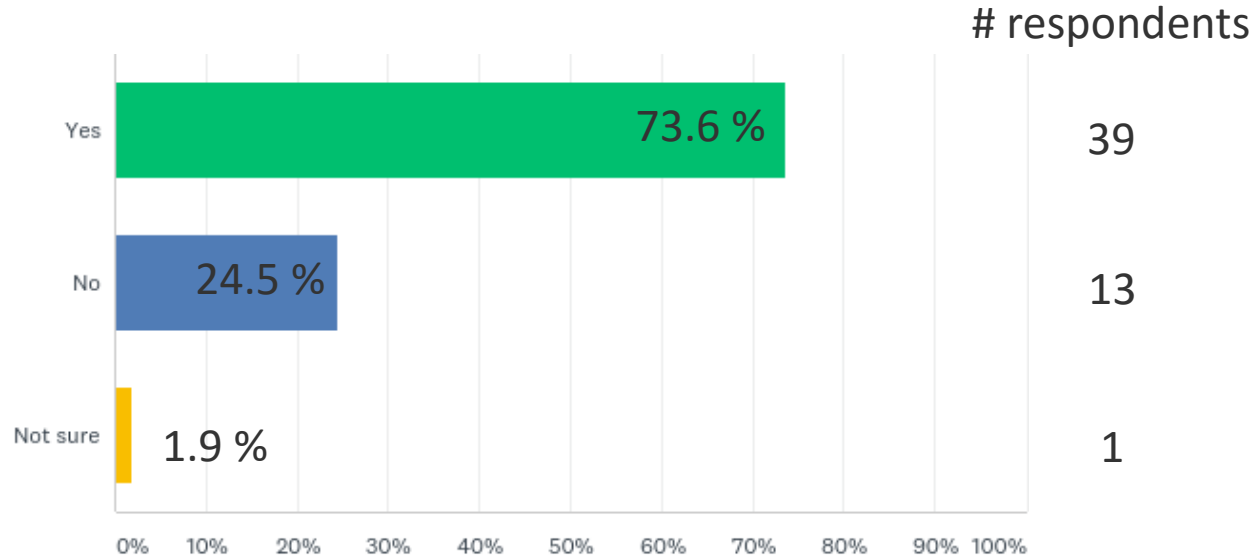


Q2: I have seen crystals underneath my hives in spring, that have been cleaned out by bees.

- The bees need to use precious energy and resources in spring to clean out these crystals that in turn puts extra stress on them in spring.
- This varies for us from region to region.
- Have seen crystals on monitoring boards and melezitose crystals in frames.
- In our area willow dew is mixed with beech forest dew to make thick toffee-flavored dew that does not crystallise. A huge amount of honey dew is harvested as well as good winter stores for the bee hive.
- This can also be seen in honeys that are renowned for granulation.
- *We keep honey dew from willow aphid out of brood boxes.*

Q3: I have noticed crystallised honey in my honeycomb.

Answered: 53 Skipped: 1

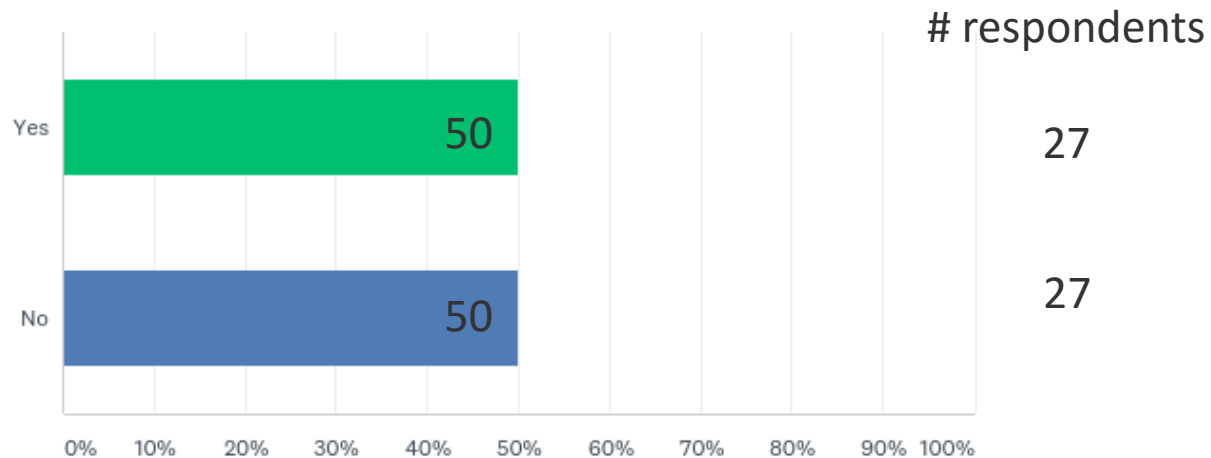


Q3: I have noticed crystallised honey in my honeycomb.

- Sometimes I have the odd hive die out because the top feed box is mainly willow dew.
- *I have tended to harvest and process my honey earlier before much of the honey dew comes on stream.*
- Not too much and mostly in year 2016.
- A couple of years ago.
- This varies year on year.
- Beech dew & willow dew combine to make a thick toffee-like honey dew.
- Nothing unusual with this statement, most honey crystallizes over time.
- Crystallised honey in past years in my Auckland hives has come from Pohutukawa nectar.

Q4: I have experienced honey losses because I was unable to extract crystallised honey.

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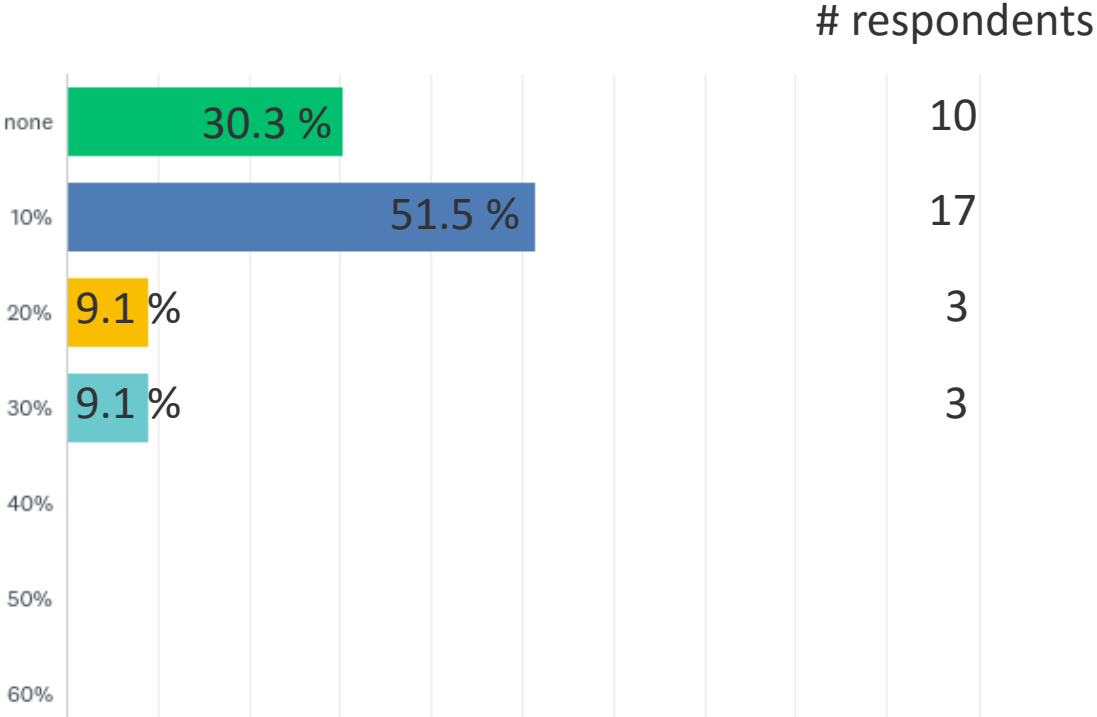


Q4: I have experienced honey losses because I was unable to extract crystallised honey.

- I had a filter damaged by willow due. \$3000 repair bill.
- When concentrations are greater than 15%, the solid crystals block filters and are a loss to the beekeeper.
- My honey was Pohutakawa.
- Not so much but I have had unusable honey in frames in the hives that bees will not consume or clean out. This can lead to over crowding in the brood frames and not giving the queen sufficient space to lay that can lead to swarming.
- Not a huge amount.

Q5: If you have experienced honey losses, please estimate the percentage lost.

Answered: 33 Skipped: 21



Q5: If you have experienced honey losses, please estimate the percentage lost.

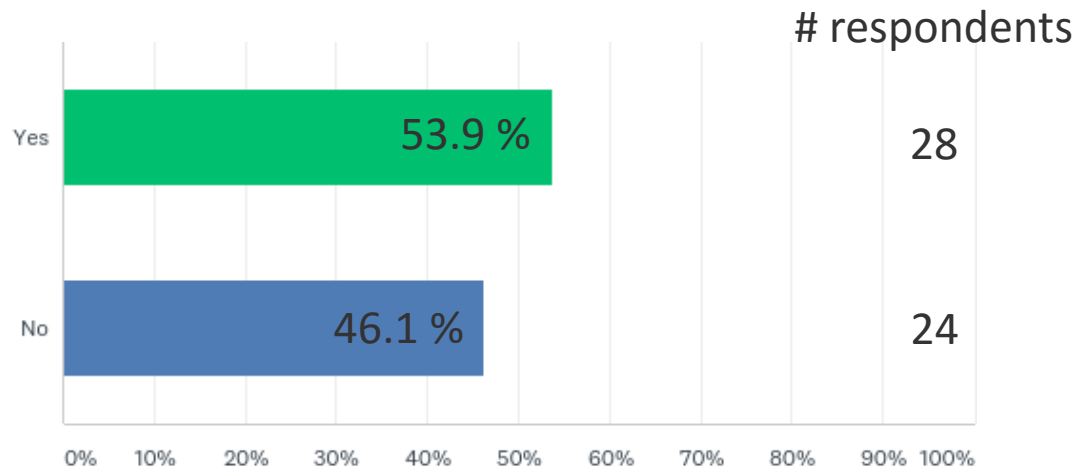
- *I have to take supers off early in the honey season to prevent them filling up with willow dew. This shortens my honey season significantly.*
- Less than 10% (3 respondents said this).
- Difficult to work out percentages.
- The honey is tainted with salicylic acid which lowers its value.

- *If warmed, honey was able to be completely extracted.*
- *Have really only two sites out of 52 that cause problems and we shift our hives out when we see the aphids building up.*

- Haven't extracted any honey.
- I am unsure as this is my first year and I only bought my hives late in the season.

Q6: I have recognised a problem with crystalised honey and have taken action by harvesting honey earlier in the season.

Answered: 52 Skipped: 2



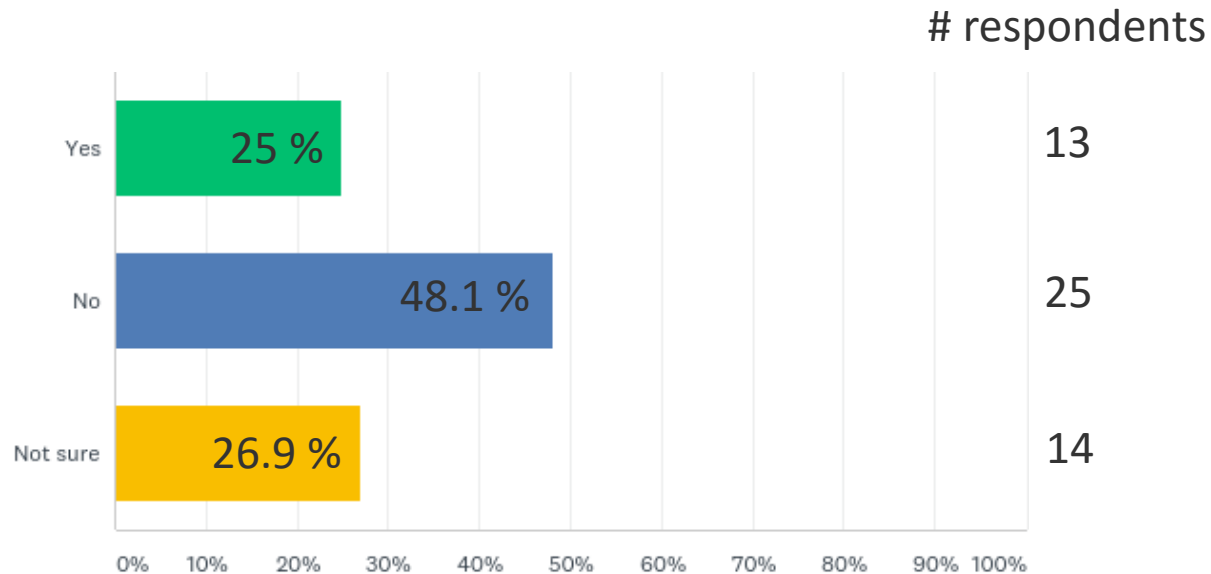
Q6: I have recognised a problem with crystalised honey and have taken action by harvesting honey earlier in the season.

- *We harvest before combs are capped.*
- Just the first year in some areas for aphids.
- Not all sites affected.
- Not always possible. / Not an option.
- Off hive but in shed.
- A competent beekeeper should be adaptable to suit the conditions.

- We have brassica honey in spring that granulates, but that has nothing to do with GWA. But we do need to get it off the hive promptly, particularly if there is a drop in external temperature & we do not leave it sitting waiting to be extracted at the plant.
- *We put it back as feed honey.*
- To date this hasn't been a major issue for us.
- *Most take manuka honey off as soon as the hives moved from manuka sites.* If contaminated by honeydew, should be labelled as honeydew honey.

Q7: My bees have shown signs of poor nutrition after being overwintered on crystalised honey.

Answered: 52 Skipped: 2

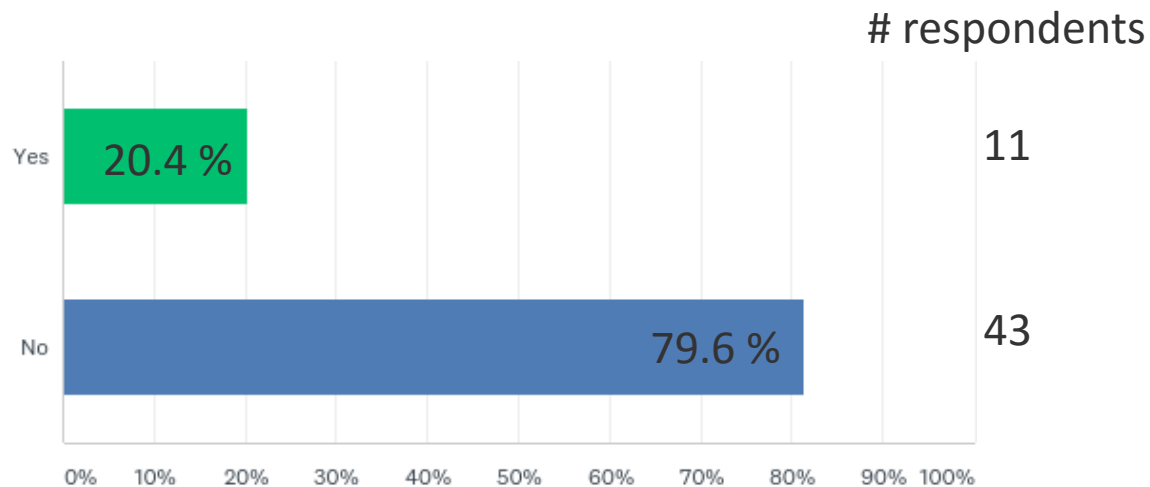


Q7: My bees have shown signs of poor nutrition after being overwintered on crystallised honey.

- *Am now feeding pollen sup to help hives recover.*
- In some areas for sure, but it could be related to other factors as well, predation by wasps, Varroa loads higher through winter and into spring...
- Willow dew honey can give a false indication of a colony's winter stores.
- I have not experienced this myself as I have good over wintering sites that *I have planted trees for bees* on. This helps a lot.
- Willow & beech dew seem to provide ample nutrition provided there are good pollen sources near the apiary site.
- The real issue is we are not seeing willow nectar in the spring now.
- Bee nutrition depends on many factors including the ability of the beekeeper to assess where bees may need syrup feeding to help cope with stored honey that has hard crystals.
- We don't know how much of the honey stores for winter will actually be available to the bees.
- Maybe, but a lot more hives in the area now may be causing bee nutrition deficiency.

Q8: I have recognised a problem with crystalised honey and have taken action by moving my hives to a new location further away from willows.

Answered: 54 Skipped: 0

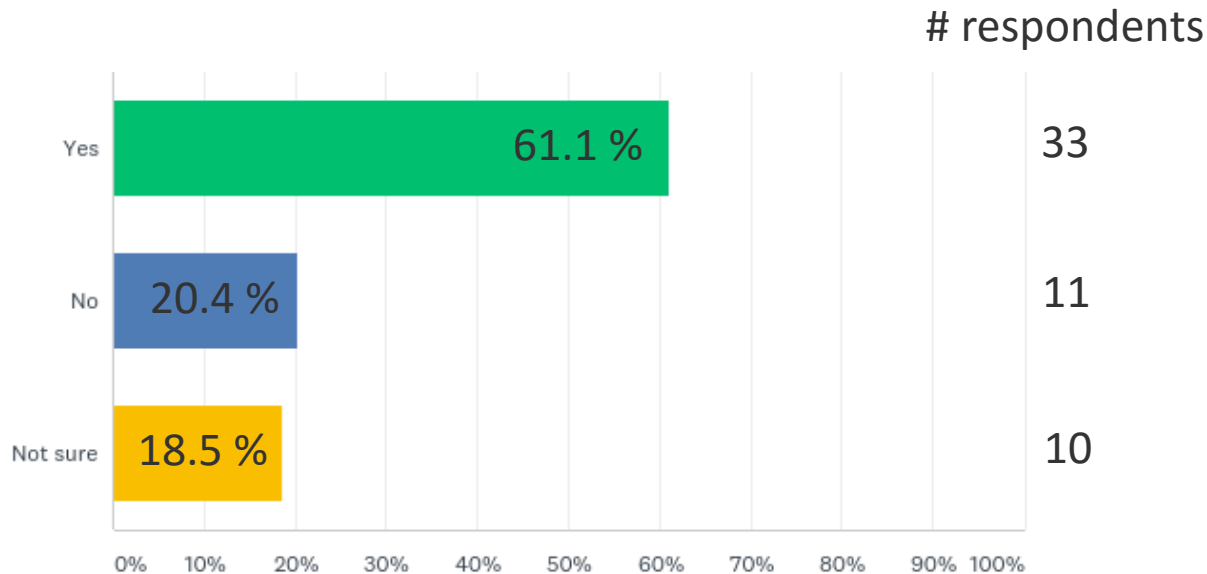


Q8: I have recognised a problem with crystalised honey and have taken action by moving my hives to a new location further away from willows.

- My adjacent beekeeper still overwinters there. The spring pollen and nectar gets his bees off to a great start.
- Not possible.
- No willows in foraging distance to my hives.
- Only minor amounts found this year.
- I have *taken honey off early* before willow aphid took effect.
- Just *harvest honey early or use for feed*.
- *We bring hives into willow dew areas to fill up with late honey flow, we harvest willow dew before frames are capped as the boxes fill.*
- There are other alternatives than shifting hives, willows provide early spring pollen beneficial to bee build up.
- I am actually *planting trees for bees willow species* with a view that this research will eventually result in the release of a bio control for GWA.

Q9: I have noticed that willows that my bees rely on in early spring for pollen and nectar have been affected by giant willow aphid as evidenced by blackened stems or branch dieback.

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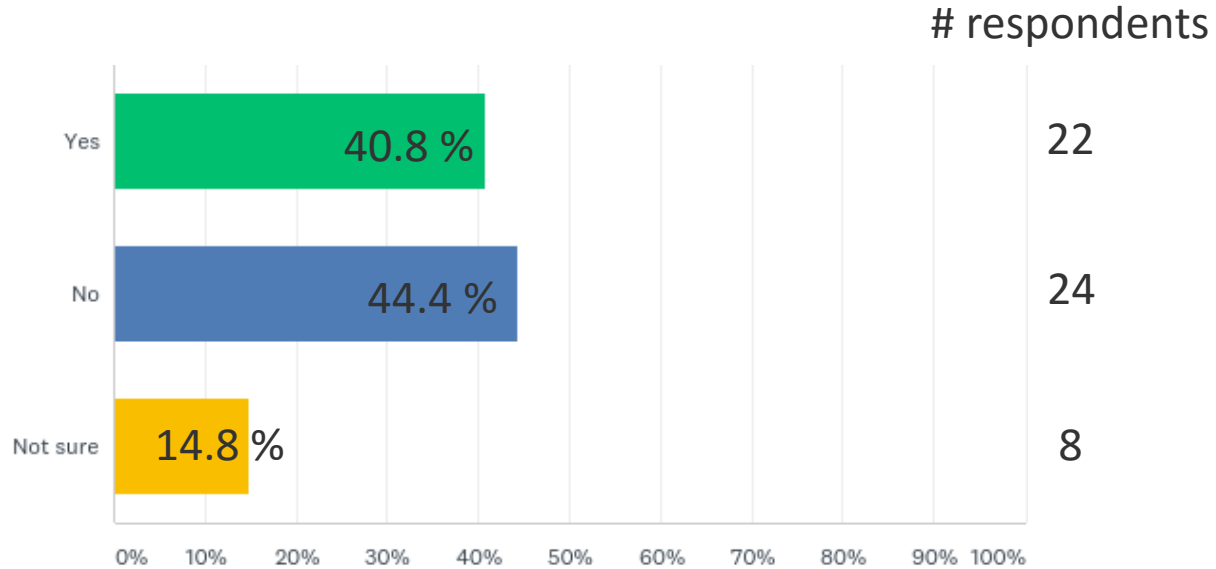


Q9: I have noticed that willows that my bees rely on in early spring for pollen and nectar have been affected by giant willow aphid as evidenced by blackened stems or branch dieback.

- Willow aphid has killed my pussy willow. / Considerable dieback.
- Even pussy and crack willows dying.
- They also have little to no nectar secreted when they come into flower.
- Foliage is blackened, there is branch dieback and they are quite brittle.
- You see blackened (mould) covered willows around. Some pussy willows are OK. / *sprayed the willow cuttings with sulphur and no aphids the next year.*
- Blackened stems, willows still seen to grow vigorously.
- No evidence, there are some willows nearby but not accessible to me.
- Poor willow flows are actually signs of stress on the willows that don't flower as well and give as much nectar & pollen as they may have prior to GWA. Perhaps we need some research on the flowering patterns of willow pre and post GWA?
- I have seen affected willow but it is not a significant food source where my bees are so affects me very little if any.

Q10: I have noticed that some of these willows have died.

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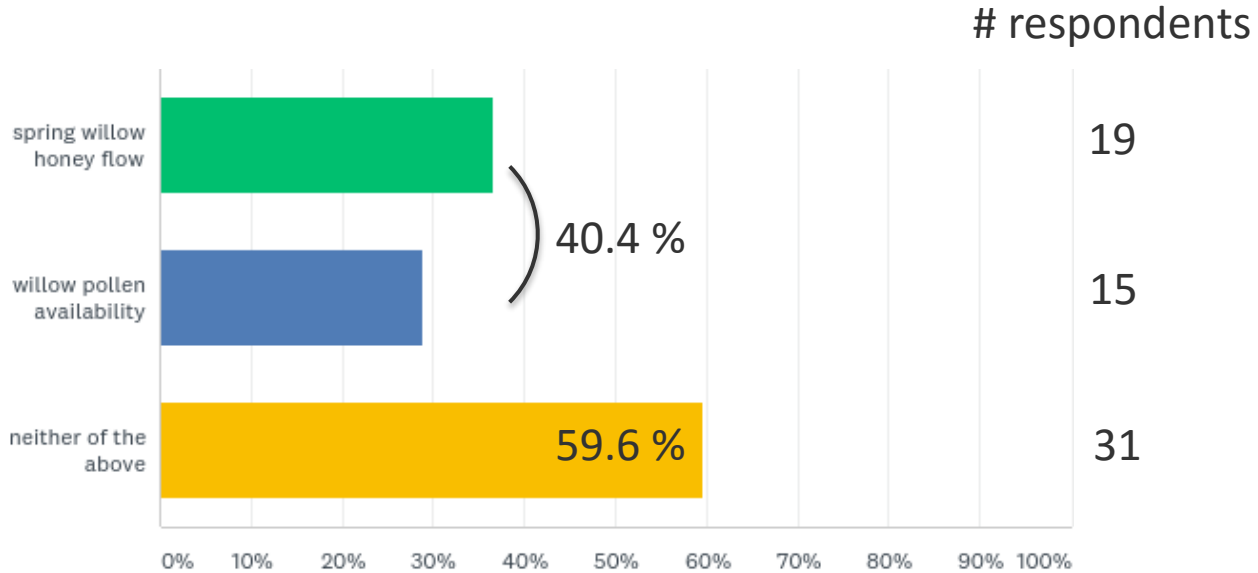


Q10: I have noticed that some of these willows have died.

- Some crack willow.
- After 3-4 years willow death is widespread.
- This is particularly evident with recent pole plantings that have been lost to GWA predation. I have also seen older willows die off at the tops and on branches leading to the eventual death of the whole tree. Other pathogens get in as well.
- Willows on my block are sprayed by DOC and land owner.
- However, a lot of the willows are currently being removed for new riparian plantings.
- We have seen more partial die back.
- Our teams are only now being alerted to willow aphid and how to deal with it.

Q11: In recent years I have seen a decrease in:

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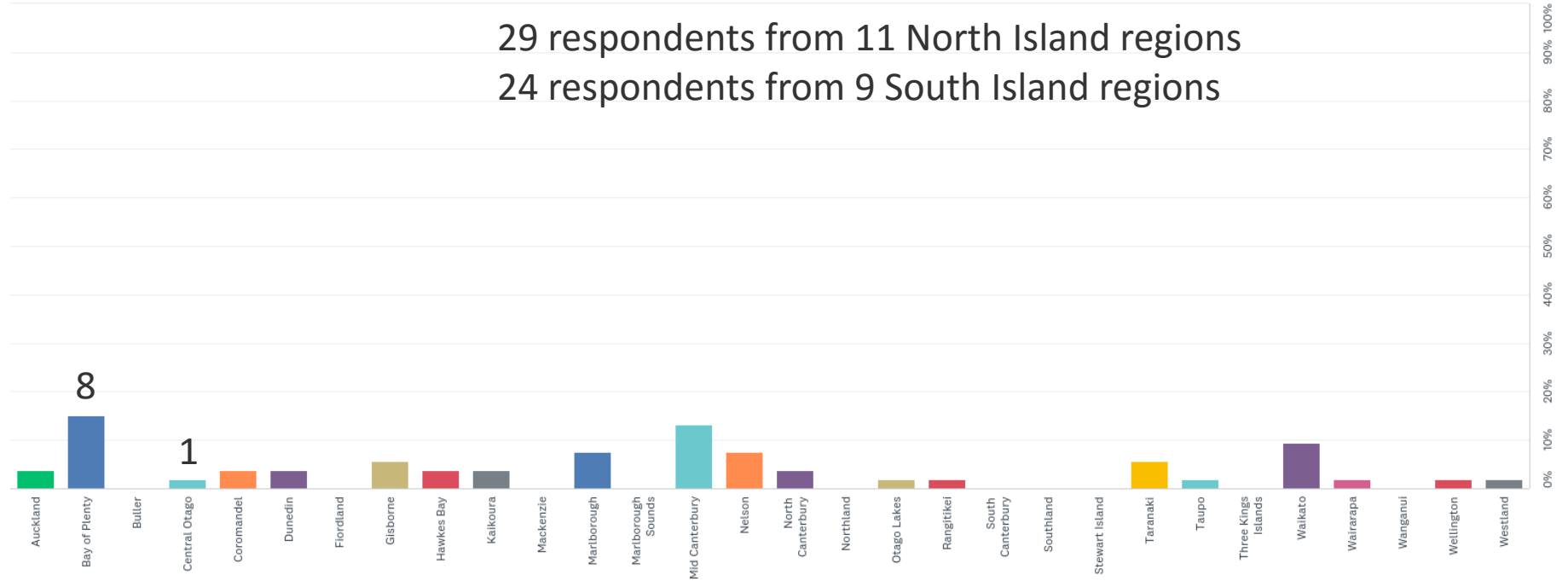


Q11: In recent years I have seen a decrease in:

- Spring willow honey flow
- Beekeepers blame poor spring weather for poor willow flows but I am sure that GWA is also making an impact as well on flowering patterns.
- Willow pollen availability
- Mainly due to local council removal of willows.
- I also note the huge increase in beehives around areas where once I was the only beekeeper. As well there has been a deliberate DoC process to poison willows and land owners have cleared 'river bed' land to farm.
- Neither of the above
- I think there are other sources available.
- We haven't had a noticeable issue.
- The bees feed heavily on new season catkins in August-October. There are not too many aphids active at that time of the year.

Q12: I practice beekeeping primarily in the following region:

Answered: 53 Skipped: 1



Q13 Additional comments

WASPS

- We have noticed large numbers of wasps on leaves of certain trees.
- Prevalence of wasps meant *resorted to Vespex as a control measure.*
- More wasps in the autumn.
- *Needed to start poisoning wasps using Vespex* in areas of high wasp concentrations.
- The first year we saw a massive increase in late summer wasp nests. Not so much in recent years. Willow dew honey was present in the first years not so much in last 2 years.
- I have only heard from other beekeepers about the effects of the giant willow aphid but have no experience of this myself. I have had a huge increase in wasp populations.

Q13 Additional comments continued

HONEY

- Major extraction problems requiring *additional heat* which reduces honey quality.
- *Difficult to filter honey* as filter bags regularly fill with crystals.
- We are also honey extractors and have quite a few beekeepers who have GWA honey in their frames which is *hard to extract*.
- Problem not apparent till very late this season, harlequin ladybirds arrived this season and kept aphid populations very low till late autumn so not much dew.
- I have noticed that the 2017/2018 season had very little willow honey dew as compared with previous years.
- The impact has been an increase of autumn honey, approximately 40 kg of honey on average, and has helped us to draw new foundation frames on the willow dew flow.

Q13 Additional comments continued

BEE HEALTH

- Have to *give more syrup* to bees for overwintering and a top up in August in some areas where GWA is prevalent in autumn.
- Poor nutrition for autumn queen cell raising. Harder to gauge weights of winter stores due to presence of willow dew.
- *Different way of managing hives* in autumn.
- Terrible impact on my 800 hives. *Try to keep bees away from the willows* when leaking dew from the aphid.
- In some seasons there has been a food honey dew source when there is normally little or no nectar income. I have noticed a decline in the willow aphid numbers and honey dew income this autumn.
- We are aware of the problems via fellow beekeeper comments but have managed by *moving sites*.

Q13 Additional comments continued

WILLOWS

- Blackened willows look awful and sick. *Farmers are not planting as many willows* for erosion control as they might have done prior to the arrival of GWA.
- Late nectar source is a positive however the impact on willow is a concern. One farmer noted that it made the bark palatable to his cows resulting in ringbarking. DOCs desire to rid the estate of all introduced species including willow is also a worry.

Q13 Additional comments continued

GENERAL

- The wider environmental damage to other plants and equipment covered in sooty mound from overhanging willows.
- They haven't affected me as yet. Positive - I'm seeing more fantails feeding on them -family of five this year. Bees working willow dew in the afternoon to dusk. Other floral sources must be better.
- Have not noticed willow aphid in the last 2 autumns.
- To my knowledge there has been no assessment made on the aphid willow dew for any beneficial effects that may be in the dew. The benefits of Aspirin for blood 'health' are known and it is recognized Aspirin was developed from an acid associated with willows. It would be ironic if willow dew had some beneficial health properties and the industry 'chose' to eradicate or somehow control the aphid to the extent bees no longer gathered willow aphid dew. So much for industry foresight! Progressive farmers have spent many years clearing land of manuka and now the next generation of 'progressive' farmers are planting manuka. Ironic, but of course there has been income generated for the industry hangers on as the manuka wheel turned full circle.