

# Host-mediated differences in quantity and chemical composition of honeydew of the giant willow aphid

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## The giant willow aphid

- A large honeydew producing aphid
- Releases 1 - 2 mm<sup>3</sup> per hour of honeydew

## Honeydew

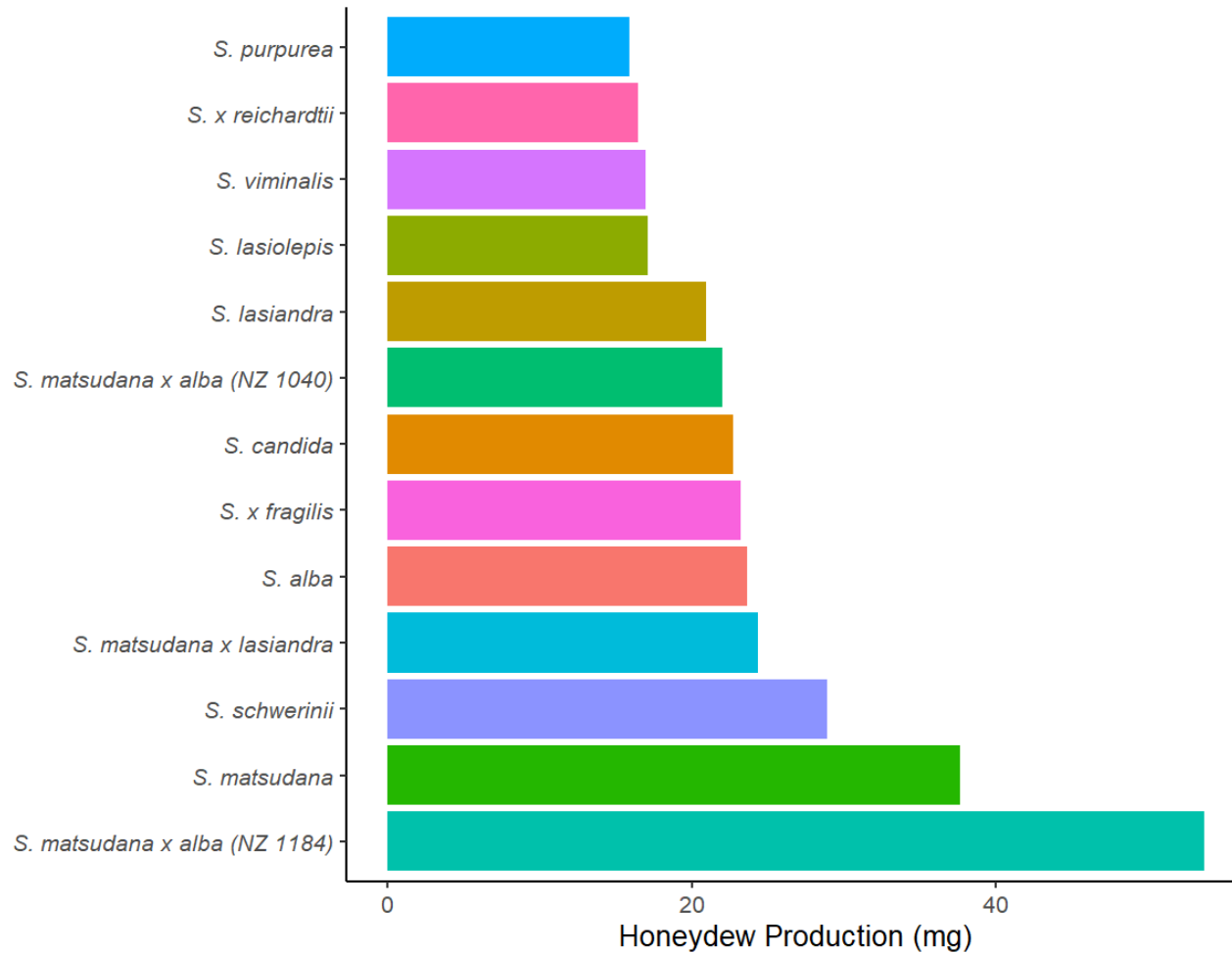
- A sugar-rich liquid
- Consists of sugars, amino acids and lipids

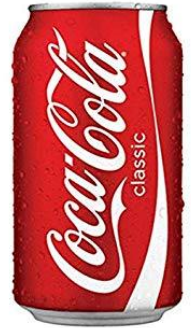
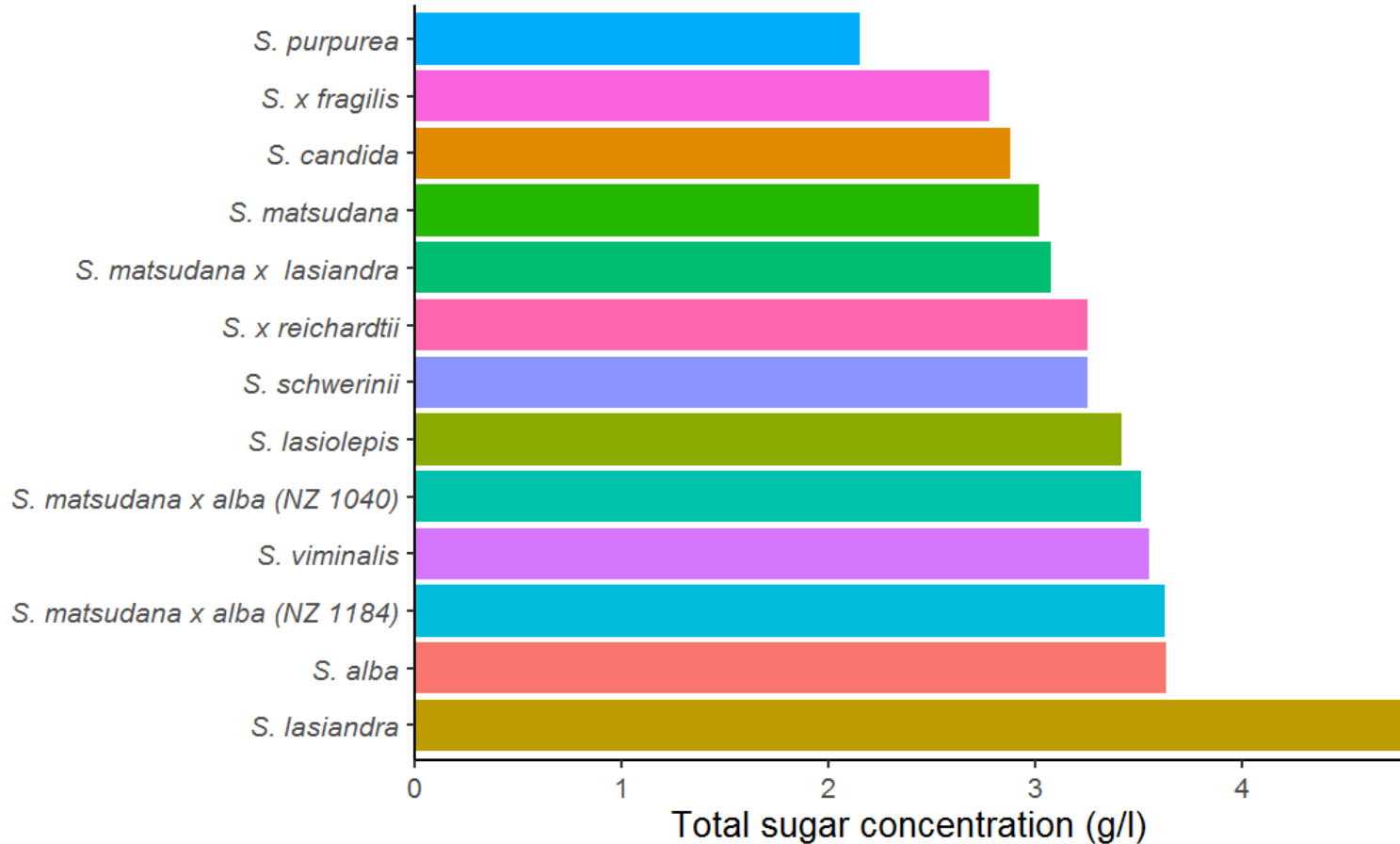
# Honeydew collection



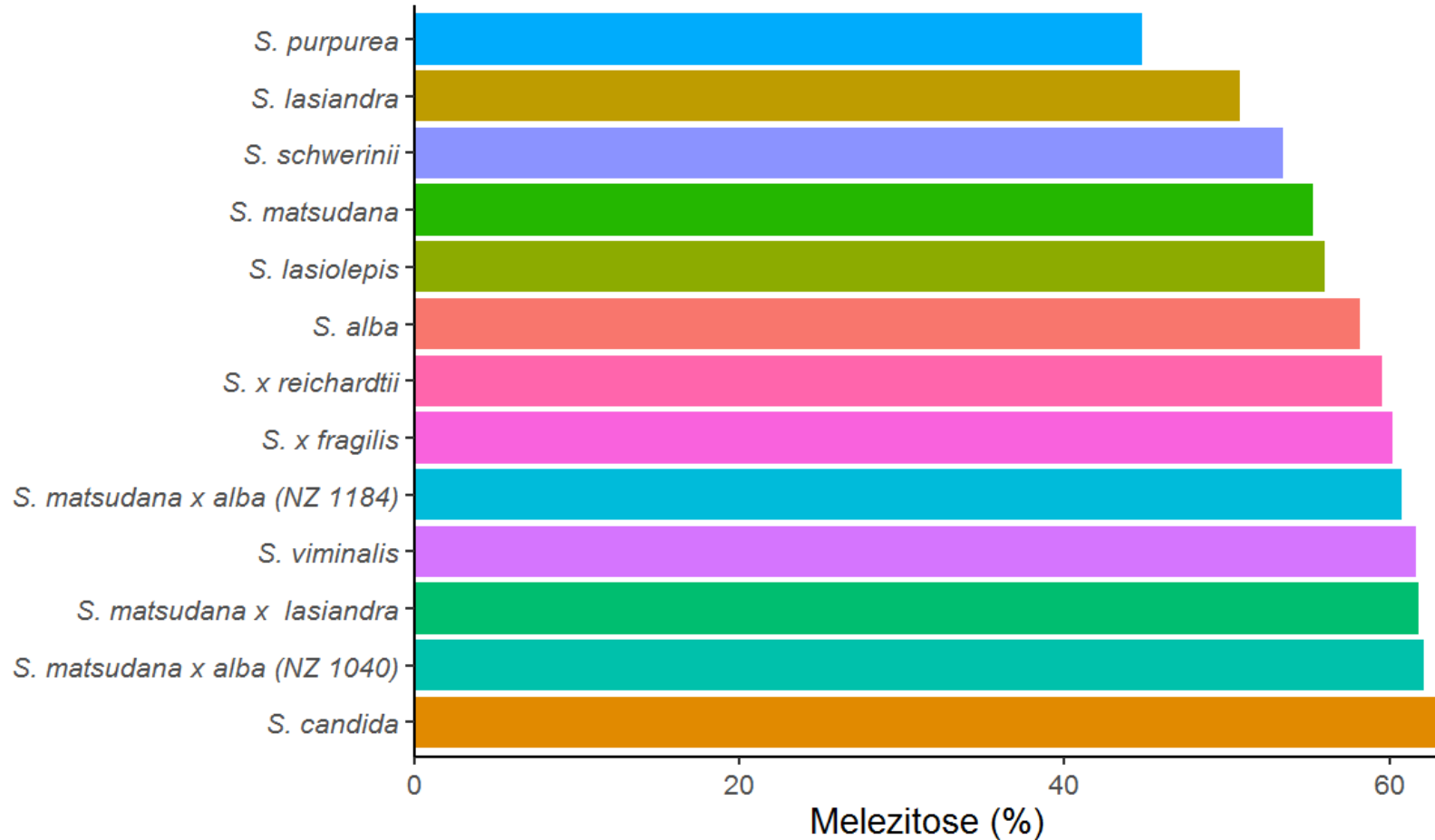
# HPLC analysis of honeydew sugars

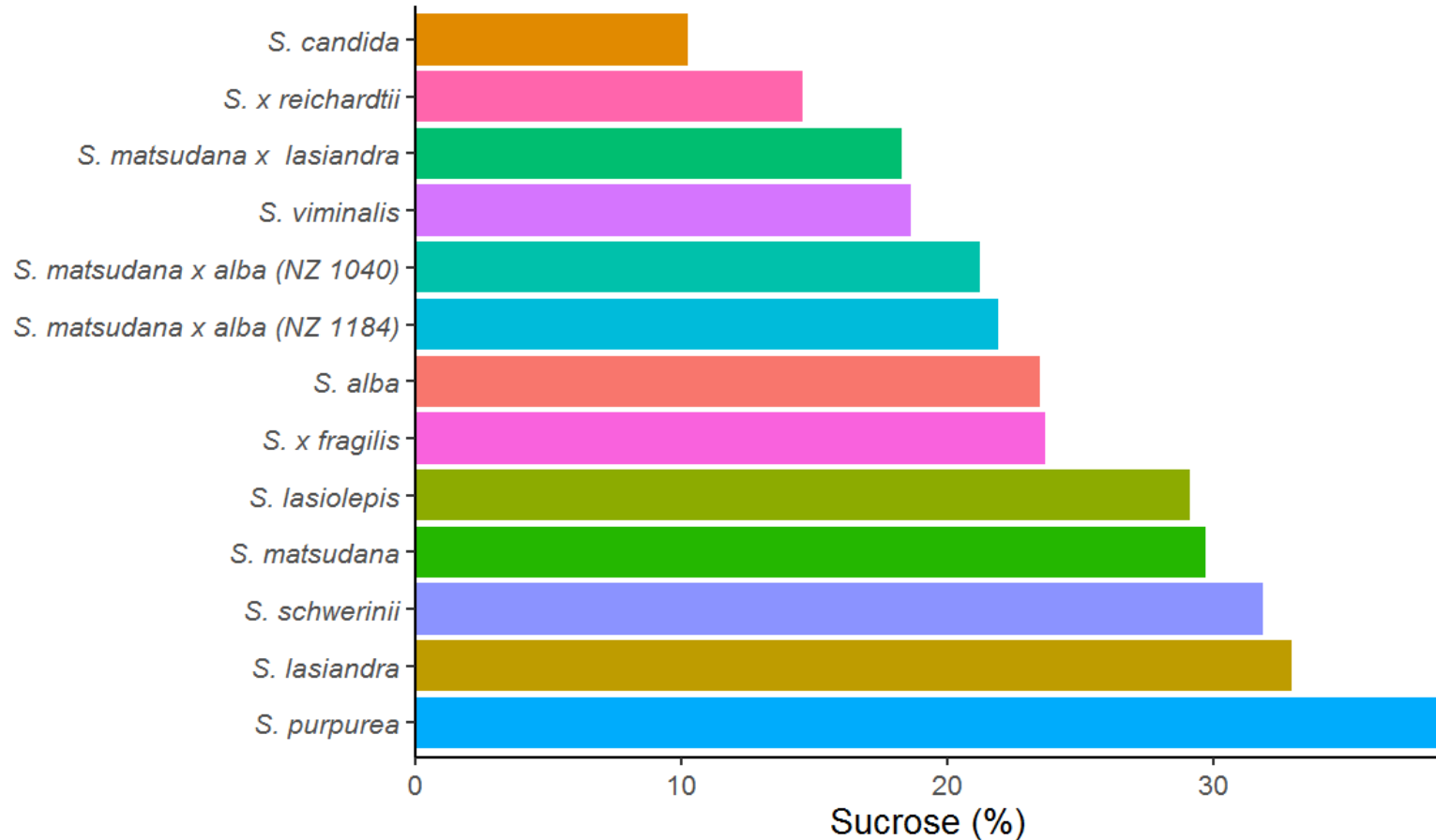




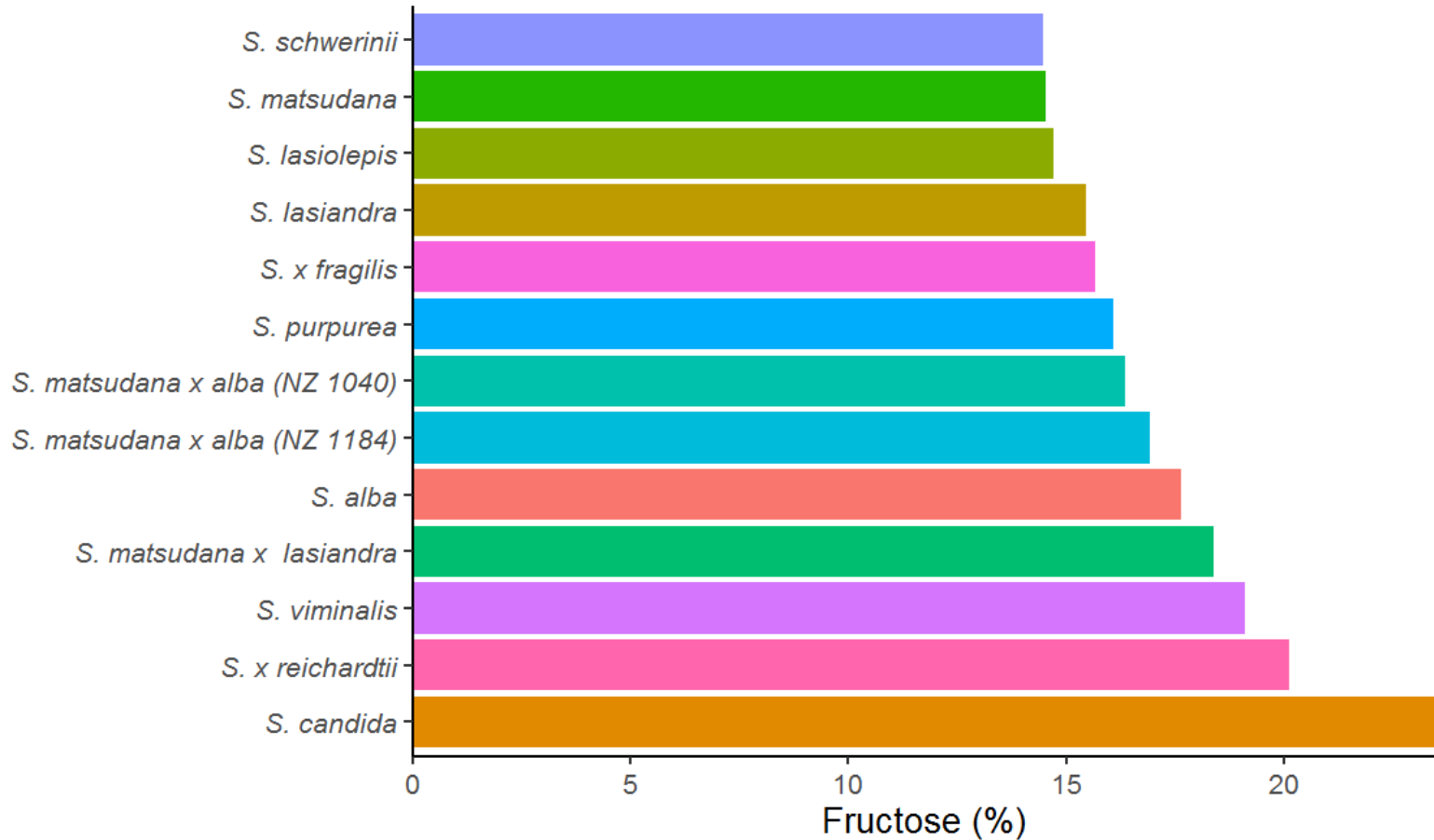


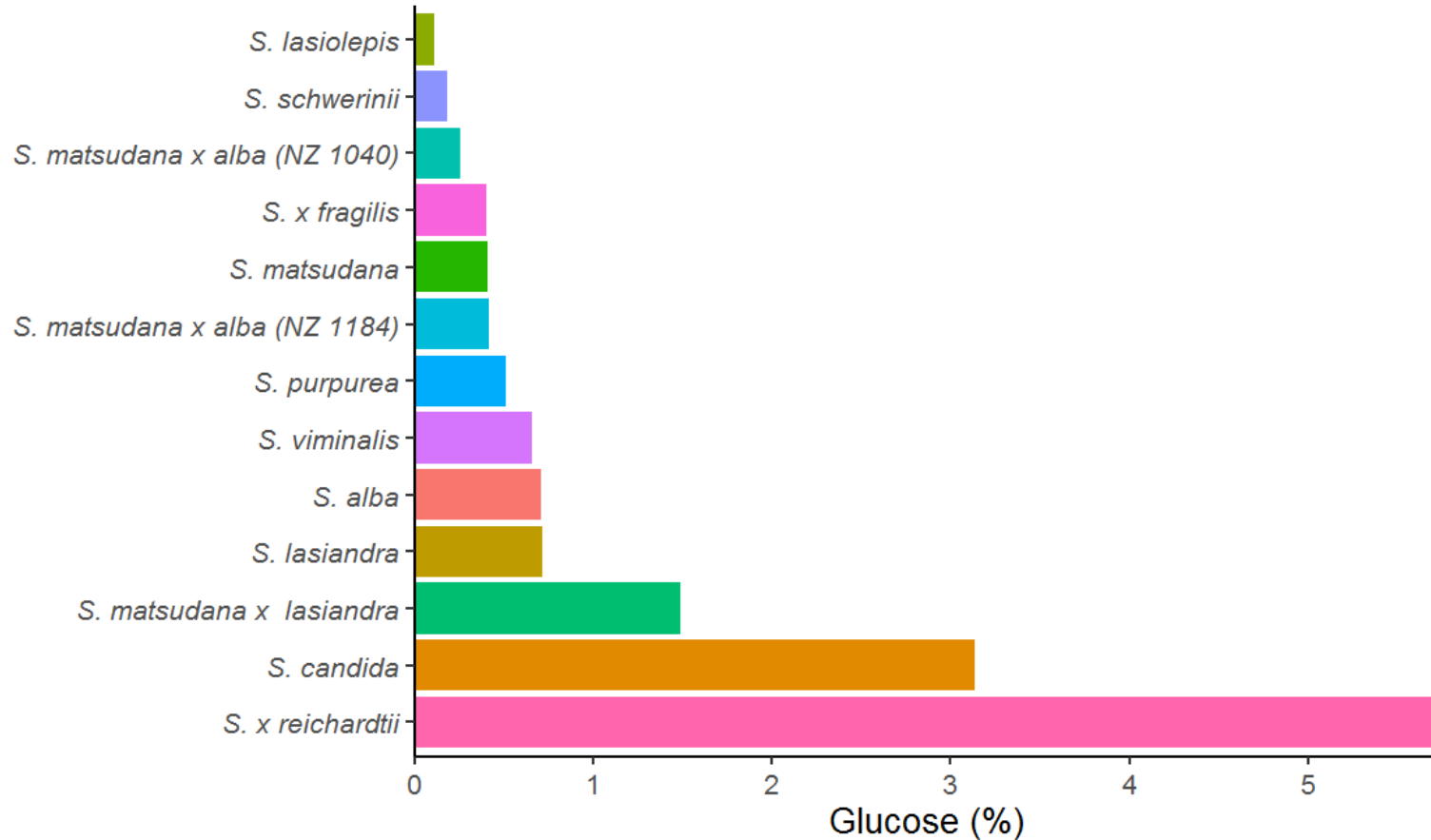
**100 g/L  
sugar**











# Conclusions

- Total sugar concentration of honeydew is similar for the willows
- Melezitose is the dominant sugar (40 - 60%) in honeydew
- Sucrose and fructose are the other main sugars in honeydew
- The resistant willows (*S. lasiolepis* × *viminalis* and *S. eriocephala*) produced no harvestable honeydew

