



# ***Drosophila suzukii:***

Local infestation patterns and monitoring  
around Wädenswil



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# Content

- Local history of *D. suzukii* appearance in Wädenswil
- Setup of a local monitoring 2012
- Occurrence and distribution
- Additional findings
- Open questions
- Adaptations for 2013



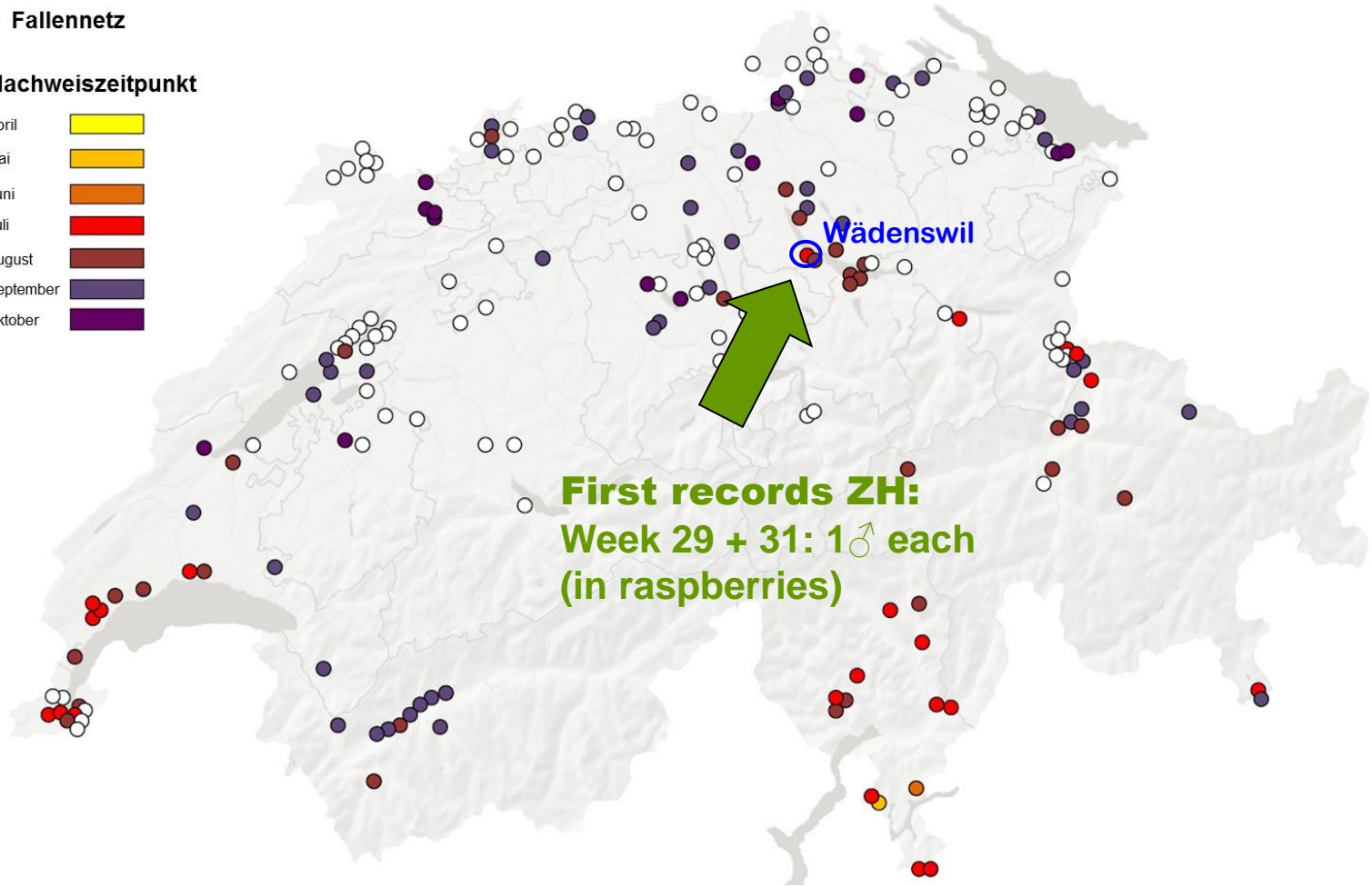


# Swiss *D. suzukii* monitoring 2012

○ Fallennetz

## Nachweiszeitpunkt

April	Yellow
Mai	Light Orange
Juni	Orange
Juli	Red
August	Brown
September	Dark Purple
Oktober	Dark Purple



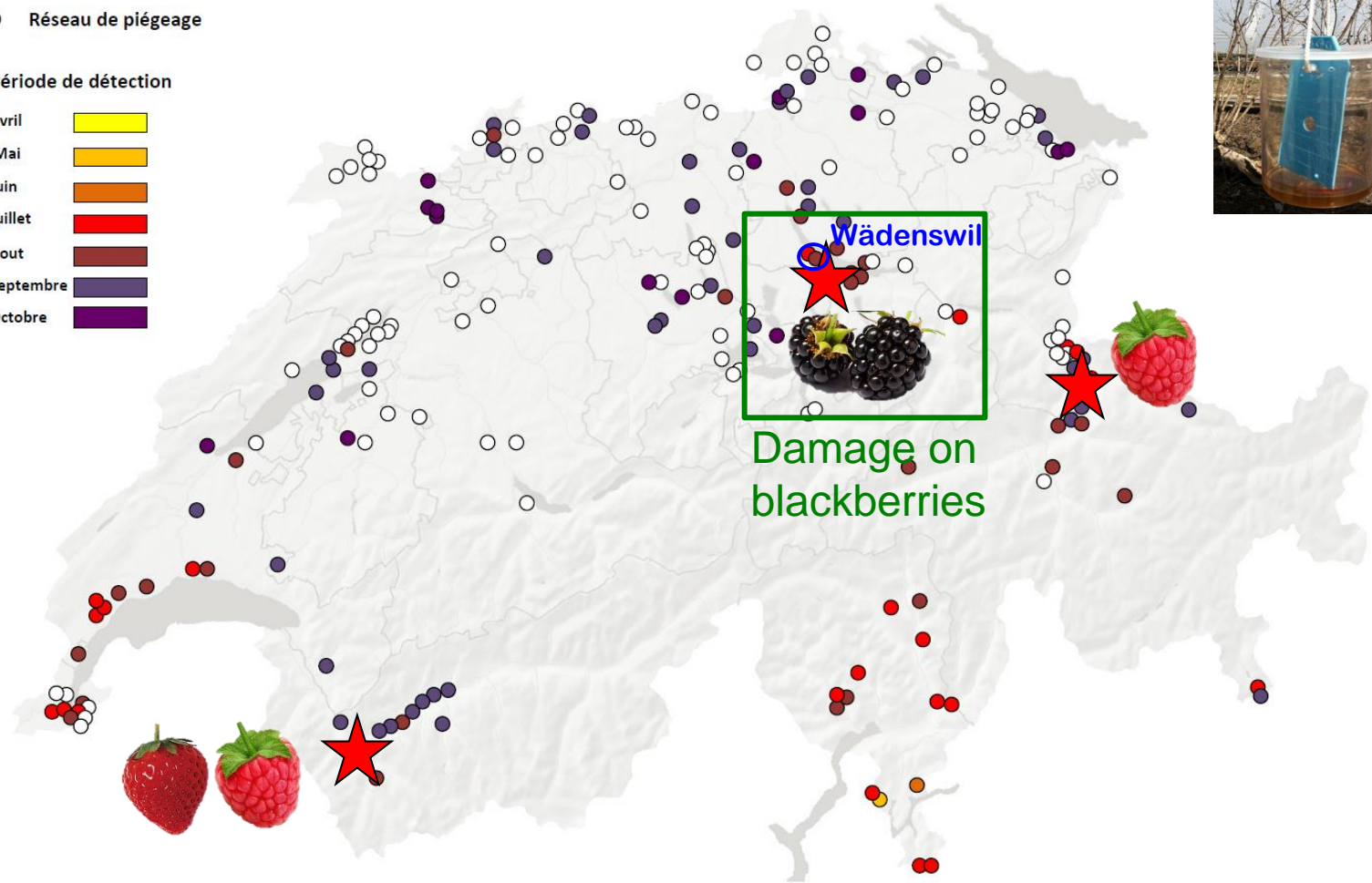
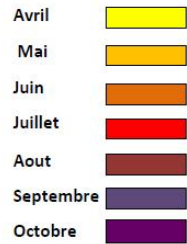
Source: C.A.Baroffio et al.



# Schweiz 2012

○ Réseau de piégeage

Période de détection



13.11.2012

Source: C.A.Baroffio et al.



# Local monitoring

## Monitoring



Official  
monitoring trap  
2012

Apple vinegar +  
water [1:1]

## Extended monitoring and experiments with baits



0,5 L PET



Various compositions

## Mass trapping



Commercial  
Gasser trap

Vinegar, red wine, sugars,  
ethyl acetate, etc.



# Crops considered



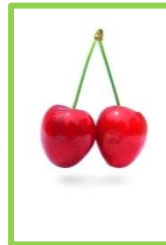
Alternative hosts



Main season



Early season

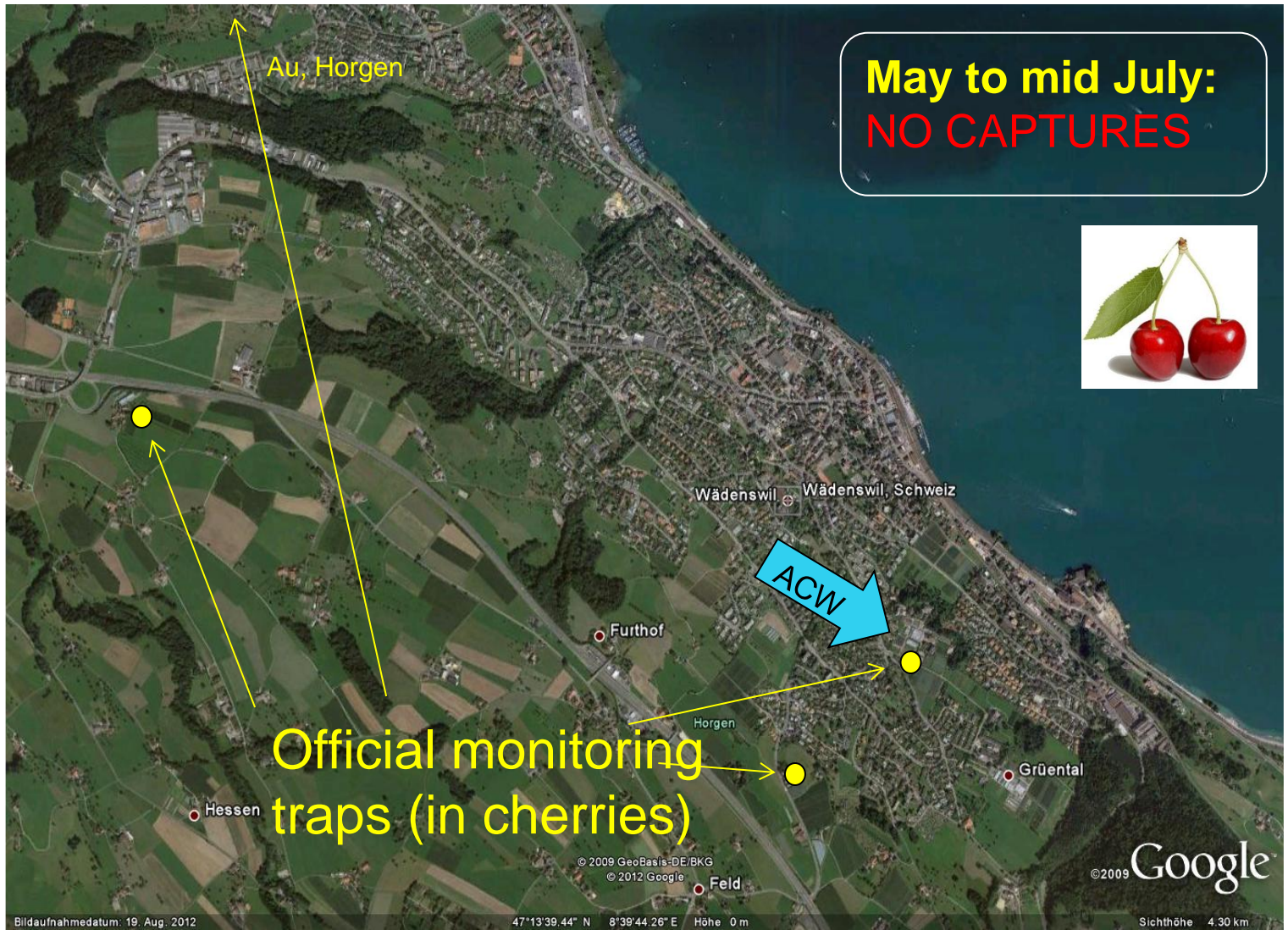


End season



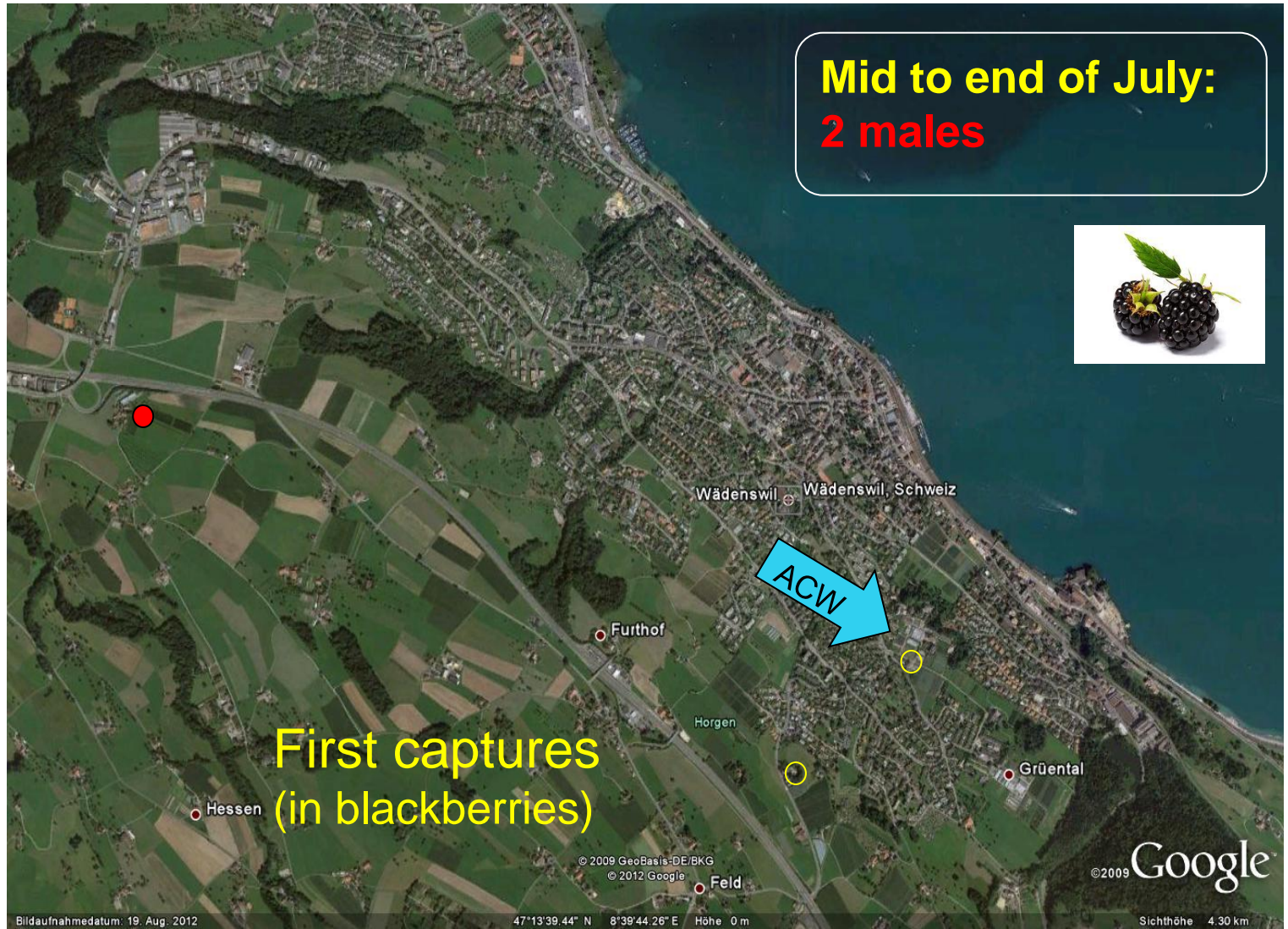


# Situation Wädenswil 2012





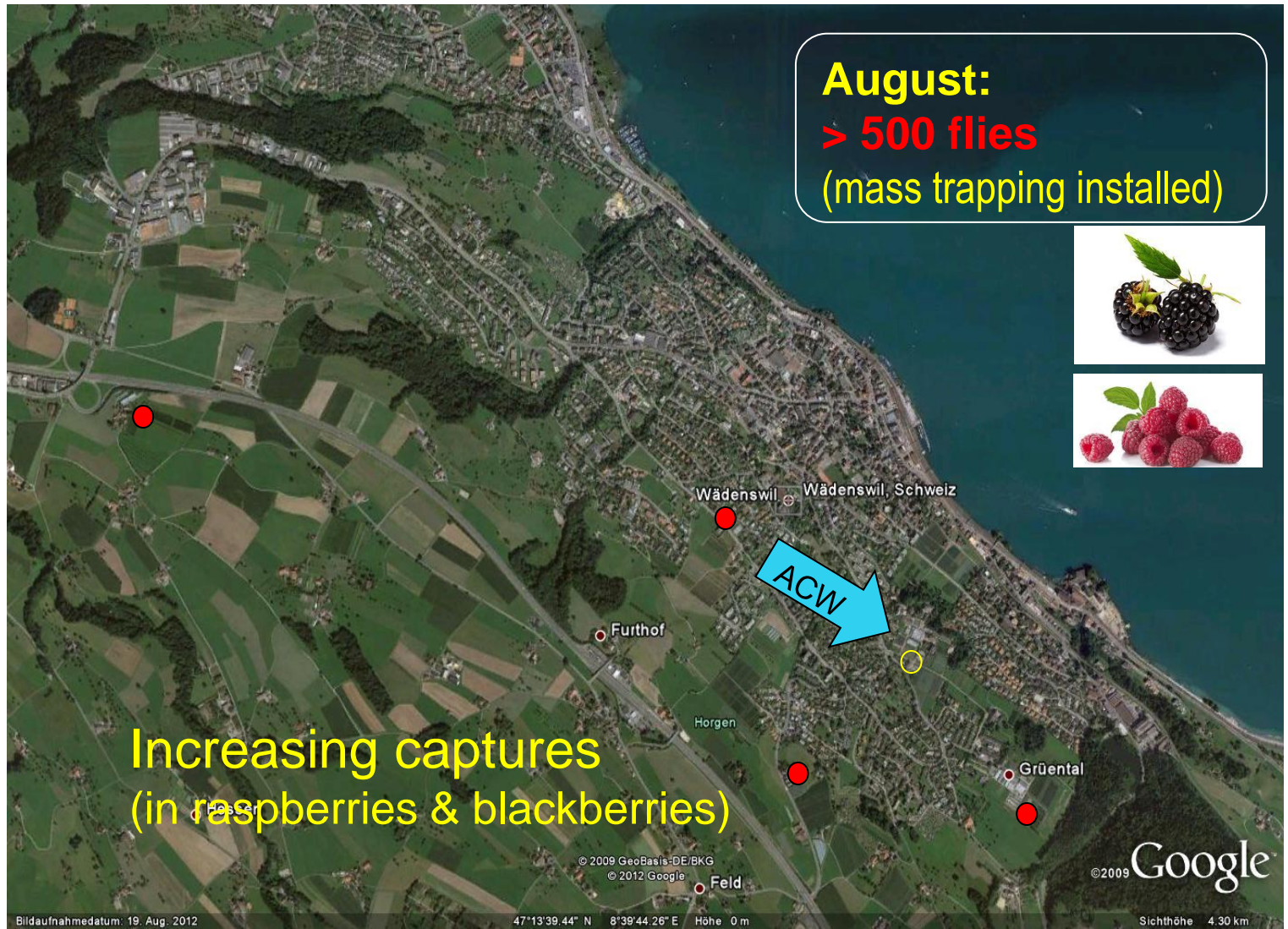
# Situation Wädenswil 2012





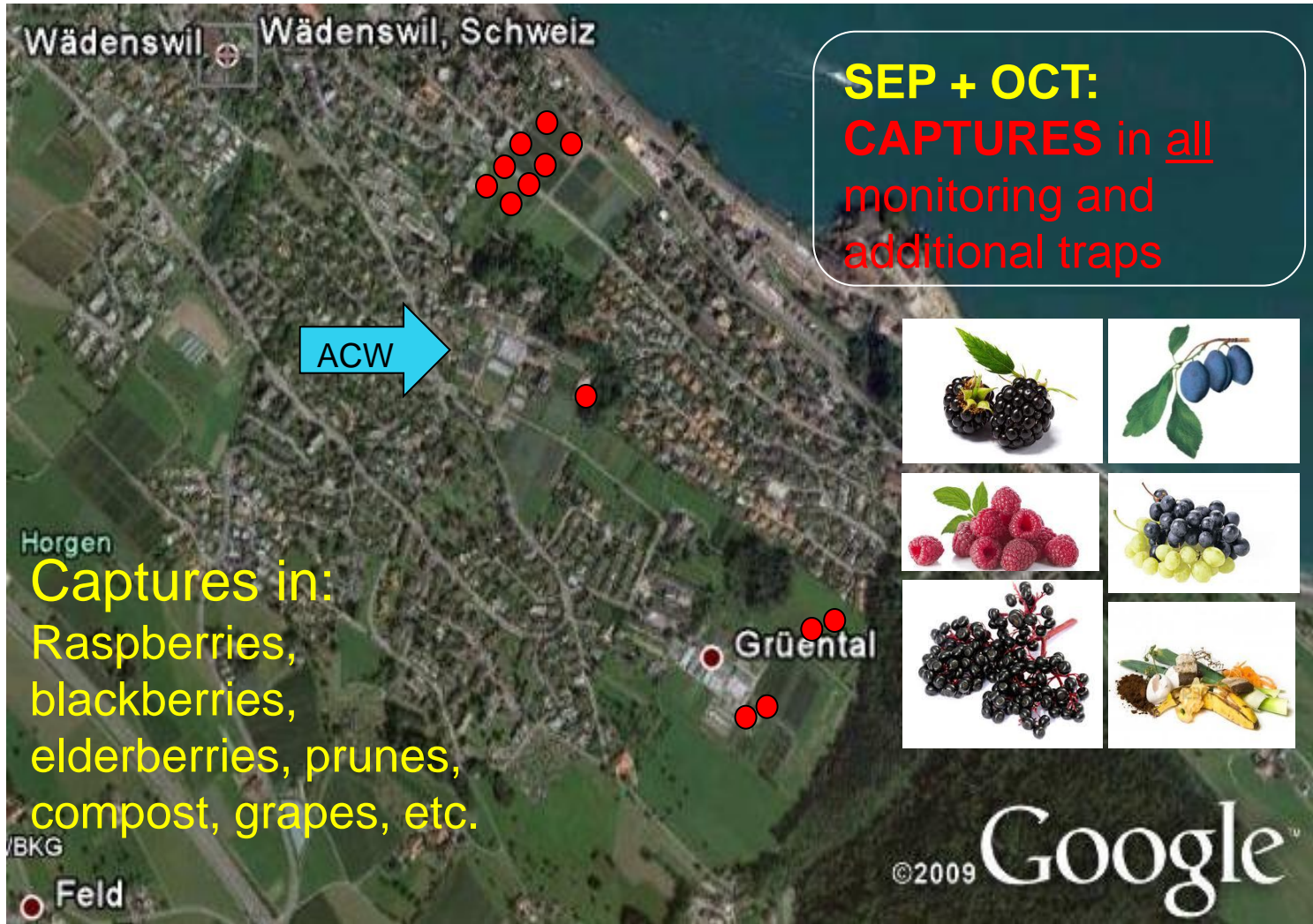


# Situation Wädenswil 2012





# Situation Wädenswil 2012





# Situation Wädenswil 2012





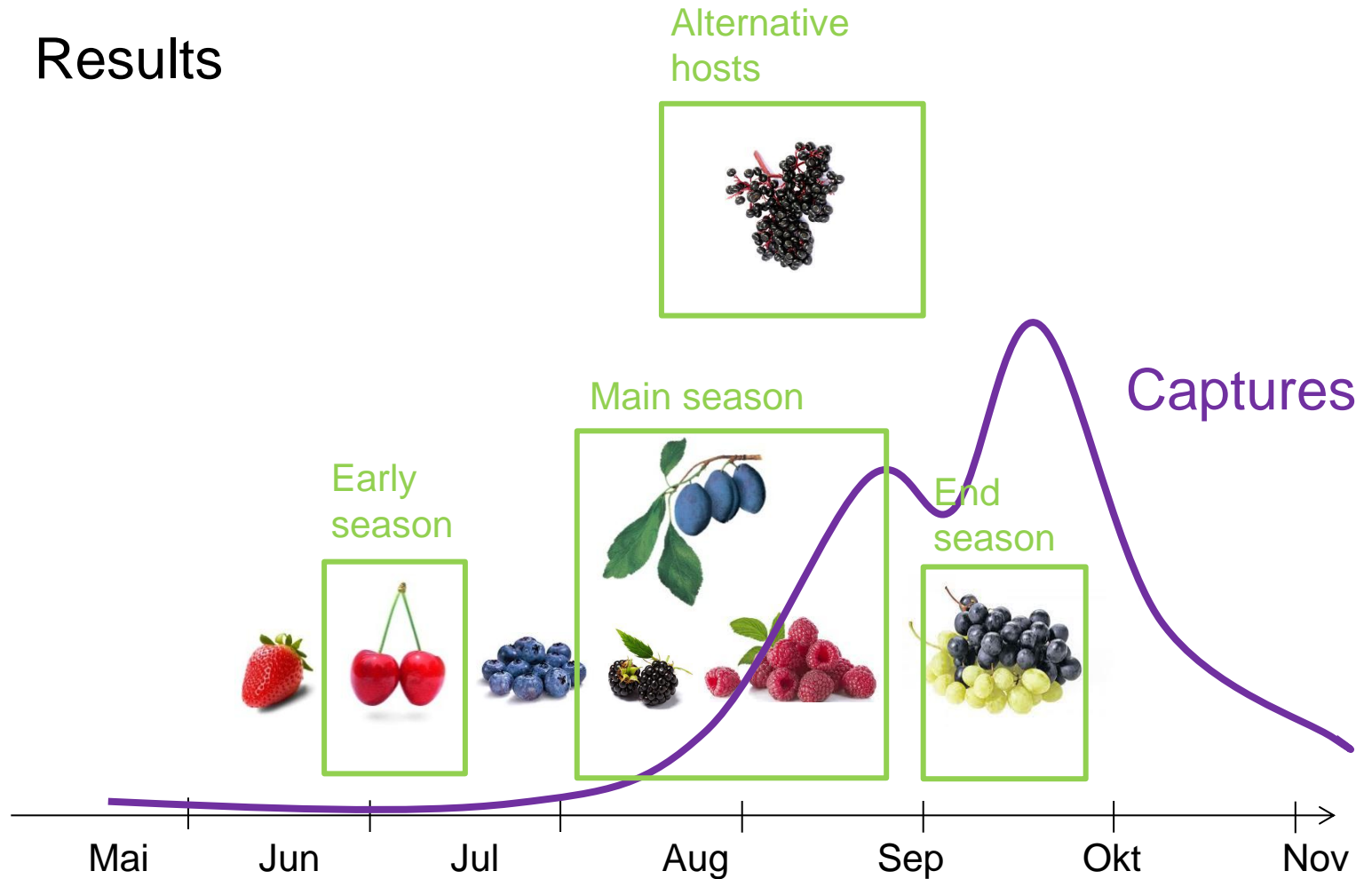
# Situation Wädenswil 2012





# Seasonal captures in Wädenswil

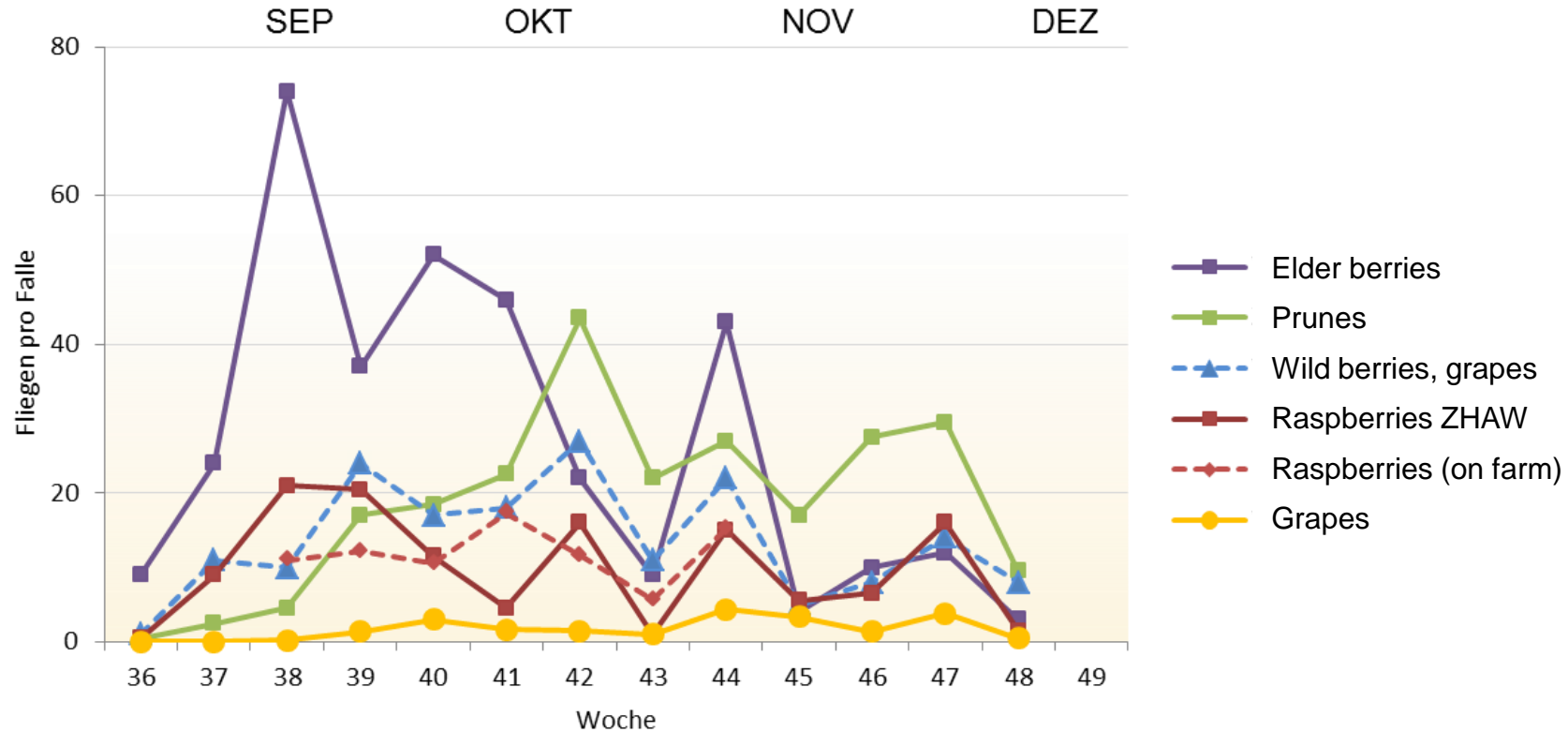
## Results





# Additional findings Wädenswil 2012

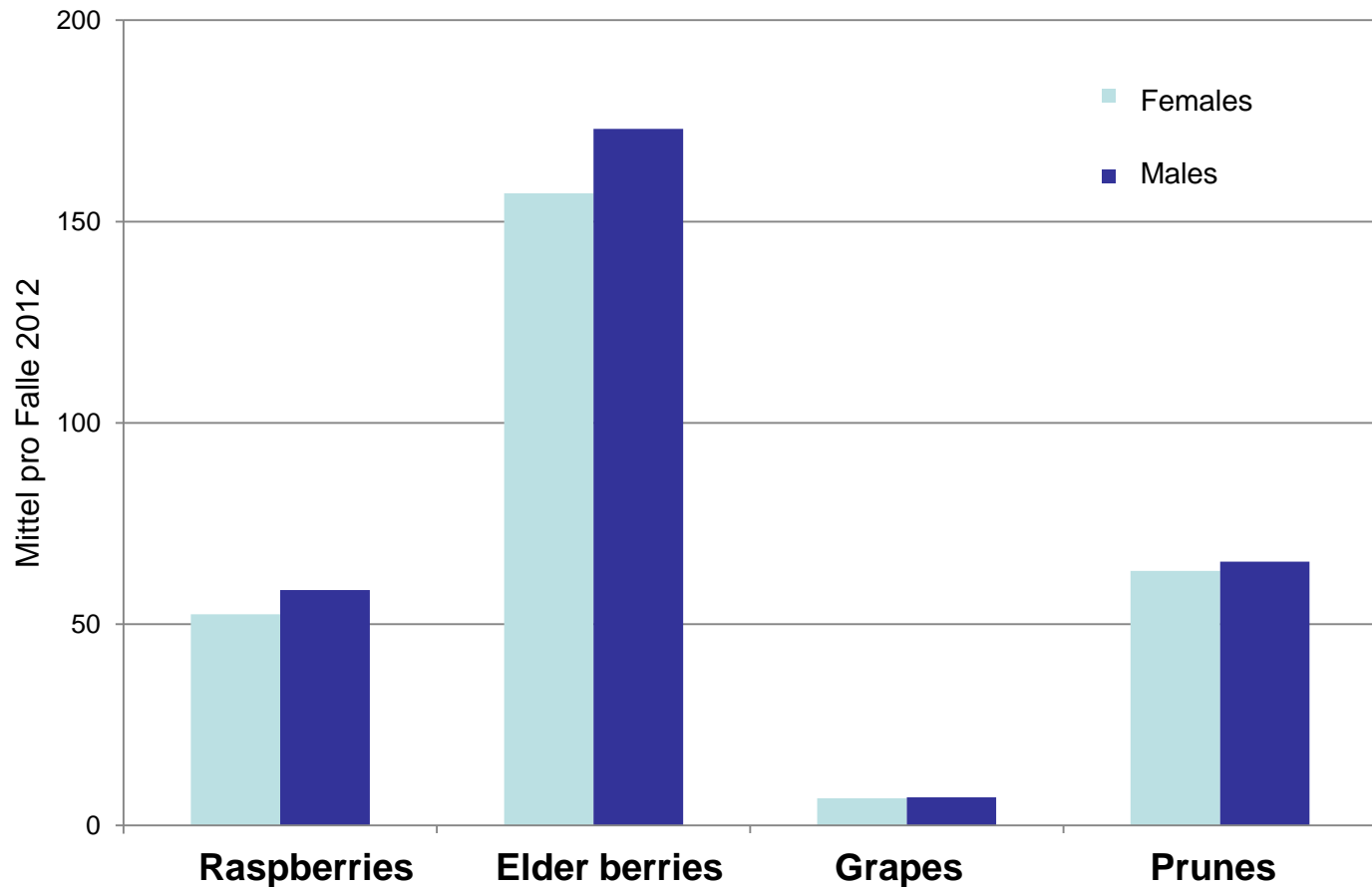
## *D. suzukii* captures in different crops (flies/trap/week)





# Additional findings Wädenswil 2012

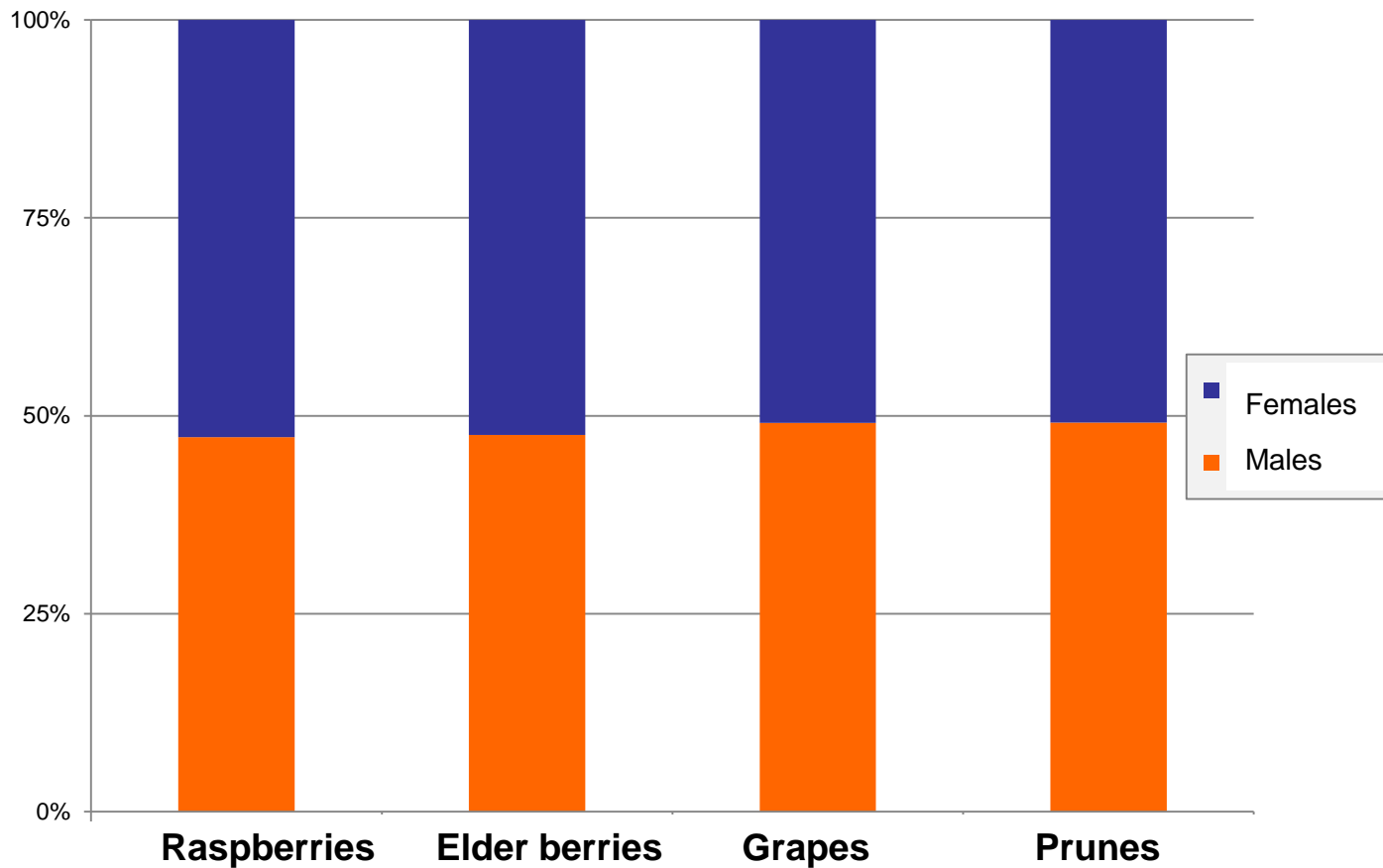
## *D. suzukii* captures+ sex ratio in different crops





# Additional findings Wädenswil 2012

## *D. suzukii* sex ratio in different crops







# Summary

- **No captures** in early summer (**sweet cherries**)
- **First captures** in **rasp- & blackberries**
- **Dispersal** into stone fruits, berries, grapes and wild hosts
- **Damage** only in **blackberries**
- **Post harvest appearance** in prunes and cherries
- **No accumulation** in vineyards at late season



# Some open questions

- Where did flies come from in early season?
- Preferred habitats/crops?
- Preconditions for damage?
- Relationship between captures and infestation?
- Post-harvest dynamics?
- Colonisation of overwintering sites?
- Seasonal response to attractants/baits?



# Adaptations for 2013

- Additional habitats
- All-season monitoring
- Including yeast baits

# Additional habitats



## Monitoring traps 2013

1. Compost
2. Sweet cherries
3. Raspberries
4. Elder
5. Edge of forest **new!**
6. Forest **new!**
7. Apple **new!**
8. Blackberry
9. Plum, prune
10. Grapes
11. Prune
12. Wild shrubs (park) **new!**

## Aims:

**More information about overwintering sites, local occurrence, seasonal distribution and preferred crops/habitats**



# Adaptations for 2013

- Additional habitats
- All-season monitoring
- Including yeast baits



# All-season monitoring

## Actual situation in Wädenswil

(24 monitoring traps in different habitats)



Date	males	females
→ 07.01.2013	<b>31</b>	<b>56</b>
21.01.2013	0	0
04.02.2013	0	<b>2</b>
19.02.2013	0	0
04.03.2013	0	0
18.03.2013	0	0
25.03.2013	0	0

*Trap examination:*  
NOV-MAR: 2x per month  
APR-OCT: weekly

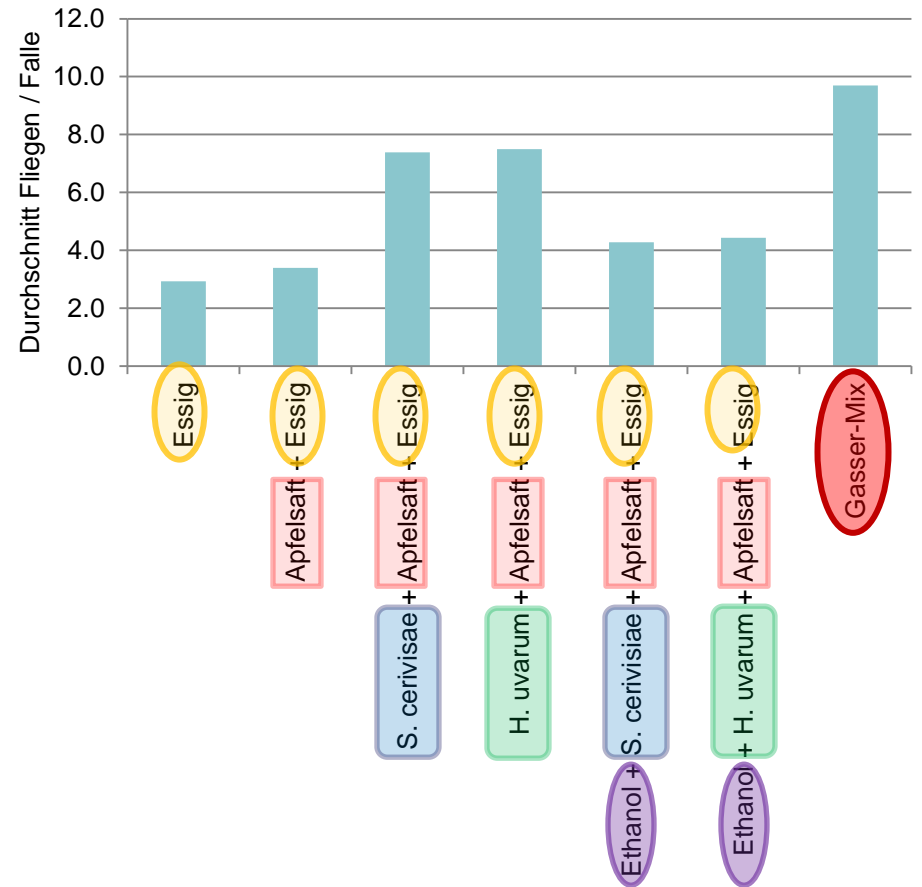


# Adaptations for 2013

- Additional habitats
- All-season monitoring
- Including yeast baits



# Yeast experiment 2012

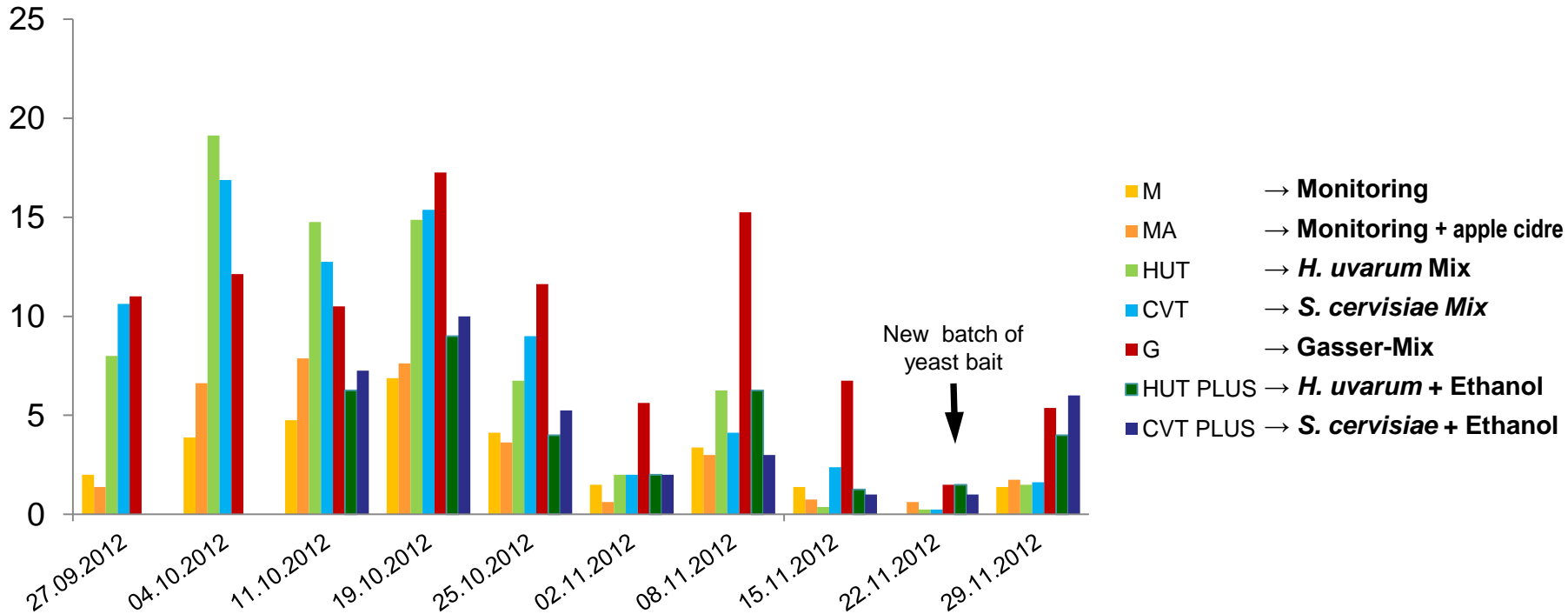






# Yeast experiment 2012

## Results (flies/trap/week)





# Local monitoring 2013

## Monitoring traps 2013

1. Compost
2. Sweet cherries
3. Raspberries
4. Elder
5. Edge of forest **new!**
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Commercial mix  
(BagInBox)



Intended additional trap series (optional):

- Yeasts (*S. cerevisiae*, *H. uvarum*)

