TRIALS UPDATE

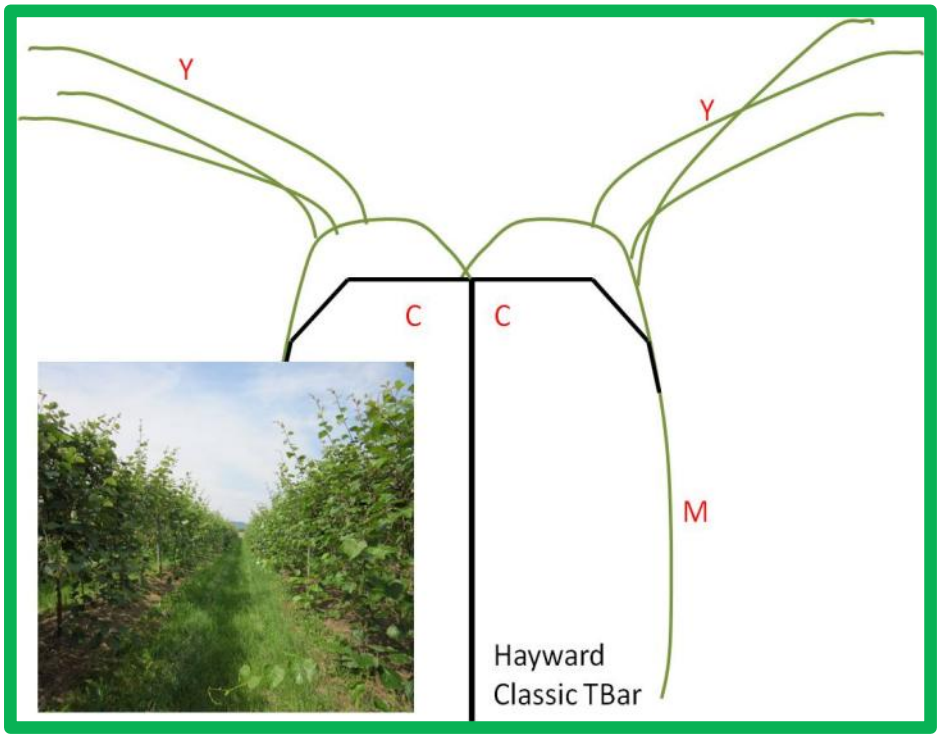
NOVEMBER 2011

PLAN PRESENTATION

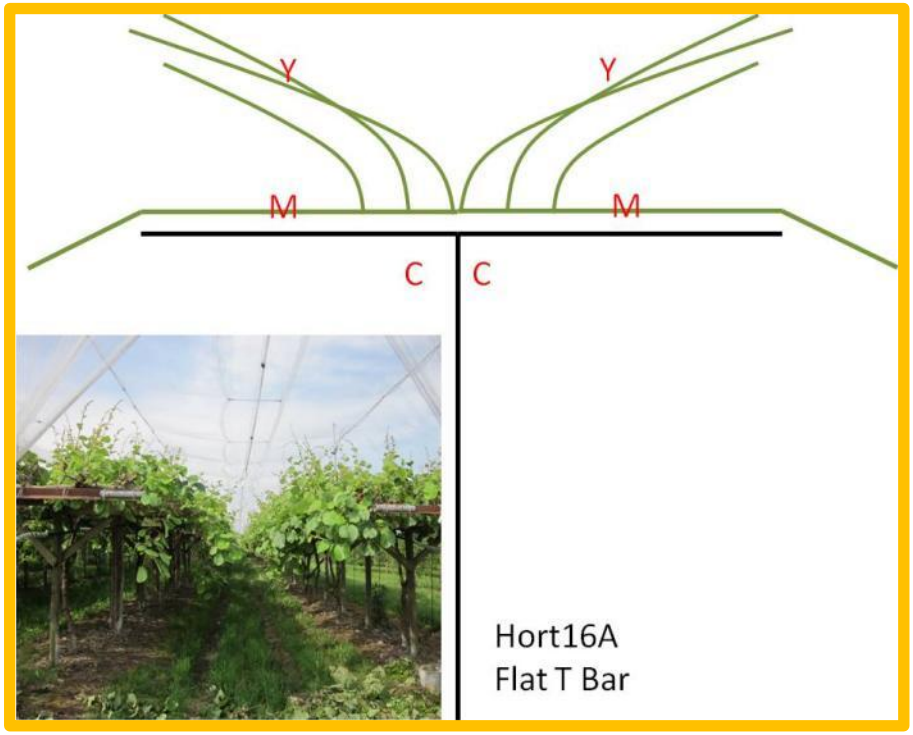
1. NORDOX SPRAY
    1. Coverage
    2. Combining volumes and rates
2. TIP SQUEEZING – what risk?

Canopy shapes

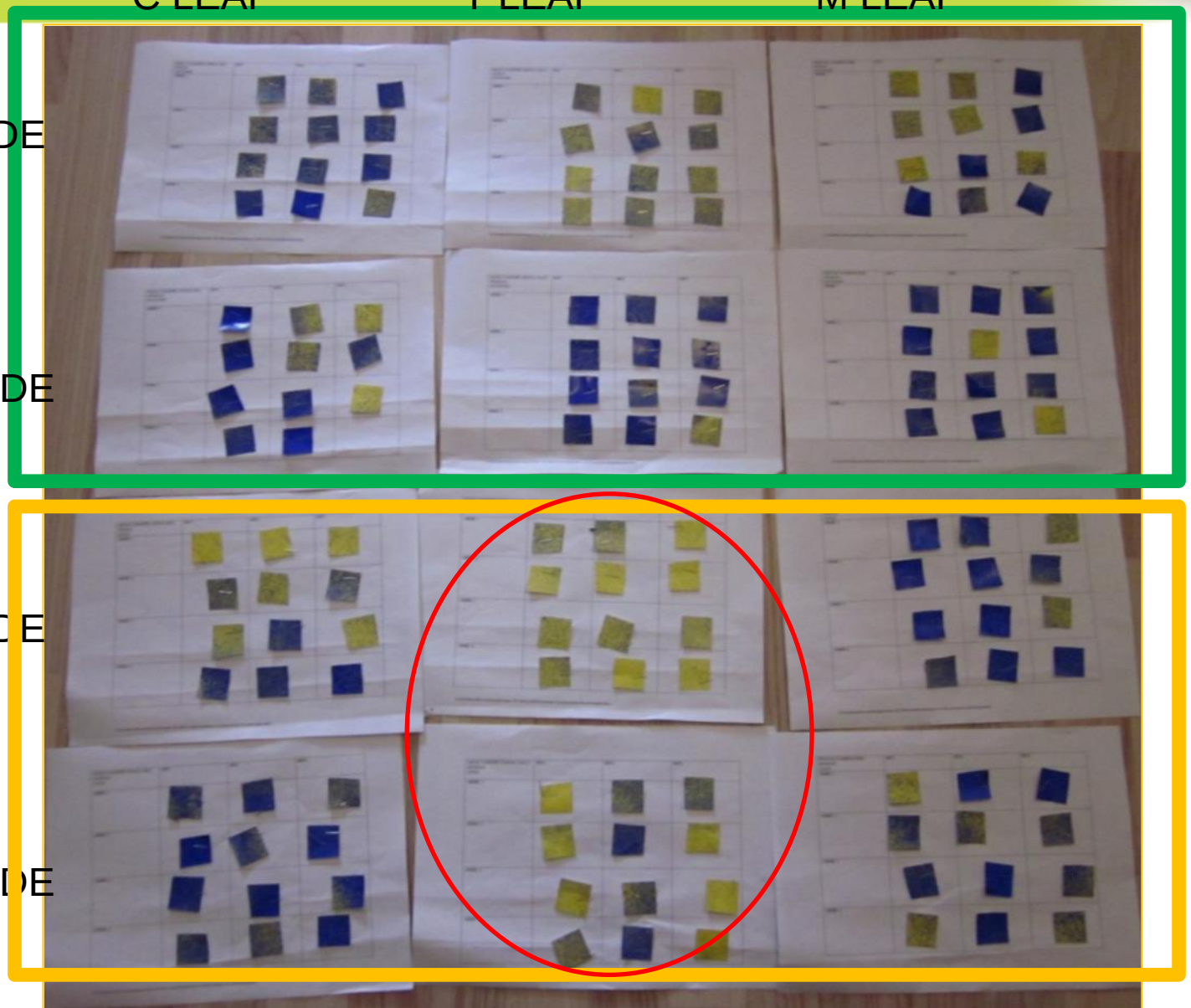
GREEN



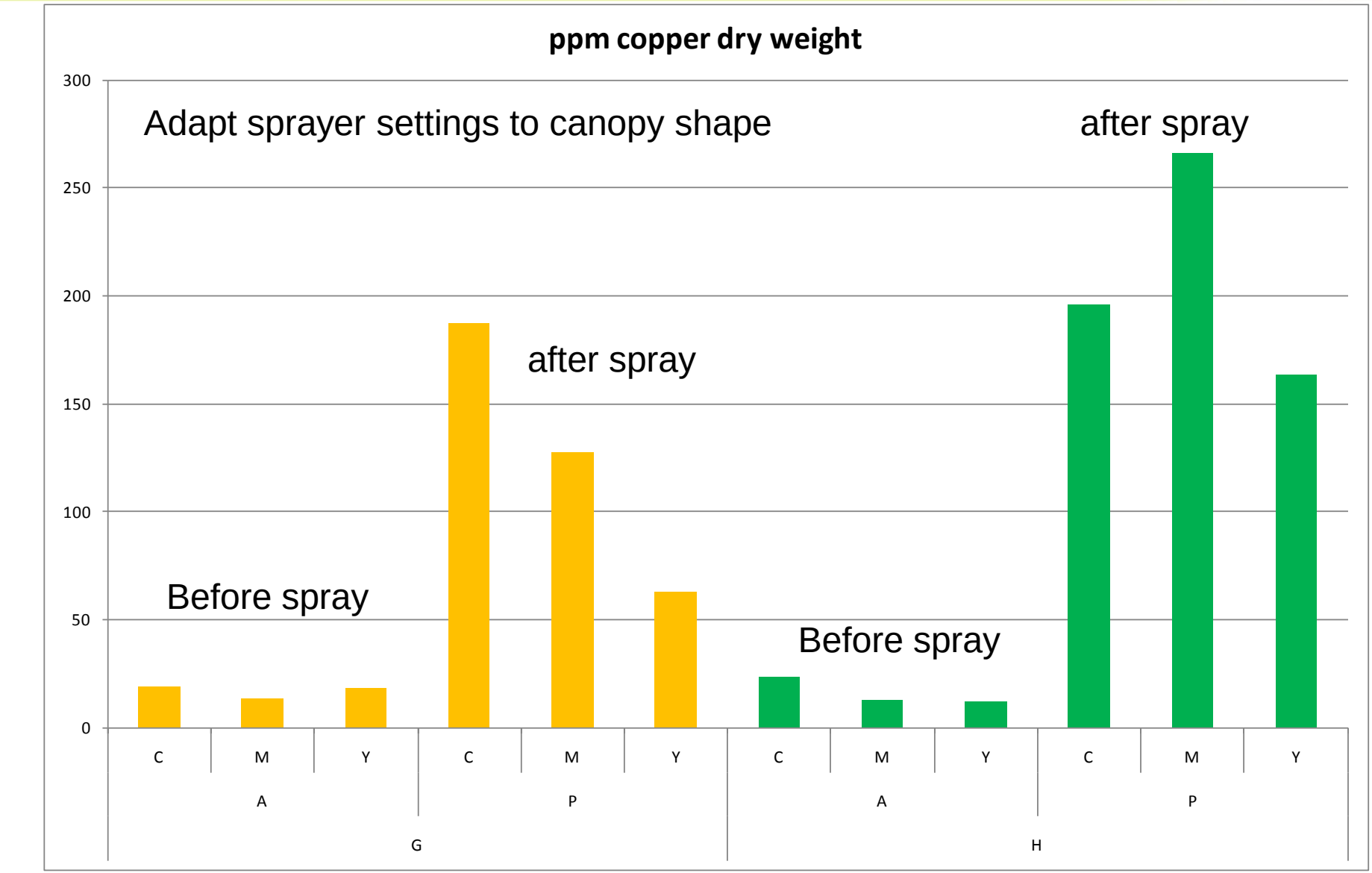
GOLD



Results – Coverage with WS paper



Results – Hort16A and Hayward coverage



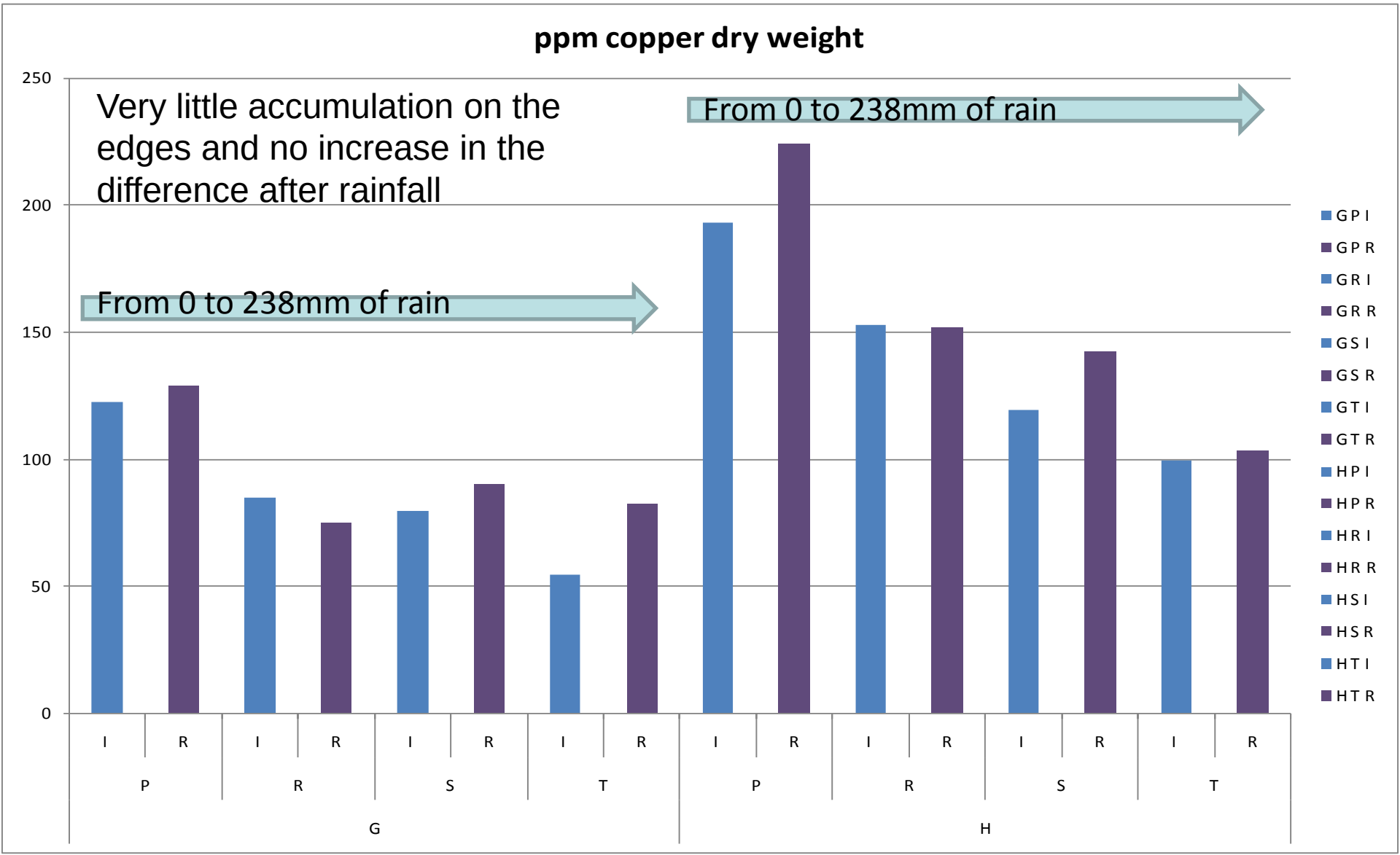
Context – Sampling preparation

Total copper in ring

Total copper in inside part

20 LEAVES PER SAMPLE

Results – Nordox accumulation on edges



Conclusions

- Residue levels are strongly linked with coverage – Good sprayer set up is crucial and has to be done according to canopy shape
- Rain doesn't wash off Nordox to the edges

Some more questions

- What is the impact of Nordox concentration in water?
- What is the impact of water volume per hectare?

- Factorial of 3 water volumes (312, 625, 1000L/ha) and 3 rates of Nordox (30g, 60g, 120g per 100L)
- Applied with a motorised knapsack sprayer = same size droplet each time

COPPER 2nd trial – August combining volumes and rates

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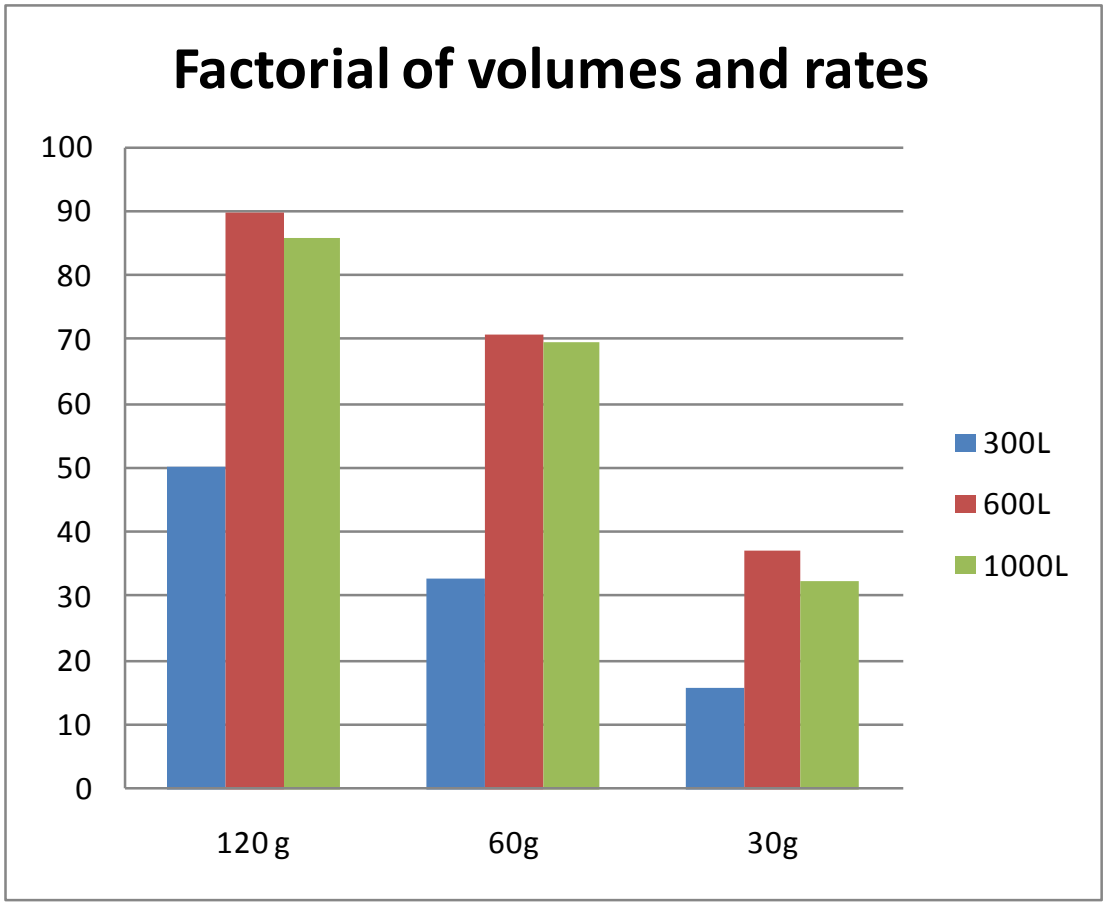


1000L = run off. Nordox quantity is a bit lower than what sticks on with 600L

For given water volume, Nordox quantity doubles from 30g to 60g per 100L, but not from 60g to 120g. As if there was a limit in Nordox amount a leaf could retain per cm².

FOR SAME DROPLET SIZE WITH NO SPREADER:

- Number of droplets
- Concentration of Nordox in a droplet

No phyto, but leaf drop accelerated for 120g/L 600L and 1000L (end sept)

Tip squeezing

- Objectives of trial: check if squeezing
  - Leads to an infection on the squeezed shoot in the current season (Q1)
  - Is correlated with infection of the whole vine (or squeezed shoot) the next spring (Q2)

ie replacement shoots are used

- 2 shoots squeezed per « treated vine », 2 non squeezed shoots marked
- Control vines with no level of squeezing

Tip squeezing - findings

A1 : No infection of replacement canes in relation to squeezing on both sites

Q2 : Vines on which tip squeezed was performed showing more infection?

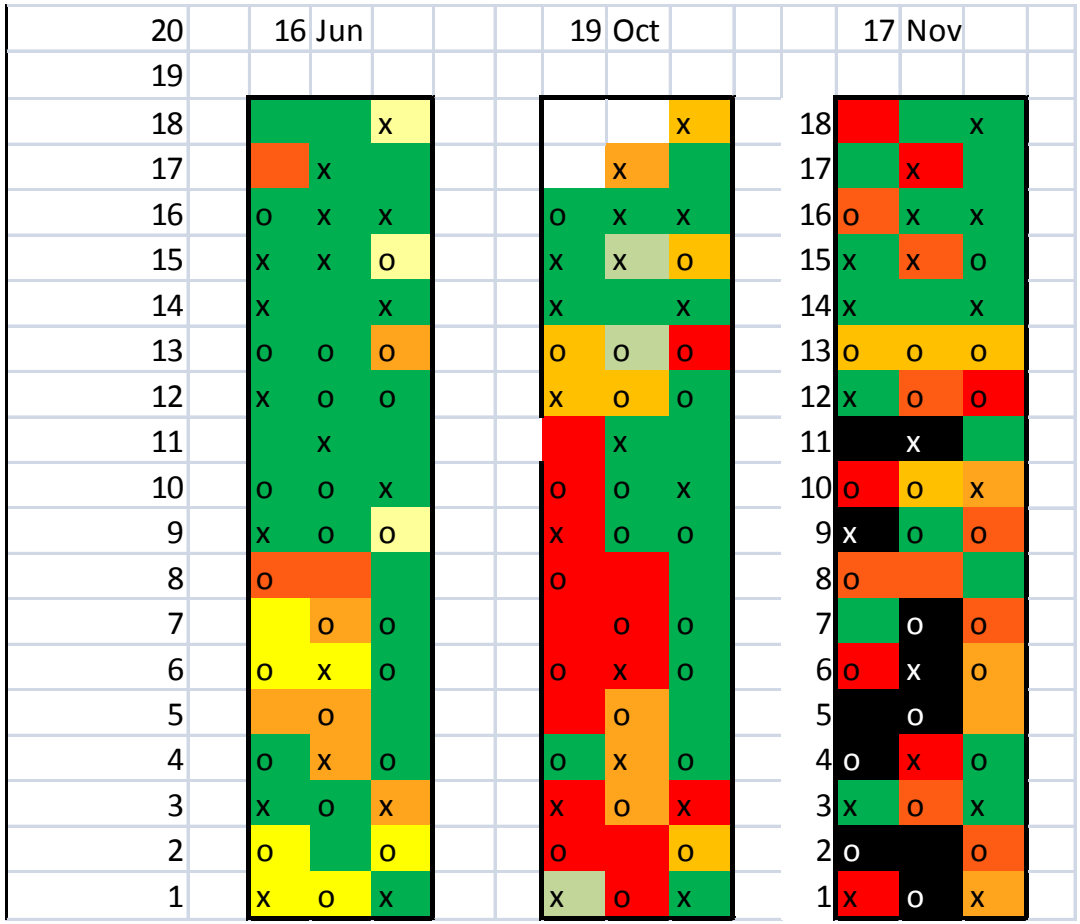
A2: Site 1- no level of infection initially where trial was performed but orchard partially cut back:

After 4 months:

% vines with dry canes	
tip squeezed	17.65
control	21.43

Tip squeezing - findings

Site 2: level of infection prior to squeezing



X = control, o = tip squeezed

Exudate visible again in autumn – orchard unlikely to won't make it to spring

Tip squeezing performed the 13/06

Grower has removed dry canes end of October

Q2 : Vines on which tip squeezing was performed showing more infection?

Tip squeezing - findings

initial		16 juin	19-Oct	delta
infected	control	27.78%	44.44%	16.67
healthy	control	72.22%	55.56%	
infected	squeezed	43.48%	56.52%	13.04
healthy	squeezed	56.52%	43.48%	

No visible effect as initial infection level determined most of further infection

Limitations

Various level of infection throughout the block

Inconsistent inoculum load

Vines already infected but not showing symptoms at the time of squeezing

Date of treatment: weather and apex shape

Tip squeezing

No direct relation to infection

Still perform any operation under fine weather

Plan canopy activities around a protectant spray programme

Trial to be repeated in NZ lab this season with consistent inoculation of tip squeezed and non tip squeezed shoots

QUESTIONS?