

# Mist dispensers for Codling Moth control

A unique, versatile and efficient method for  
Mating Disruption of Codling Moth



FGV Conference  
16 August 2018  
Russell Fox



# Codling moth increasing problem

Worldwide problem – same chemicals, same pest, same problem

New chemistry is very effective - but uncompromising  
coverage & timing is absolutely critical for performance

MD ties going out late – after the moths have flown- lost the race  
an increasing problem with large blocks and orchards

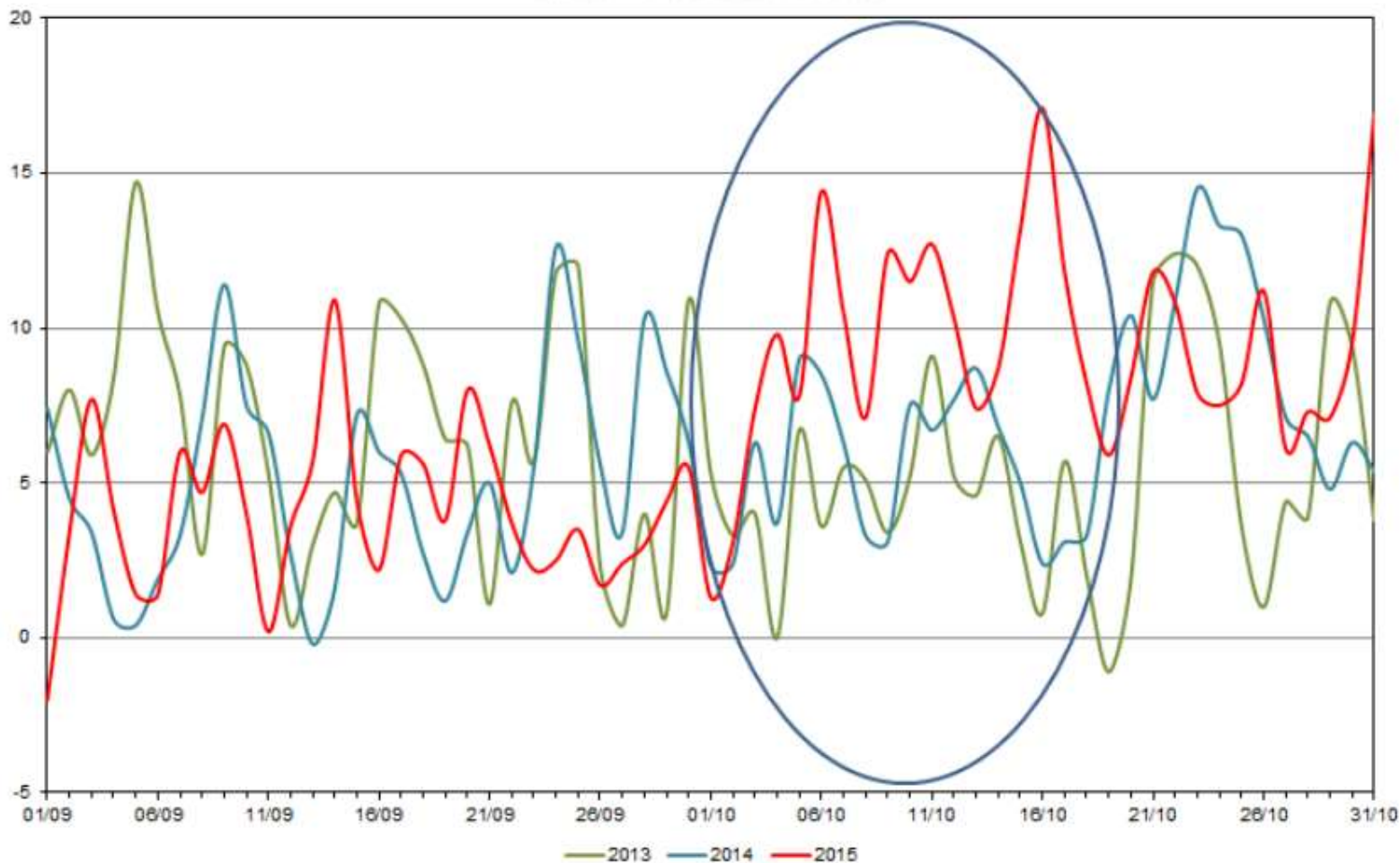
CM adapting – mating outside the pome fruit blocks  
stone fruit, edge effect , hot spots in pome fruit block

Climate variability - effect of weather patterns  
impact on pest, polymers, chemicals

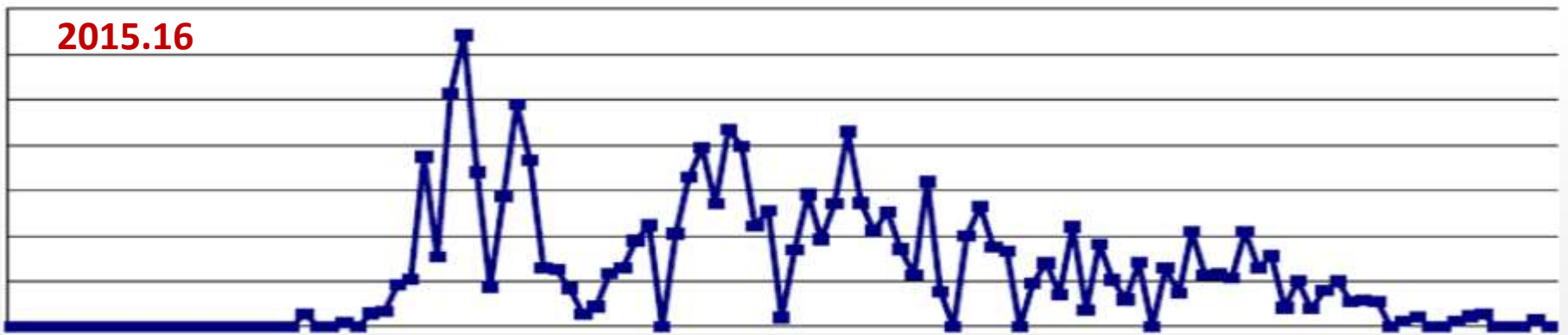
# Growing conditions 2015-16

## Minimum Daily Temperatures

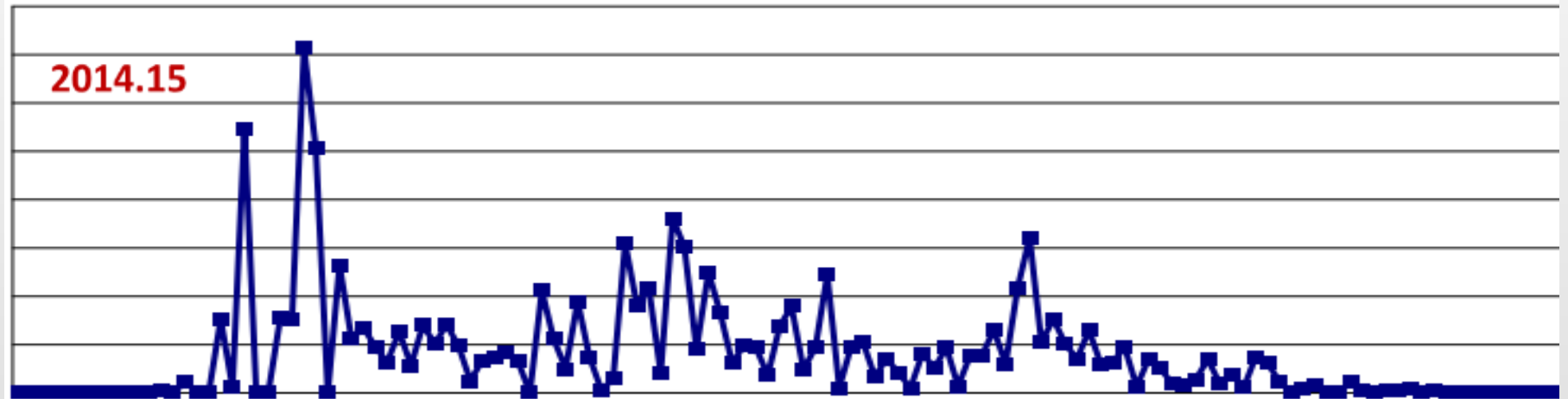
MINIMUM DAILY TEMPERATURE



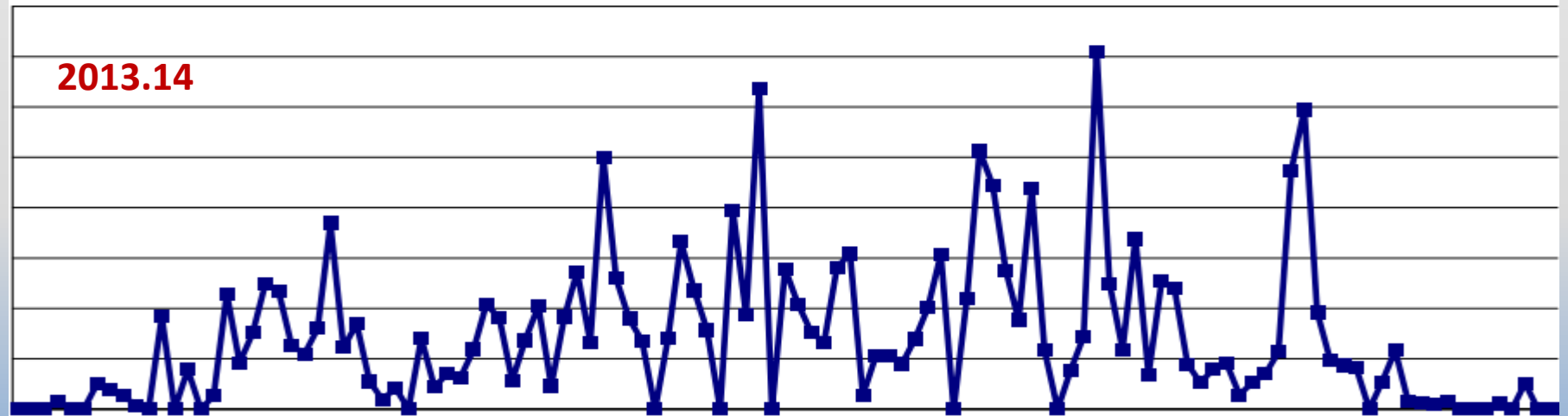
2015.16



2014.15

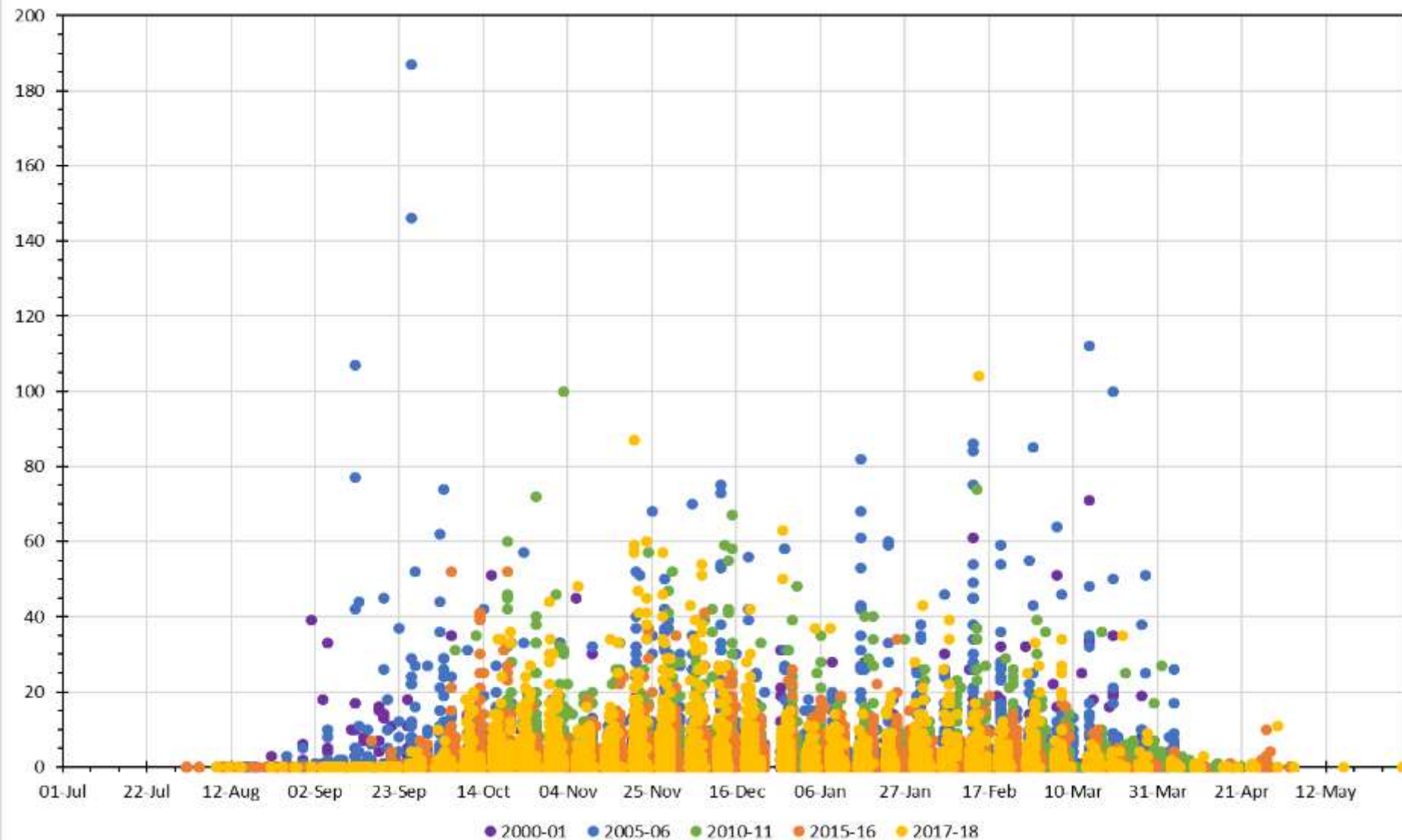


2013.14



# CM 10mg trap catches over 18 years

Comparison of trap catches (codling moth 10mg lures)



# Tactics & Strategy

IKC round table meeting – USA getting on top of CM

How - What are they doing different

IKC Working group study tour - to see what they are doing

Visited growers, researchers, university trials

Chris Peters, growers, Pacific Biocontrol, Betsy Beers

Outcome - same chemicals, mating disruption problems

**BUT** – **CM Mist** was performing best

# **Shin Etsu Codling Moth Mist Aerosol**

## **Emits behaviour modifying pheromone disrupts mating of CM**

**Battery powered metering device**

**emits precise amounts of pheromone**

**install in the orchard before the Codling moth fly**

**Season long release**

**Pre-programmed, ready to use**

**temperature sensor**

**single year use**

**easy to install – fast and low labour cost**



CM Mist aerosol dispensers





# How does CM Mist work

CM Mist works with battery powered aerosol emitter for delivering CM pheromone.

Each emitter comes with batteries installed and pre-programmed to spray pheromone every 15 minutes for 12 hours per day starting at 5:00 p.m. and ending at 5:00 a.m. if temperatures are above 10 °C.

Temperature sensor ensures efficient release of pheromone.  
An internal clock is pre-set to the local time zone.

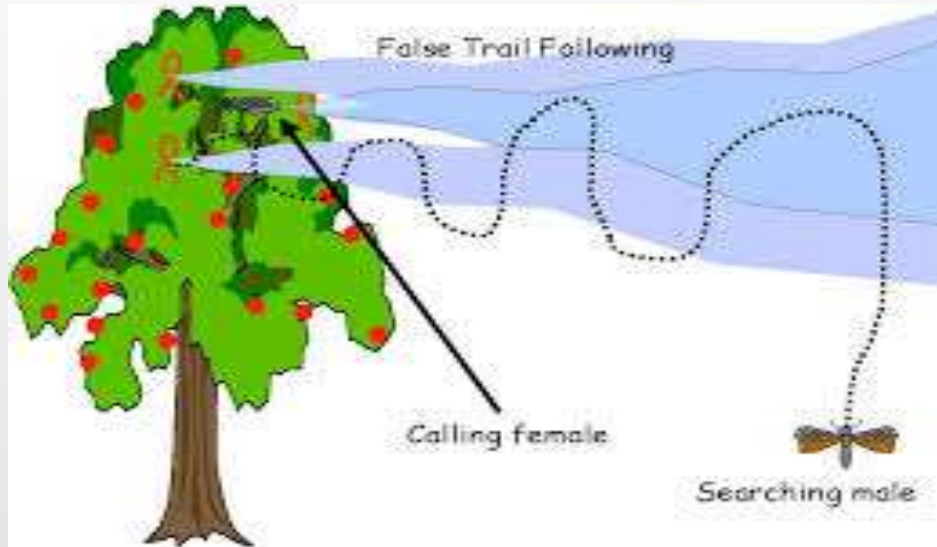
Following activation, LED will flash amber at 3-second intervals shows the emitter is on and ready for deployment in the orchard.

Distribute misters throughout the orchard in a grid pattern at 2 to 3 per Ha on 60m grid. Start on the upwind border.

Place the first mister near orchard border.

Standard practice to treat block boundary with hand applied ties

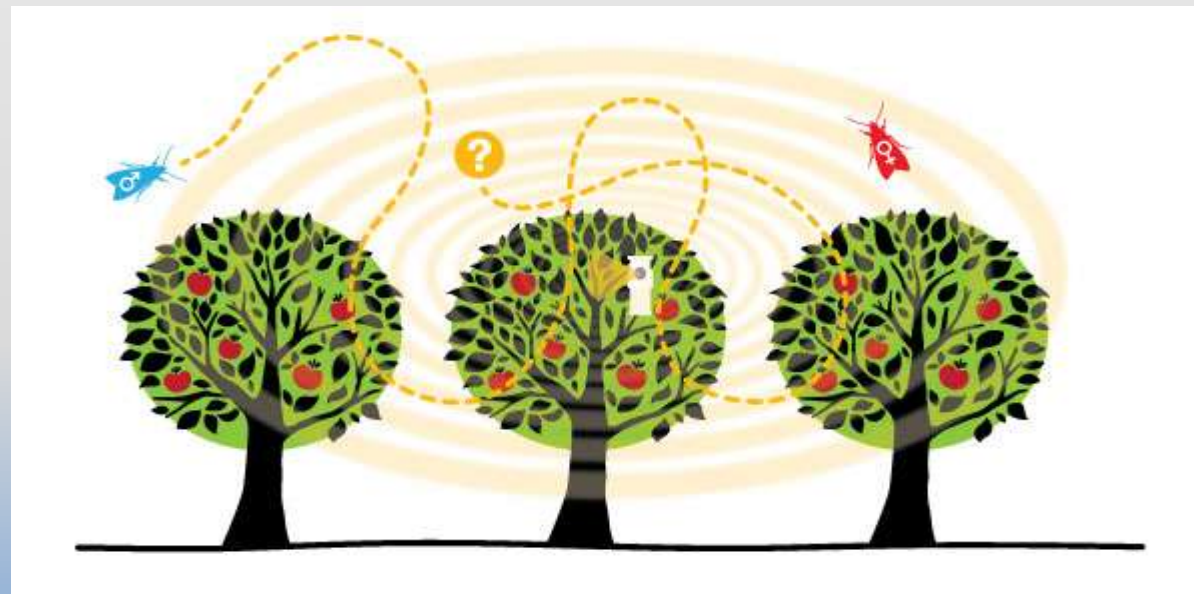
# Why does CM Mist work?



**Hand applied dispensers**

Many point sources of pheromone  
1 every 10 -20 sq. m

**CM Mist aerosol**  
Large area coverage  
Large air volume  
Less dead air areas



# CM Mist in GMV

## Three trial sites 2017.18

apples and pears

compared to hand applied MD ties

monitored weighed cannisters, trap counts, fruit checks

high pressure and medium pressure blocks

## Trials continuing 2018.19

apples and pears

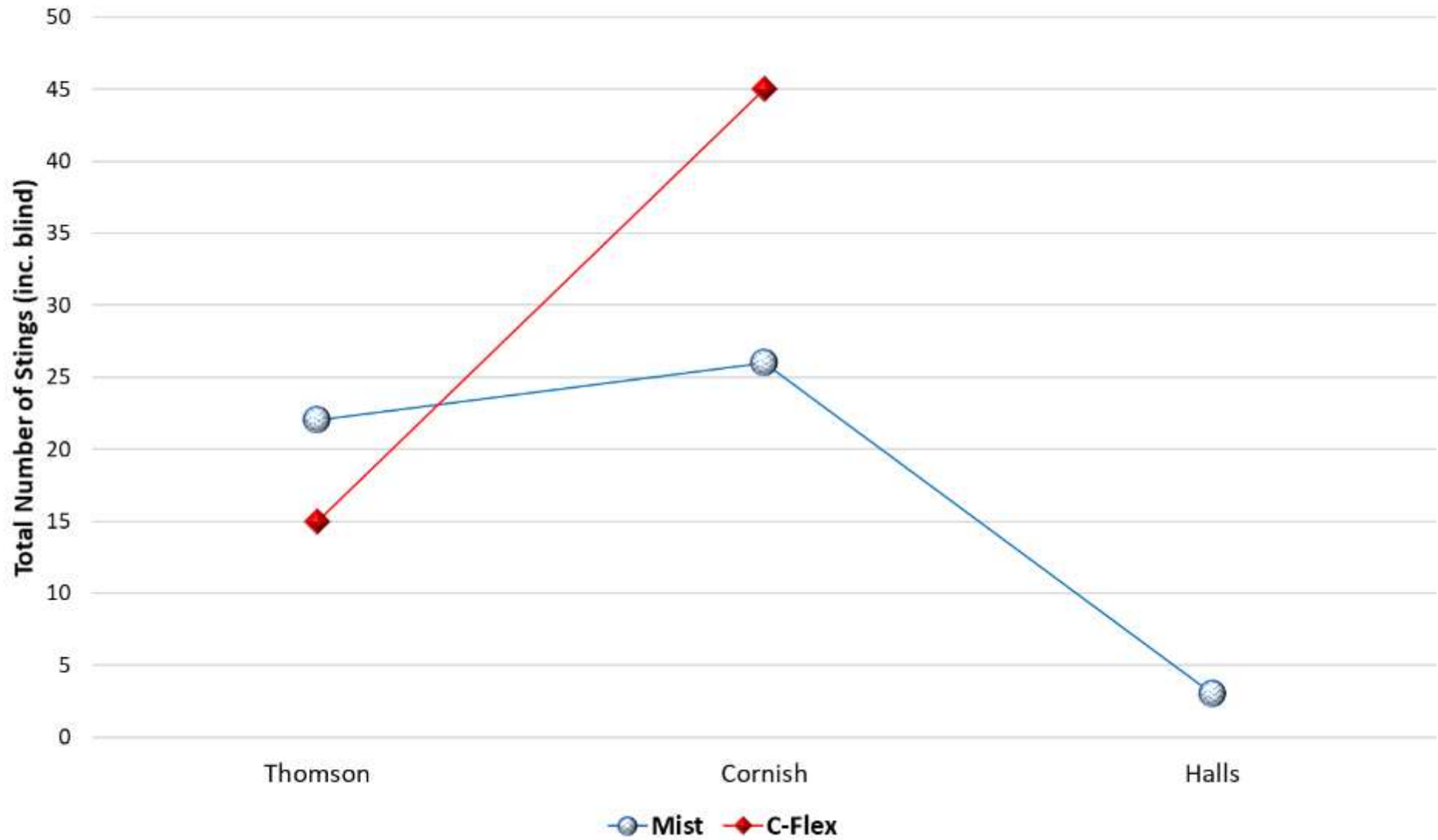
high pressure and medium pressure blocks

## Registration expected 2019.20

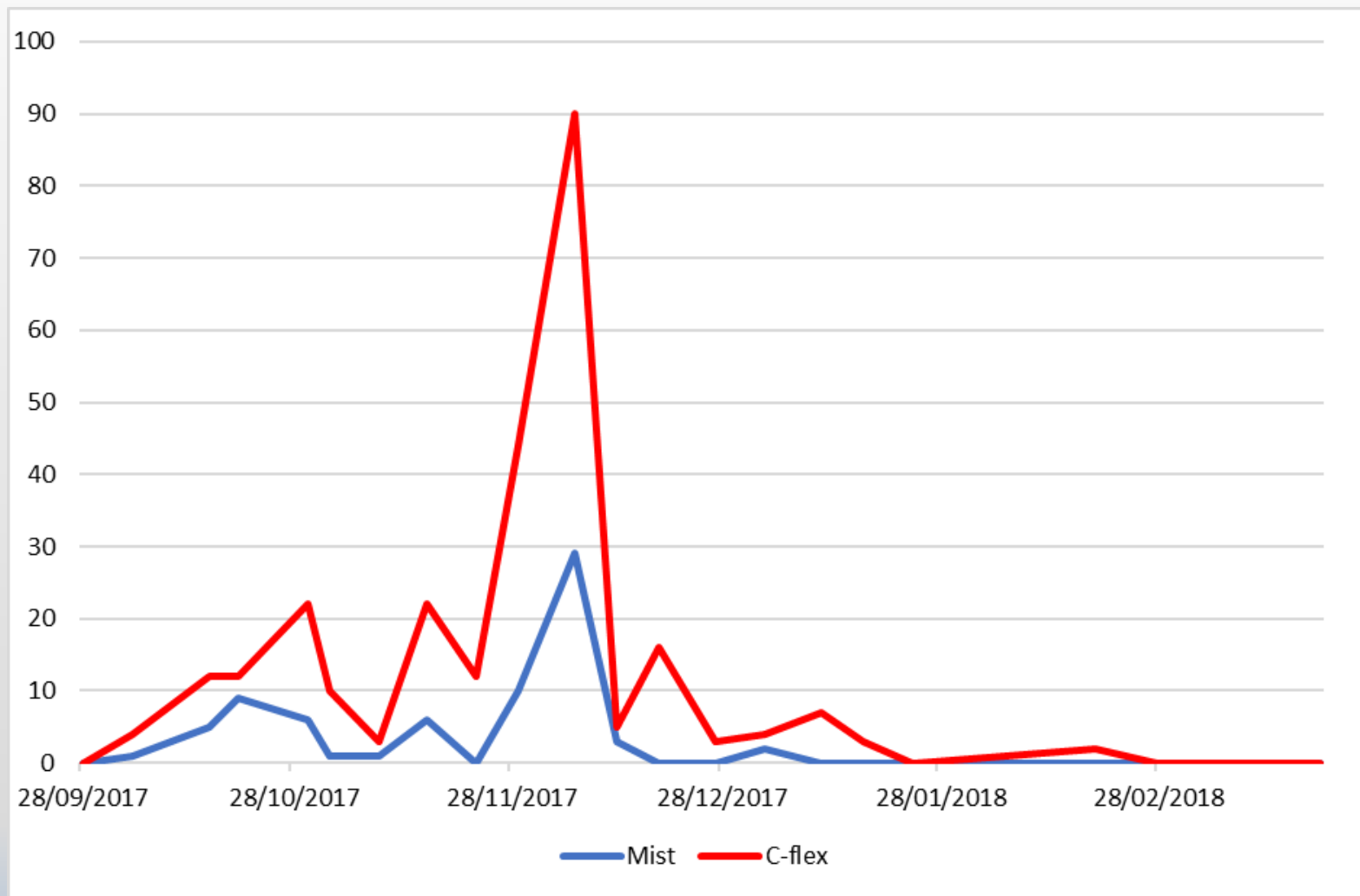
**Performance – as good or better than hand applied MD ties**



### 2017 IKC CM Mist Trial Total Number of Stings by site



## CM Mist Trial 2017.18 10x CM trap counts



**Performance – as good or better than hand applied MD ties**

# Monitoring vital to know what is happening in Your block

Lure types for monitoring pests in mating disrupted orchards

1X CM lure            this lure should not catch any moths in a successful

10x CM Lure            high load overpowers MD ties or mist

10X CM + DA            catches male + female moths – consistent catches  
trap catches will be higher than 10x lure  
understand trap catches , what do the numbers mean, trends

Thankyou

Any questions

Now, tonight, or any time