

# Control of codling moth by postharvest application of Ethephon 2SL and insecticide

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# Previous Research

(R. Van Steenwyk et al.)

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- Bartlett harvest July thru mid Aug.
- Substantial fruit remains in trees after harvest
- CM larvae that complete development:
  - » End of July: enter pupal stage → adults
  - » End of August: enter overwintering stage
- Postharvest fruit removal reduced overwintering CM 75%
- Larvae that infest ripe pears do not complete development (6.5 kg/cm<sup>2</sup>)

# Applications of Ethephon 2SL

## Sacramento and North Coast

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- 10-20 acres each:
  1. (2007) 4 pt. Ethephon + 2 pt. Lorsban 4E  
(2008) Replaced Lorsban – other insecticides
  2. Untreated

2007

Sacto (4) – Aug. 4-9

NC (1) – Aug. 14

2008

Sacto (5) – Aug. 12-15

NC (5) – Aug. 22-Sept. 5

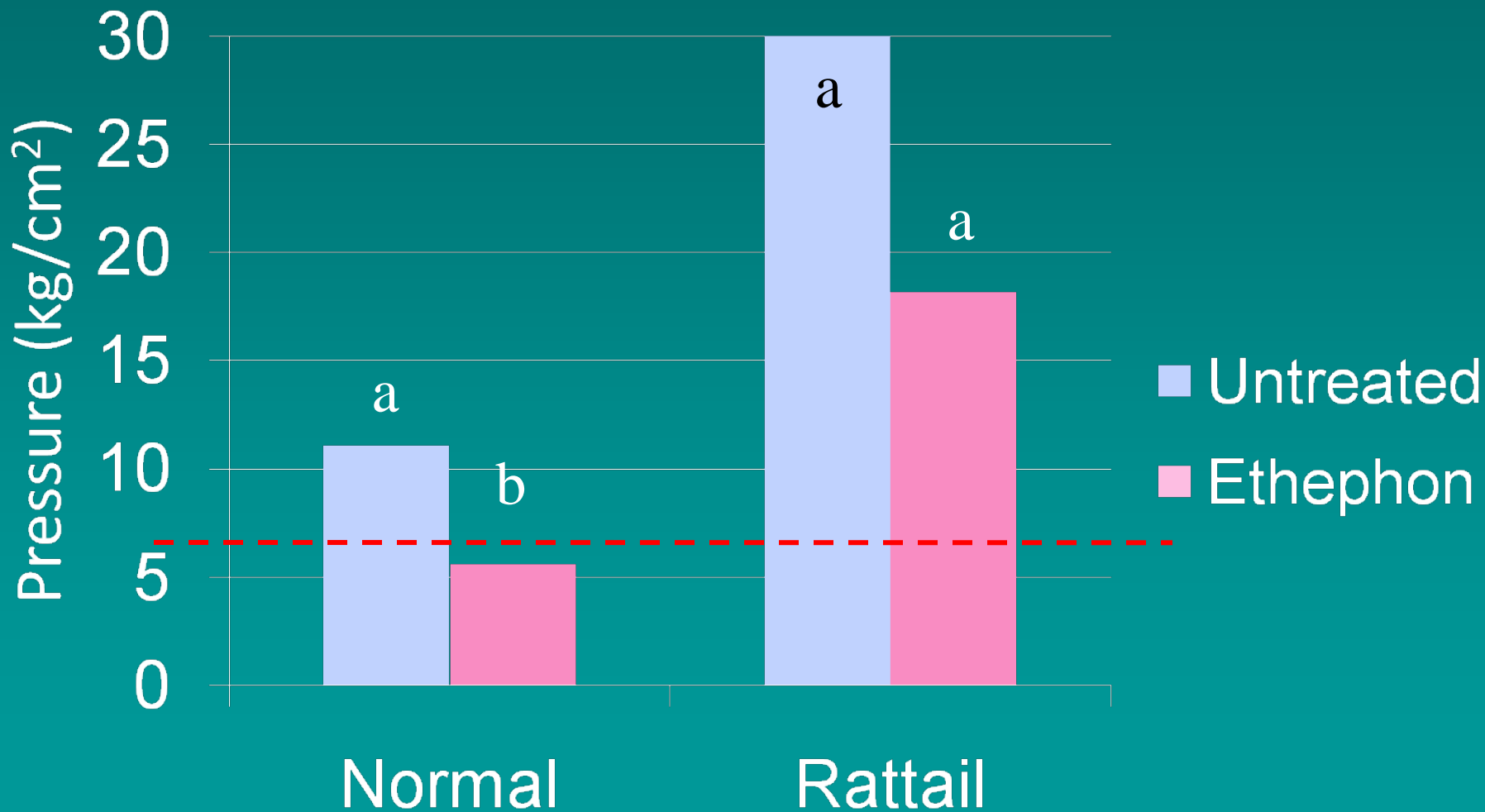
# Measurements

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- Measured fruit firmness weekly after spray
  - » 25 normal fruit and 10 rat tail fruit
- Monitored trap counts in spring (1<sup>st</sup> gen.)
  - » 5 bait pan traps, 1 in center of block
  - » 1 pheromone trap (10X), in center
- Measured yield and fruit size

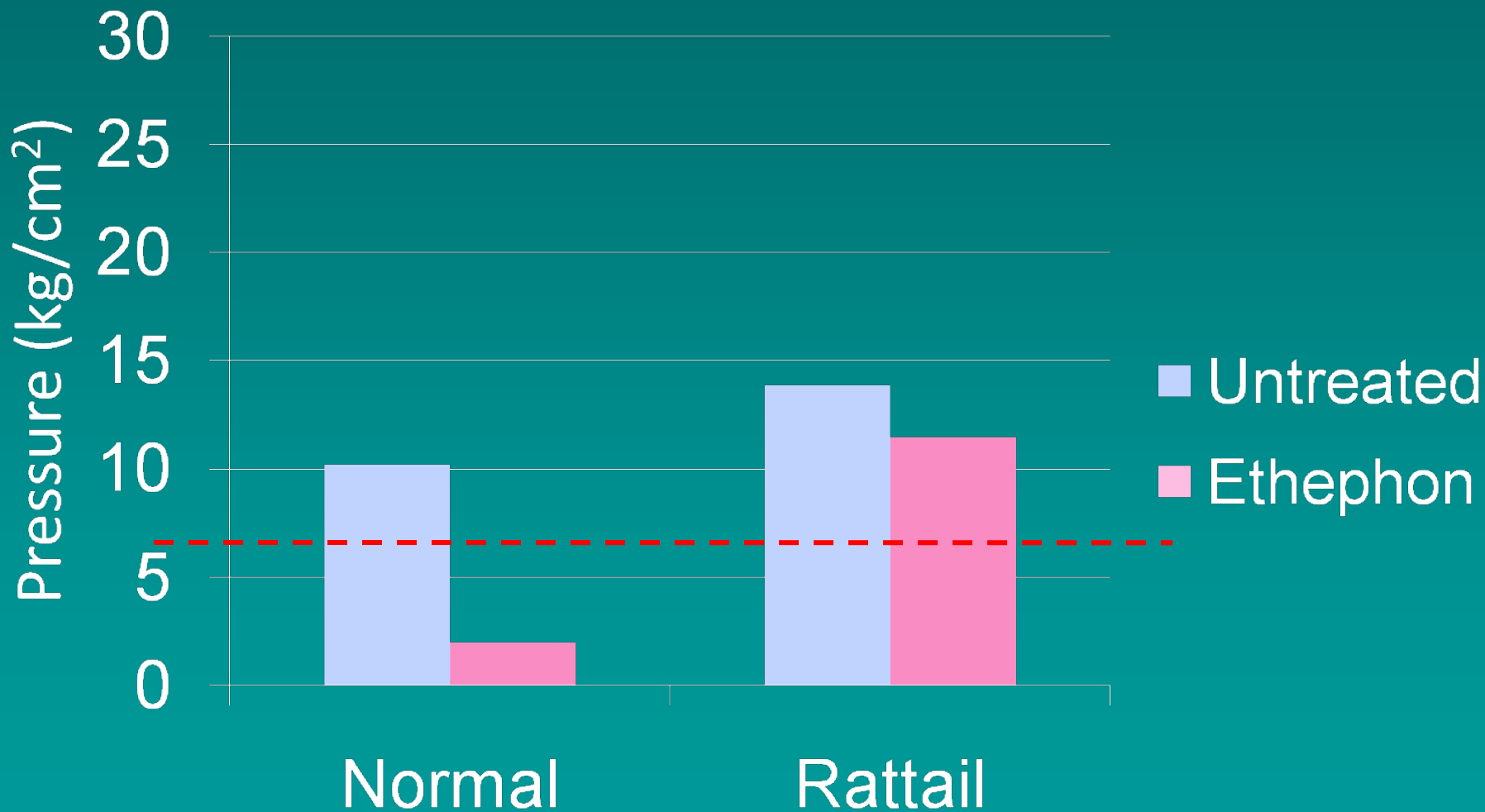
# Fruit Pressures - 2007

Sacramento, 2 wks. after Aug. 4-9 spray



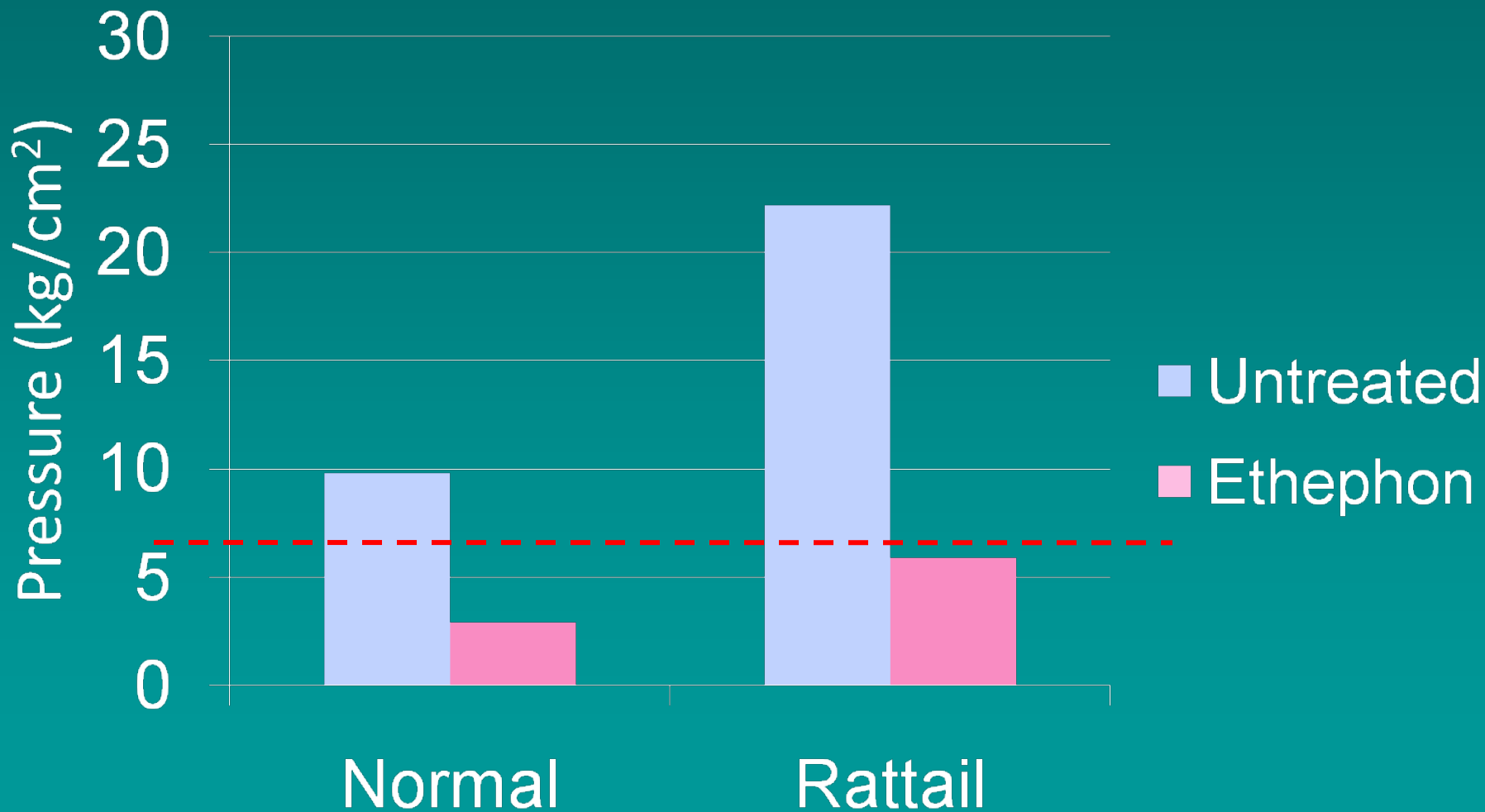
# Fruit Pressures - 2007

Mendocino, 2 wks. after Aug. 14 spray



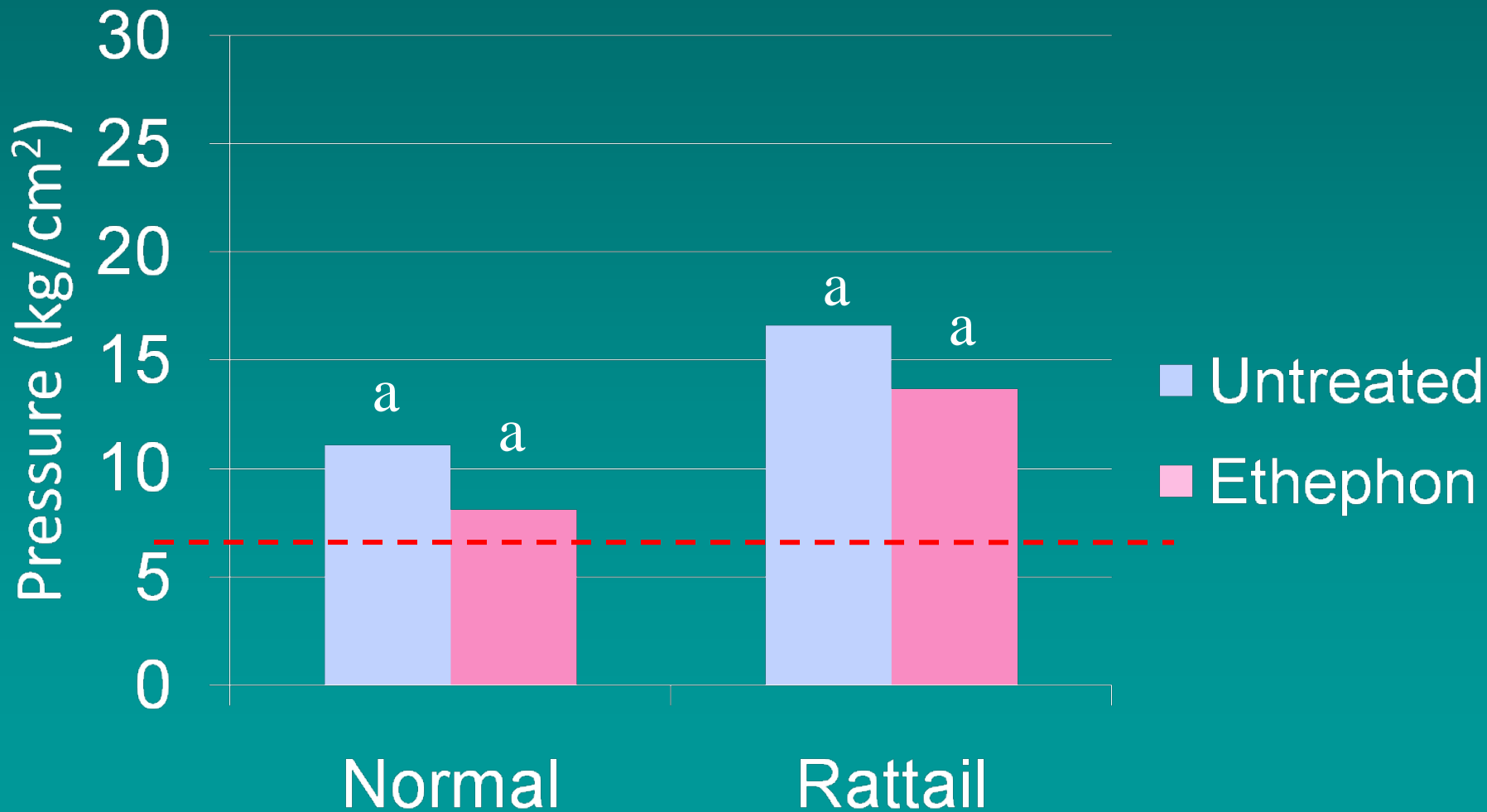
# Fruit Pressures - 2007

Mendocino, 3 wks. after Aug. 14 spray



# Fruit Pressures - 2008

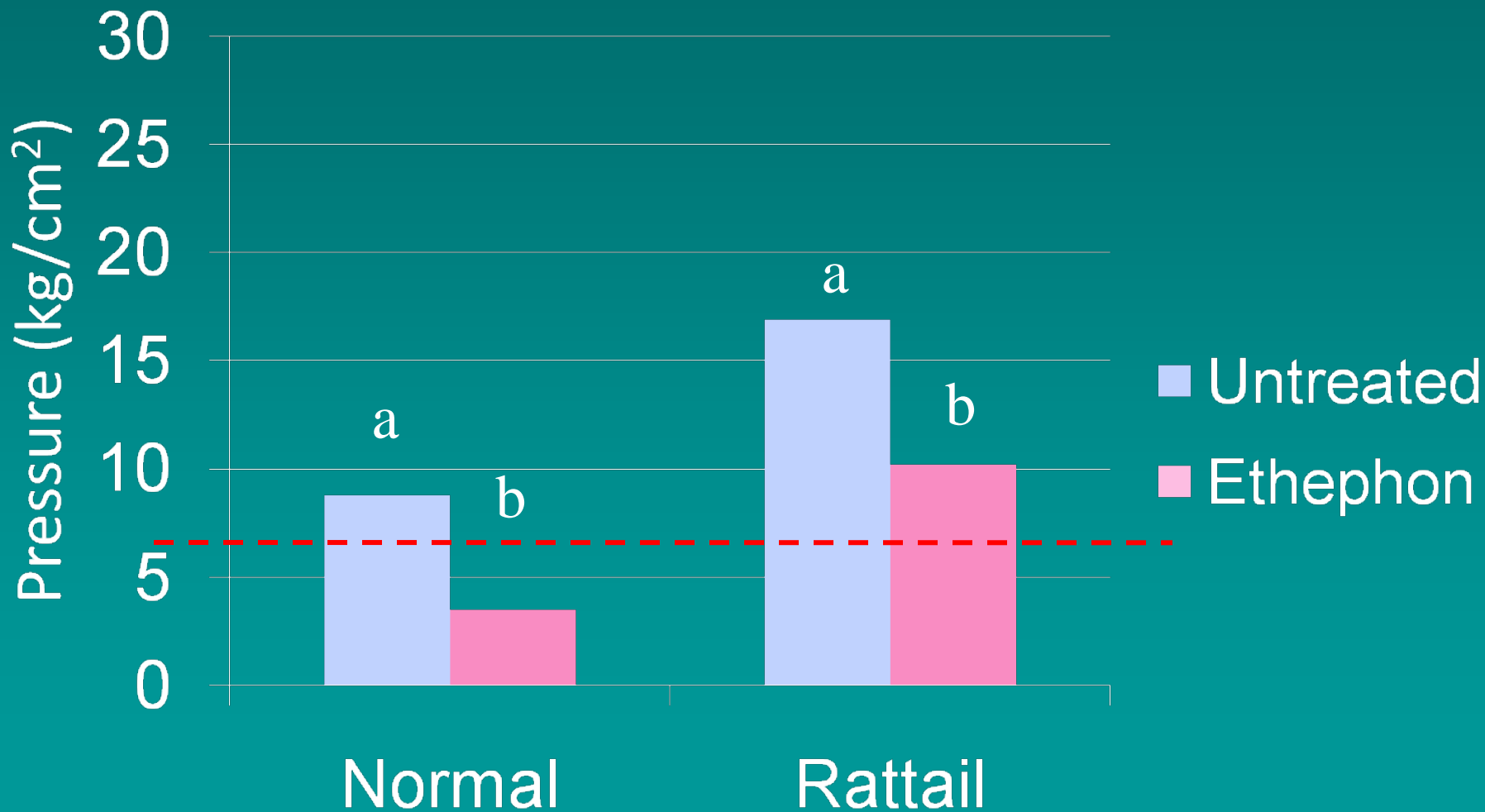
Sacramento, 1 wk. after Aug. 12-15 spray





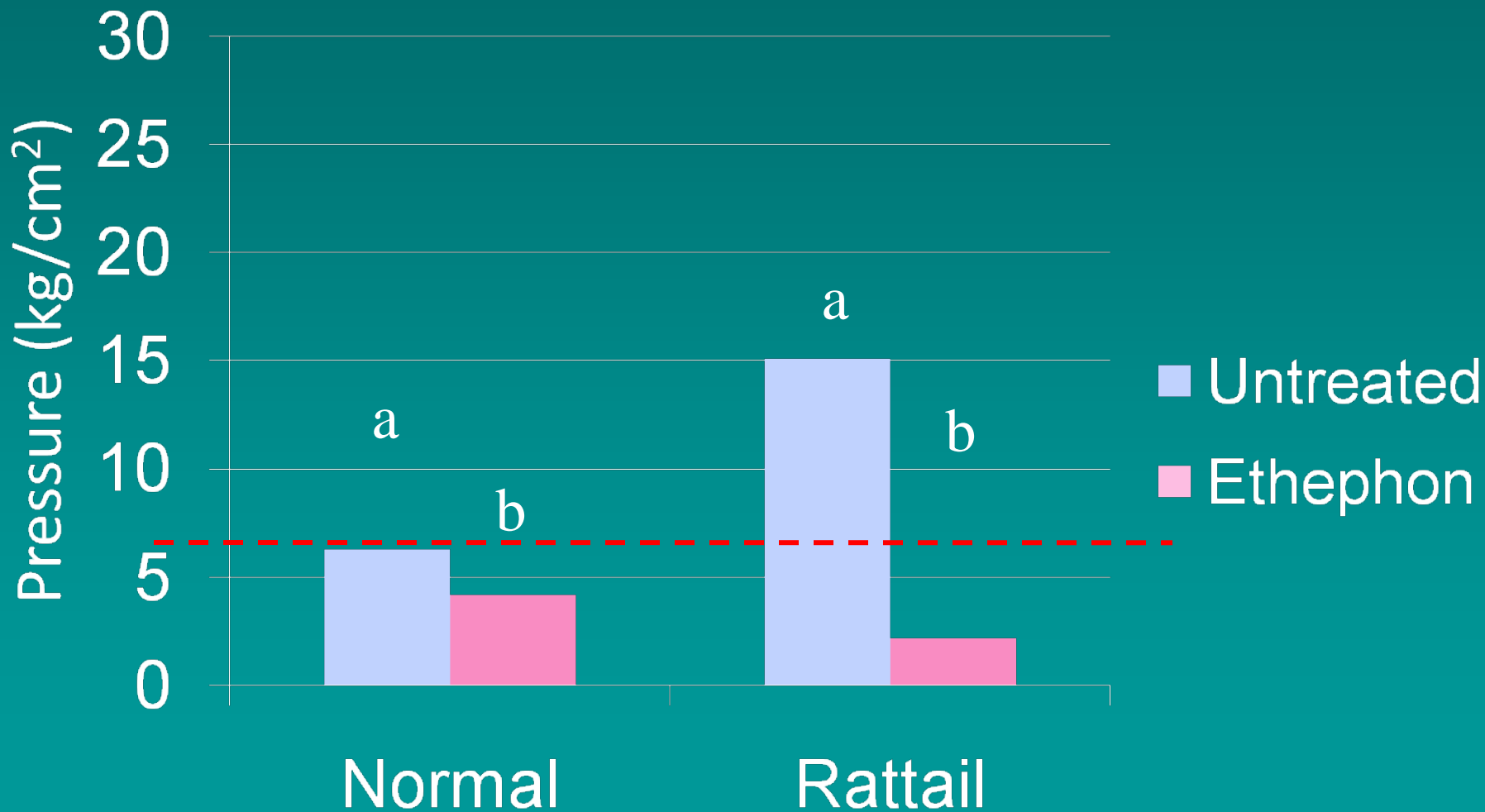
# Fruit Pressures - 2008

Sacramento, 2 wks. after Aug. 12-15 spray



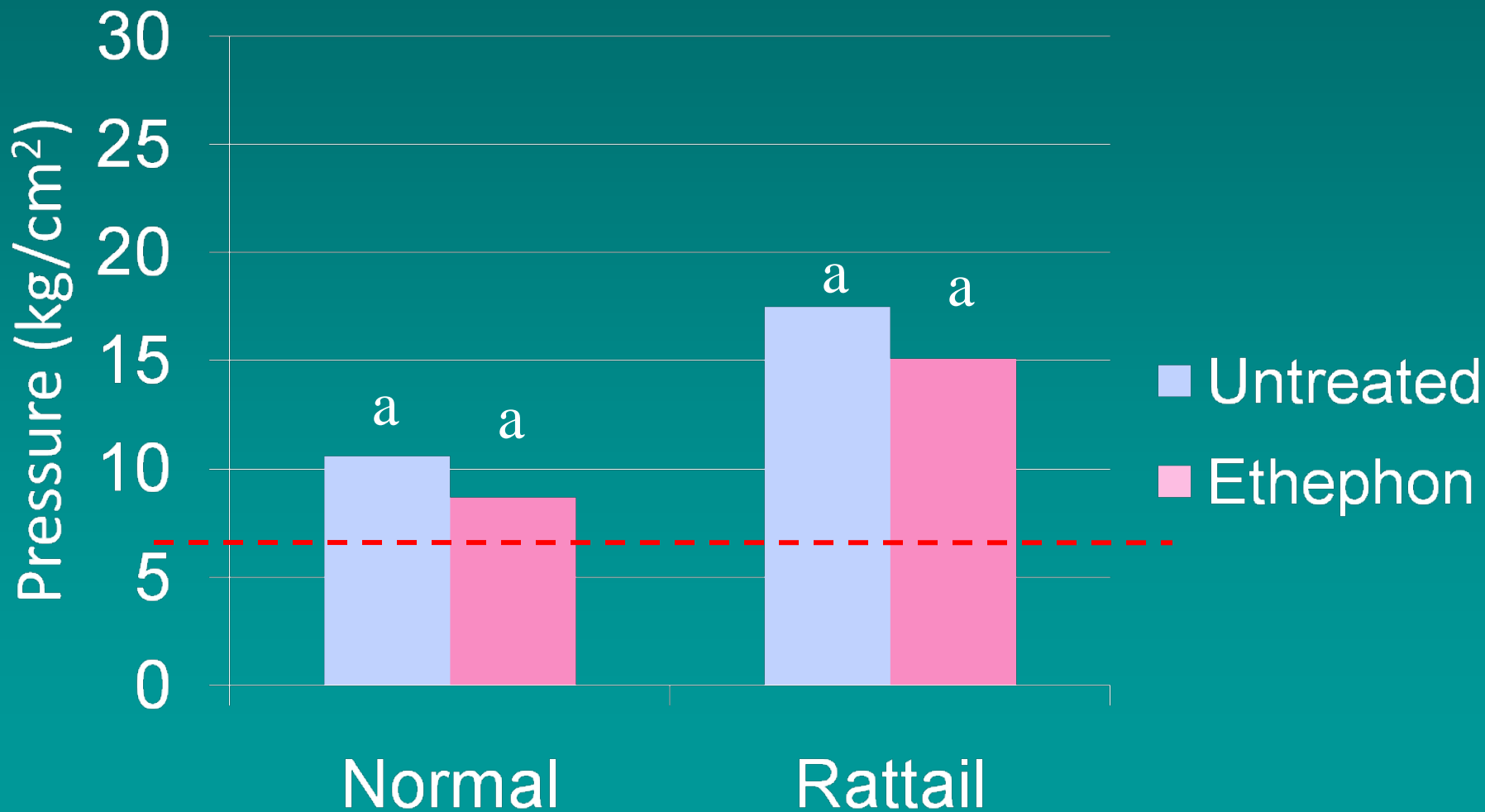
# Fruit Pressures - 2008

Sacramento, 3 wk. after Aug. 12-15 spray



# Fruit Pressures - 2008

Lake/Mendo, 1-2 wks. after 8/22 - 9/5 spray



# Bait Pan Trapping



X

X

X

X

X

X

X

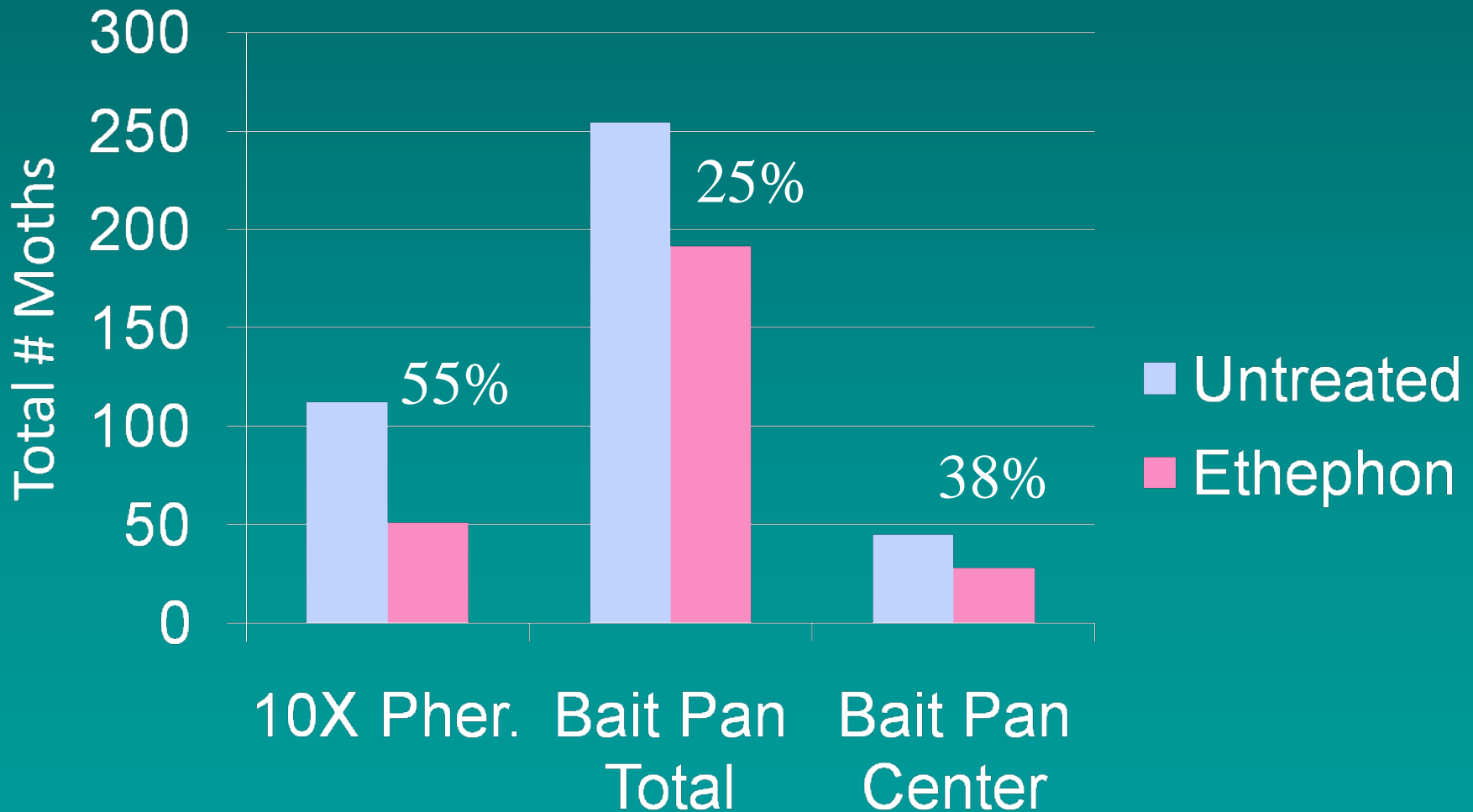
X

X

X

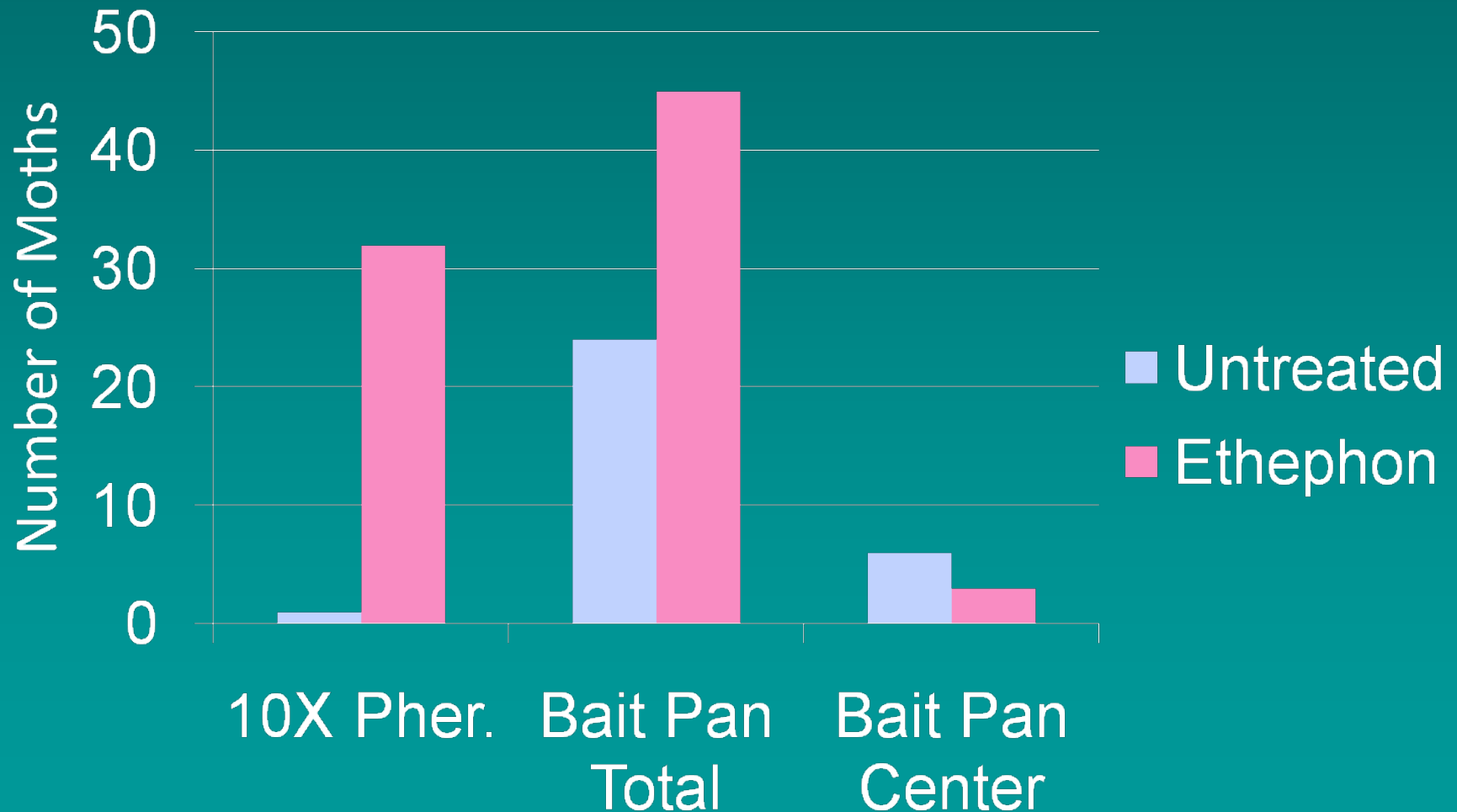
# Trap Catches – 1<sup>st</sup> Generation (Sacto.)

## % Reduction with Ethephon



# Trap Catches – 1<sup>st</sup> Generation (Mendo.)

## % Reduction with Ethephon



# Conclusions to Date

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- Typical decline of fruit pressure to 6.5 kg/cm<sup>2</sup> after treatment:
  - » Normal fruit: 1-2 weeks
  - » Rattail fruit: 2-3 weeks
- Yield (avg. # trees to fill one bin)
  - » No differences
- Fruit size (weight of 400 fruit/block)
  - » No differences