

Caps and Tarps for Better Fumigation



TOM WALTERS, INGA ZASADA, JERRY WEILAND AND LISA DEVETTER

Vapam Caps

- Vapam injected through relatively shallow (5 to 10 inch) shanks
- Relatively inexpensive
- Can be highly effective
- When does it work best?



Vapam Cap Trial Treatments

Untreated Check (UTC)

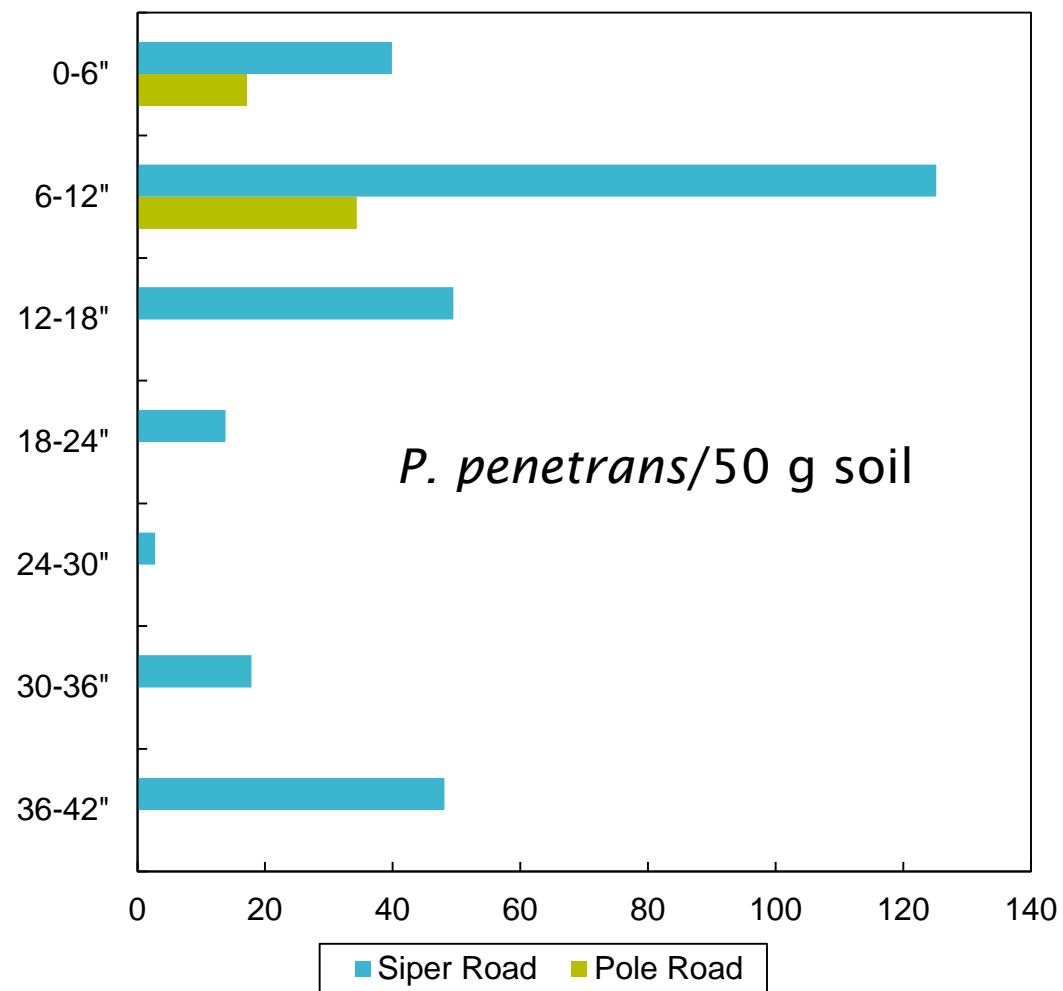
Vapam shallow-applied

Strike 60 deep-applied

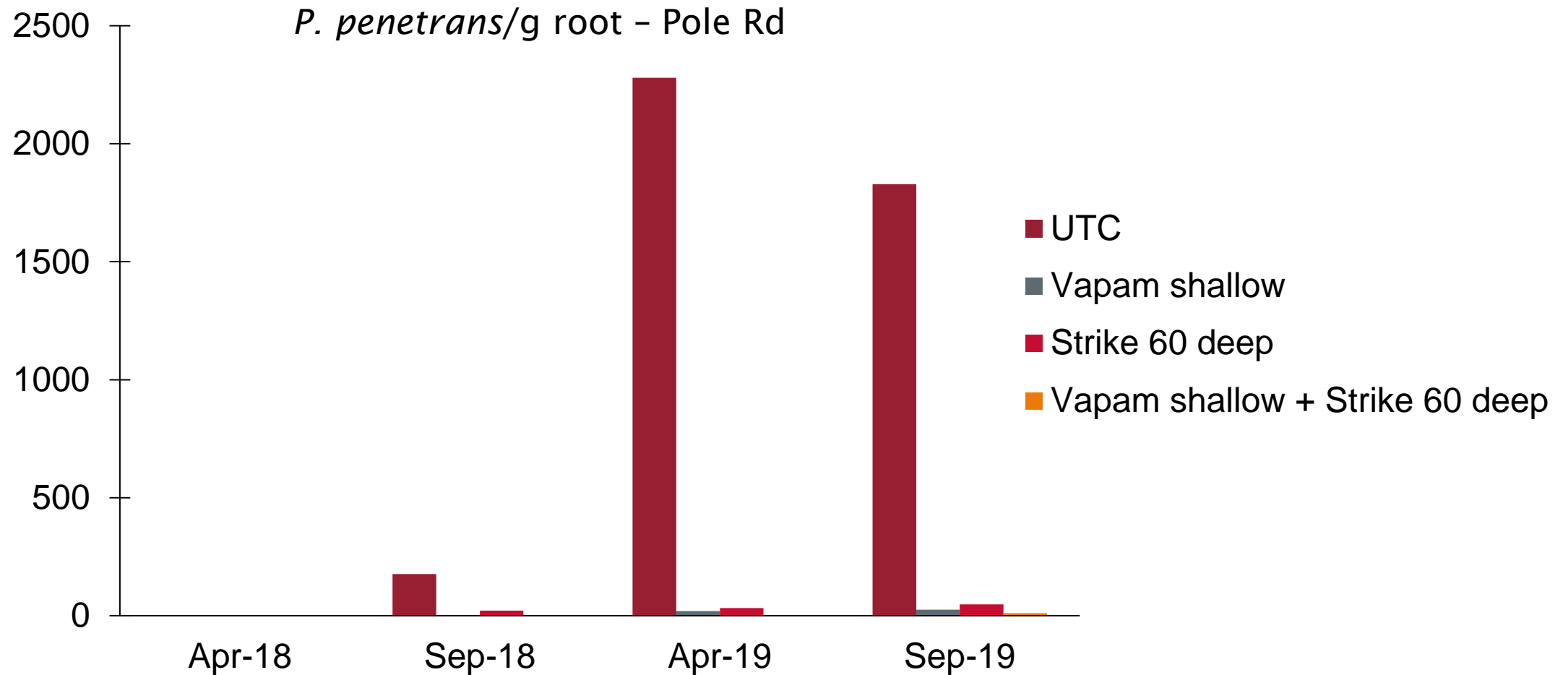
Vapam shallow + Strike 60 deep

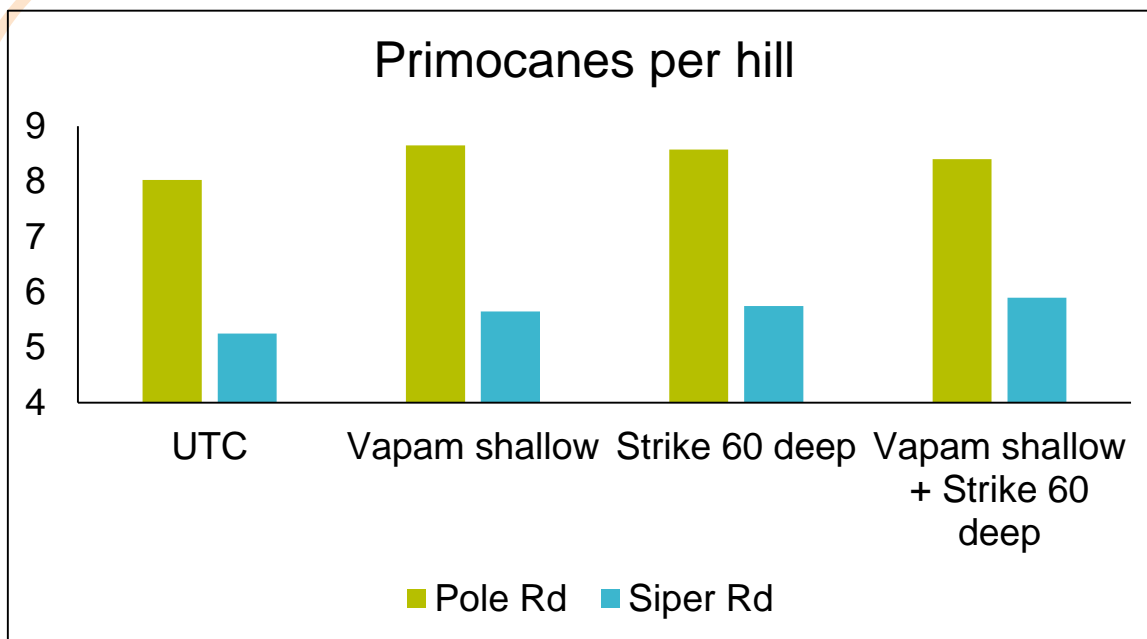


Pretreatment *P. penetrans* vertical densities

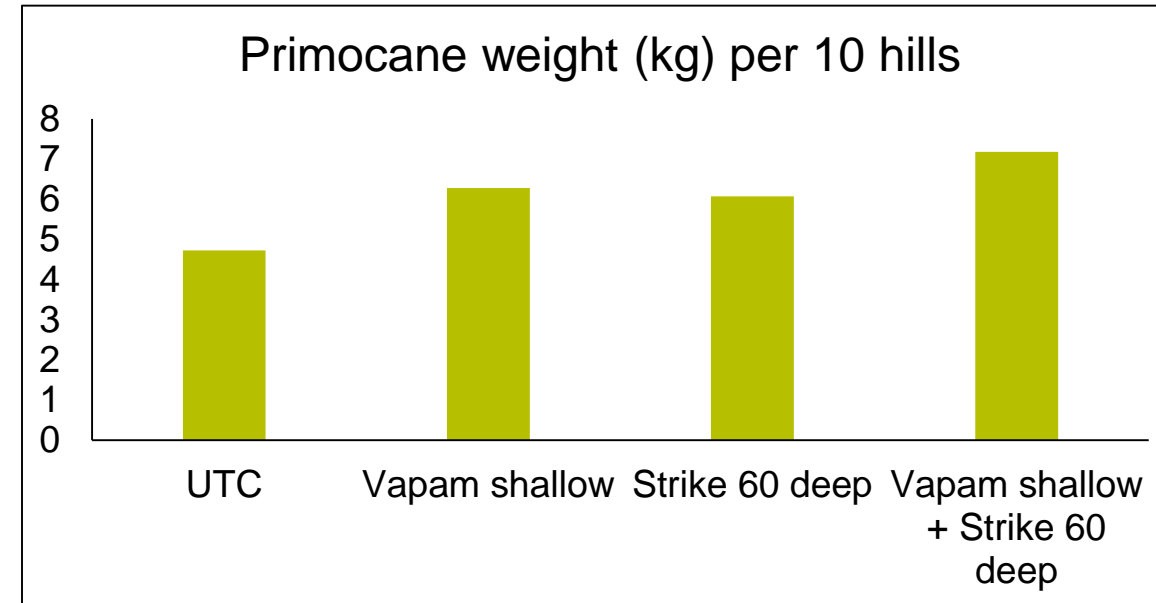
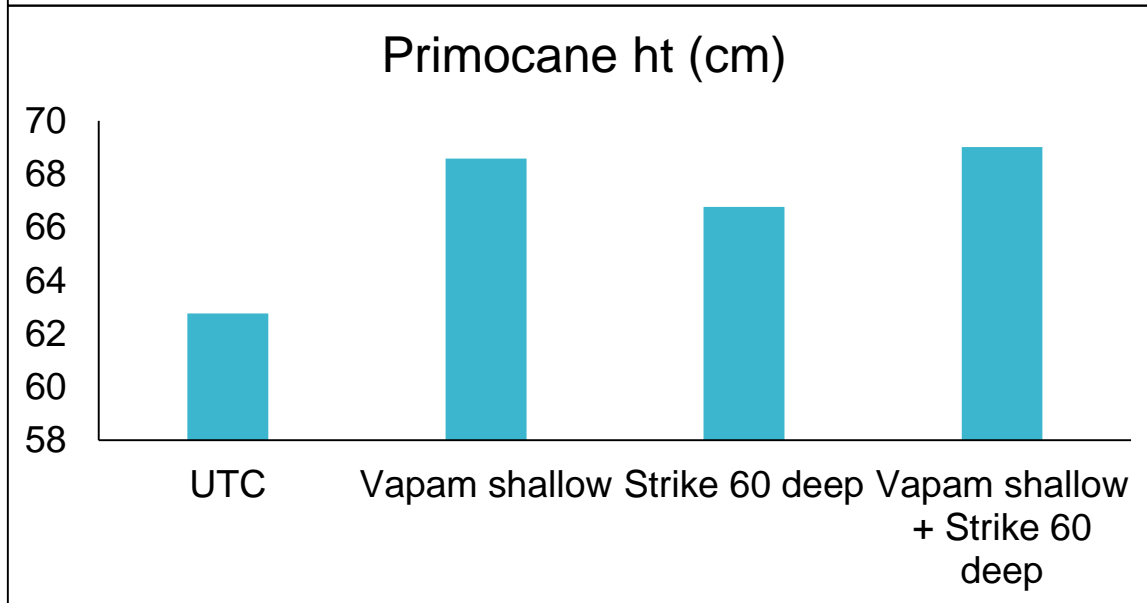


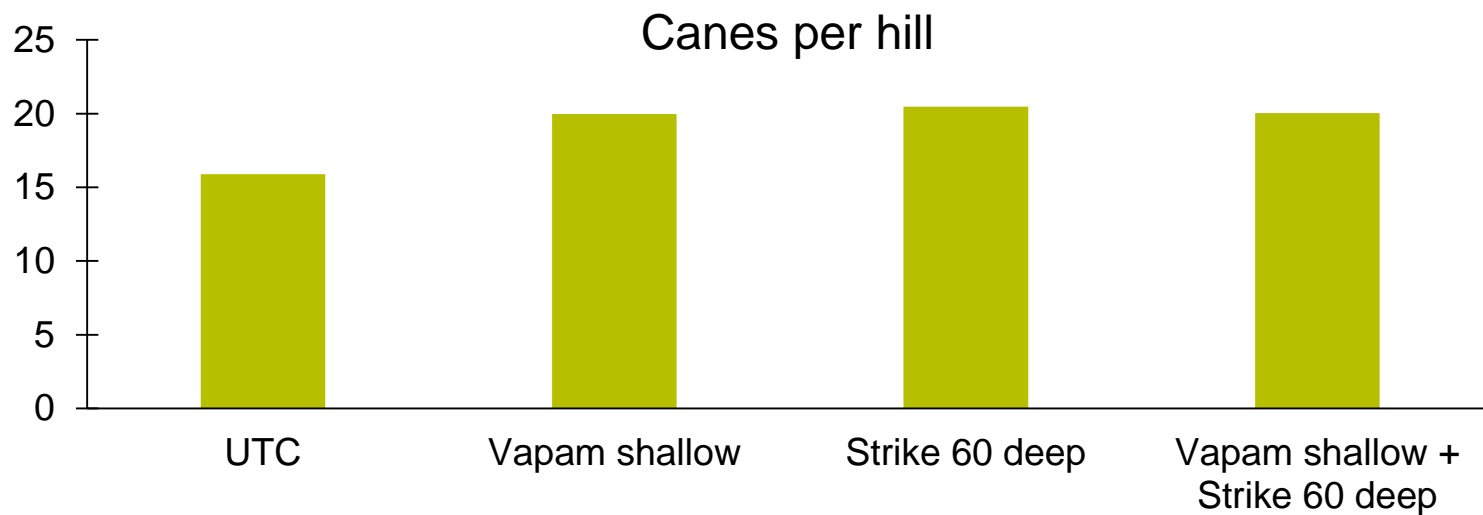
All fumigant treatments suppressed *P. penetrans*



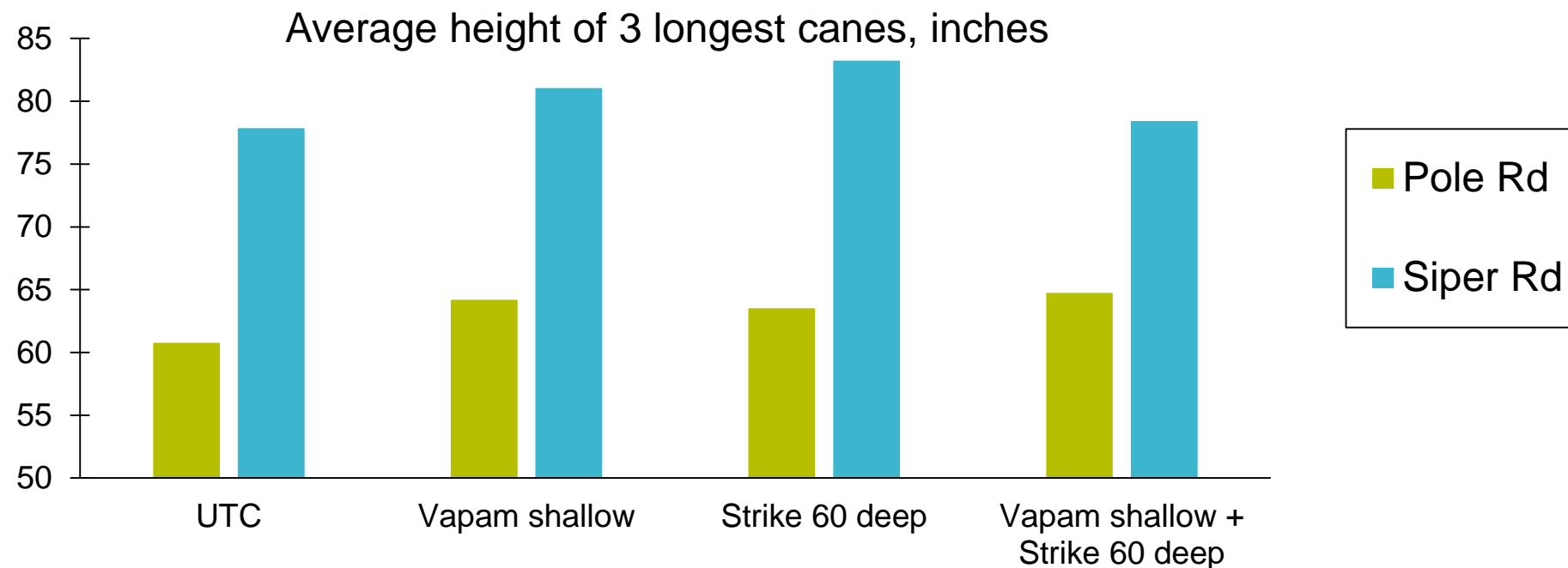


2018 Vigor was improved in fumigated plots...





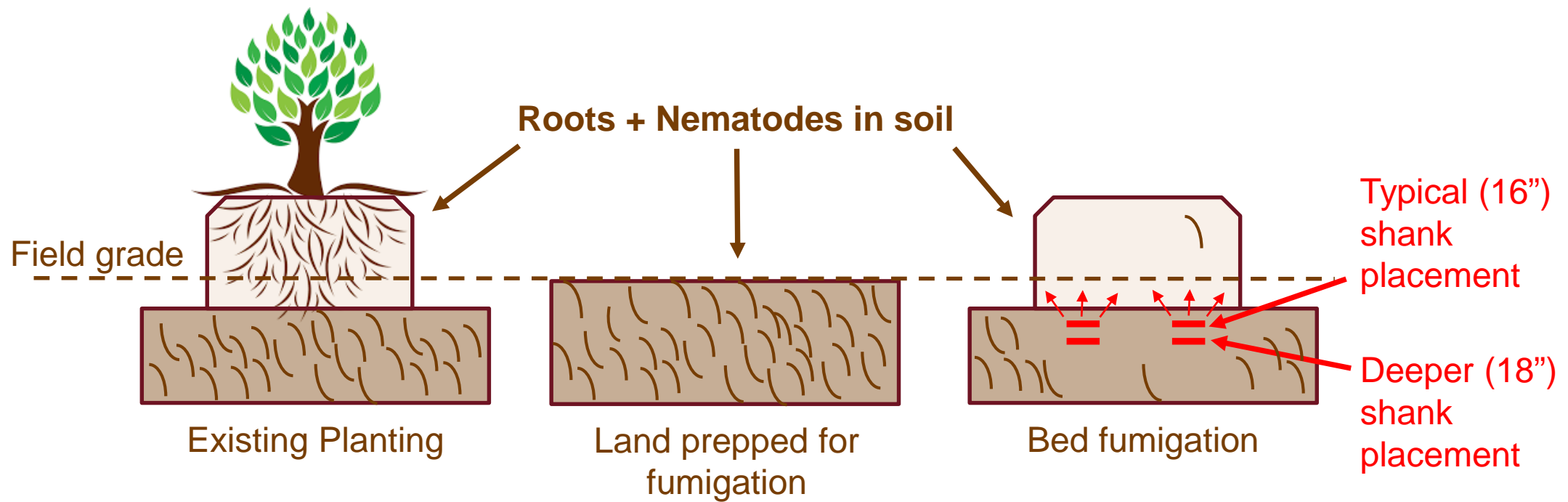
...and vigor in fumigated plots looked better in 2019 as well



Bed fumigation

- Fumigant injected as bed is formed
- Only the bed is fumigated
 - Reduced buffers
- Low fumigant usage

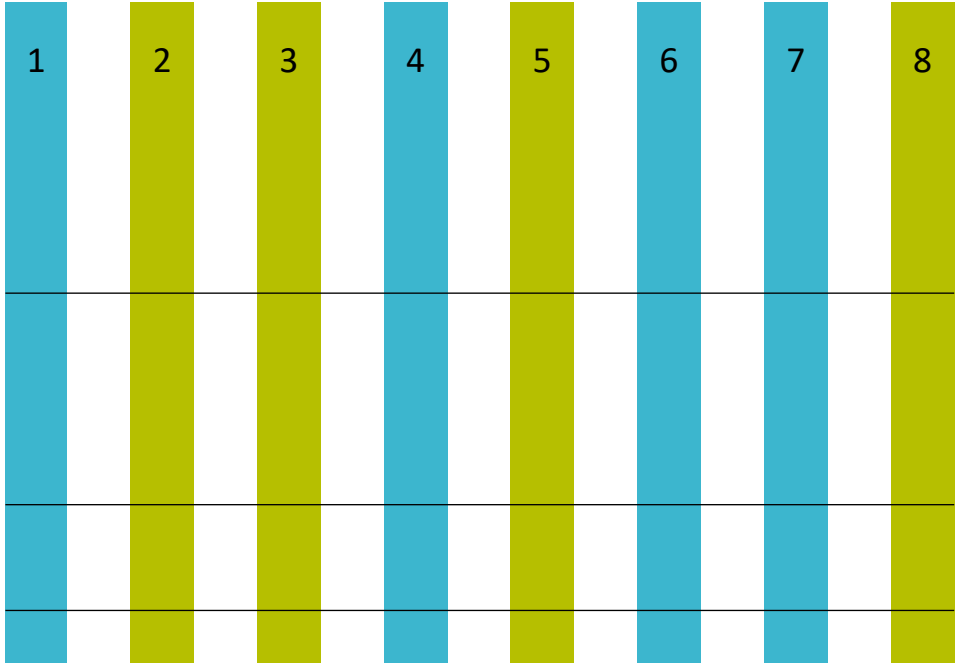




Nontarped, deeper shanks

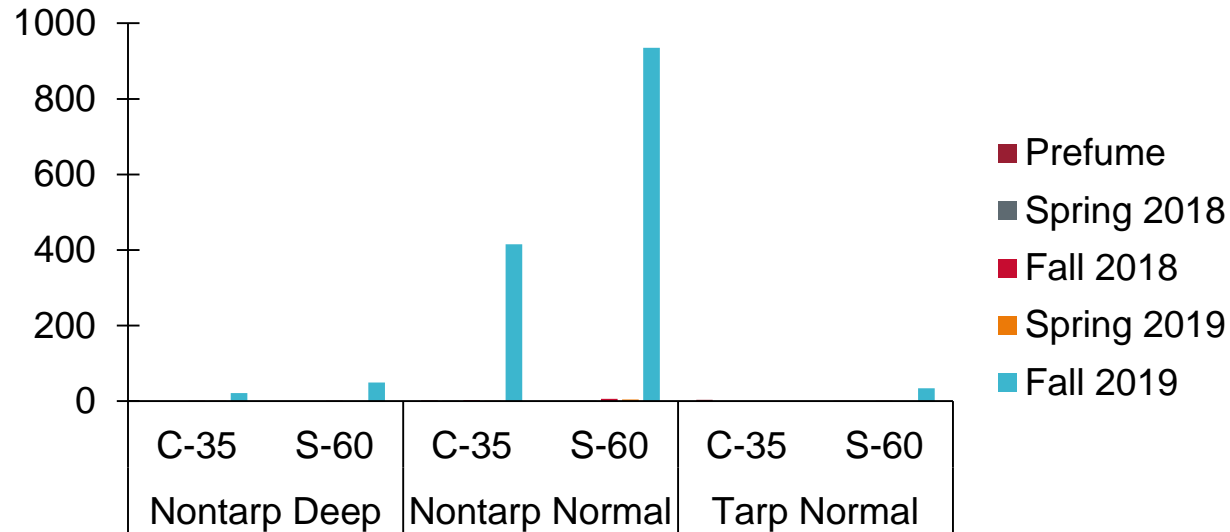
Nontarped

Tarped



fumigant	gallons per broadcast acre	gallons per bed acre	lb 1,3-D per bed acre	lb pic per bed acre
Strike 60	14	35	165	252
C-35	16.8	42	298	163

P. penetrans/50g soil

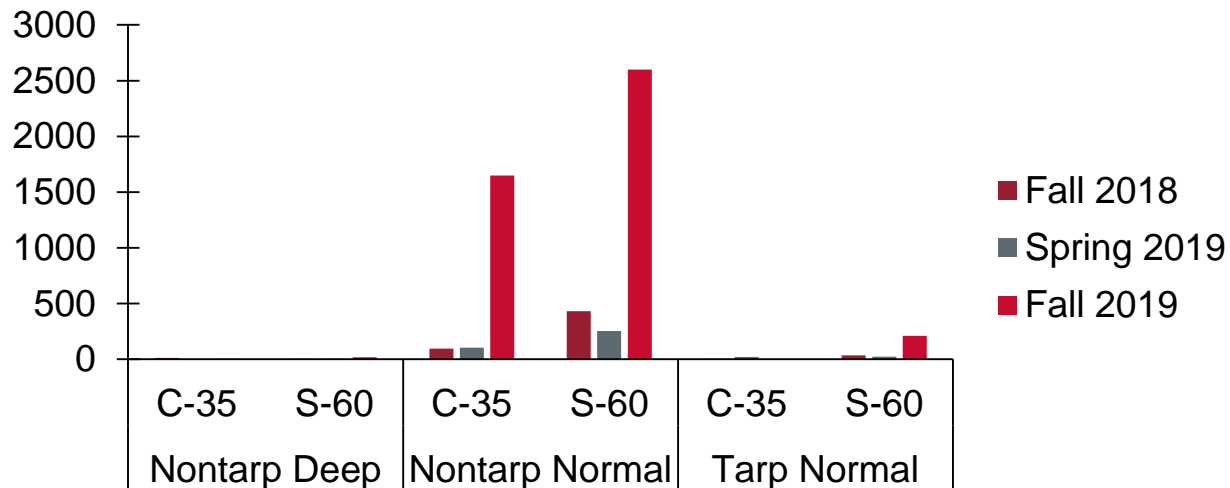


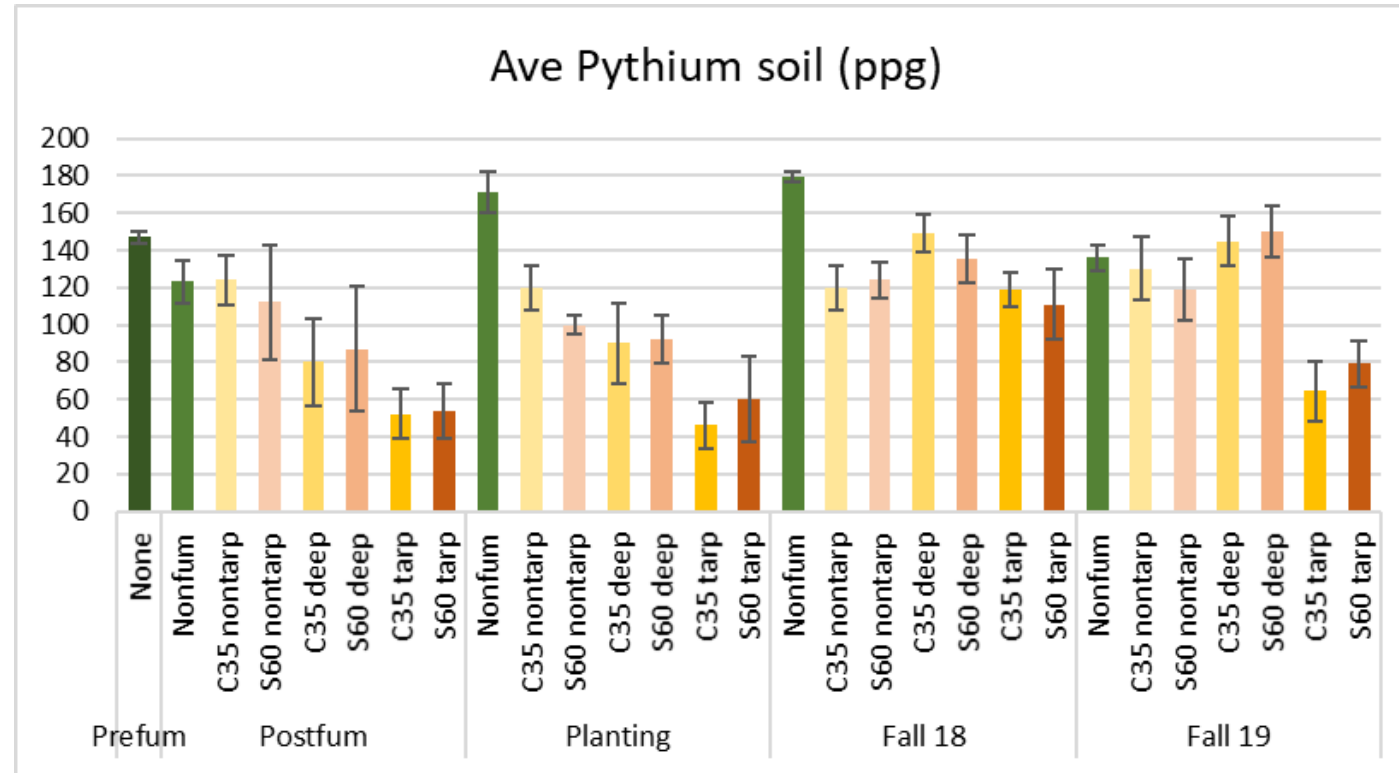
Tarps improved *P. penetrans* control; so did deeper shanks

Roots were better than soil for identifying where control was effective

C-35 appeared more effective than Strike 60

P. penetrans/g dry root

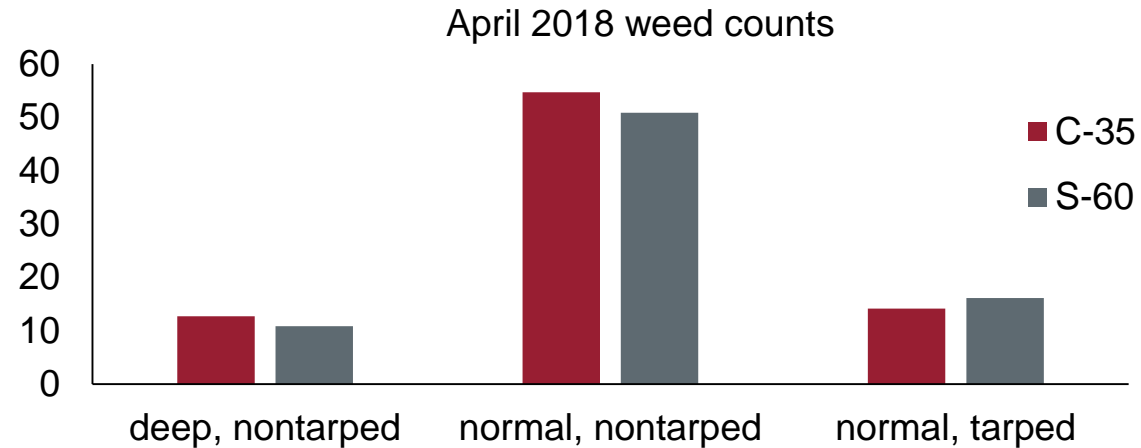




Deeper shanks gave some control for *Pythium*, but tarping gave better, long-term control

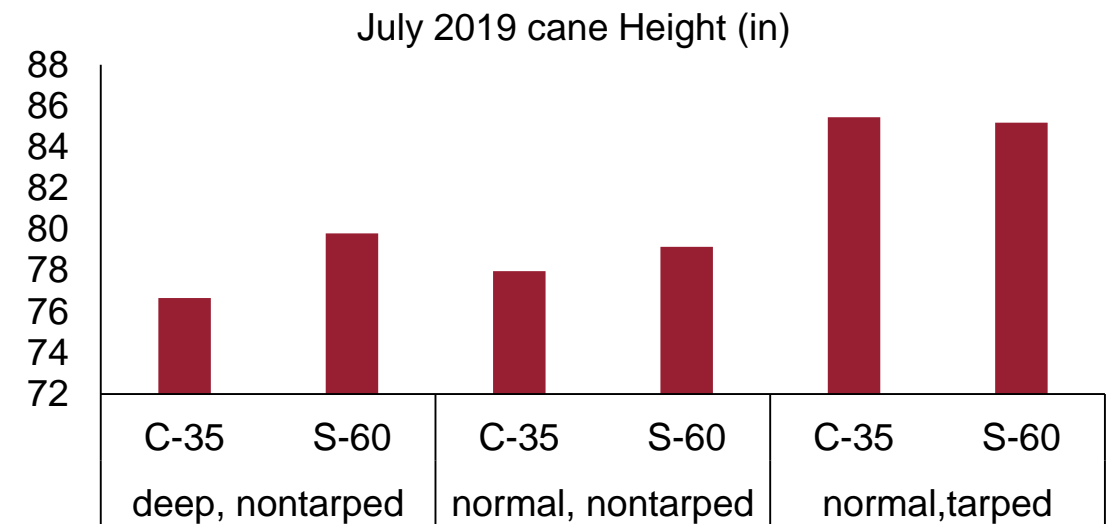
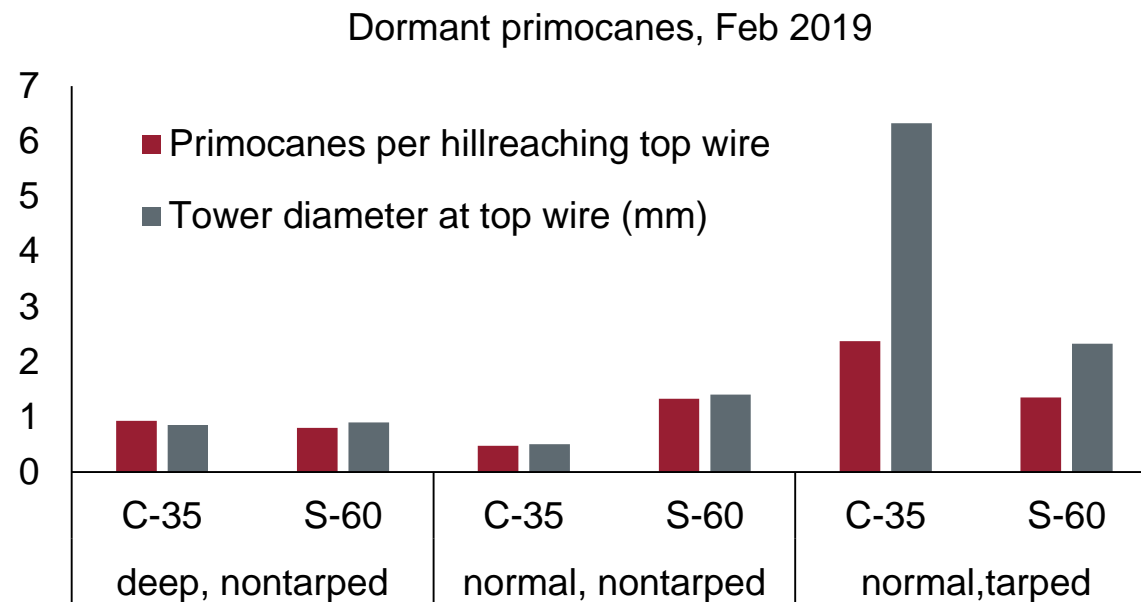
Does better *Pythium* control = better *Phytophthora* control?





Tarps and deeper shanks also improved weed control

Tarps appeared to improve first and second years' growth





Thanks!!

Cooperators:

Trident Ag Products

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Clark Farms

Enfield Farms

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