Nematode management in peanuts

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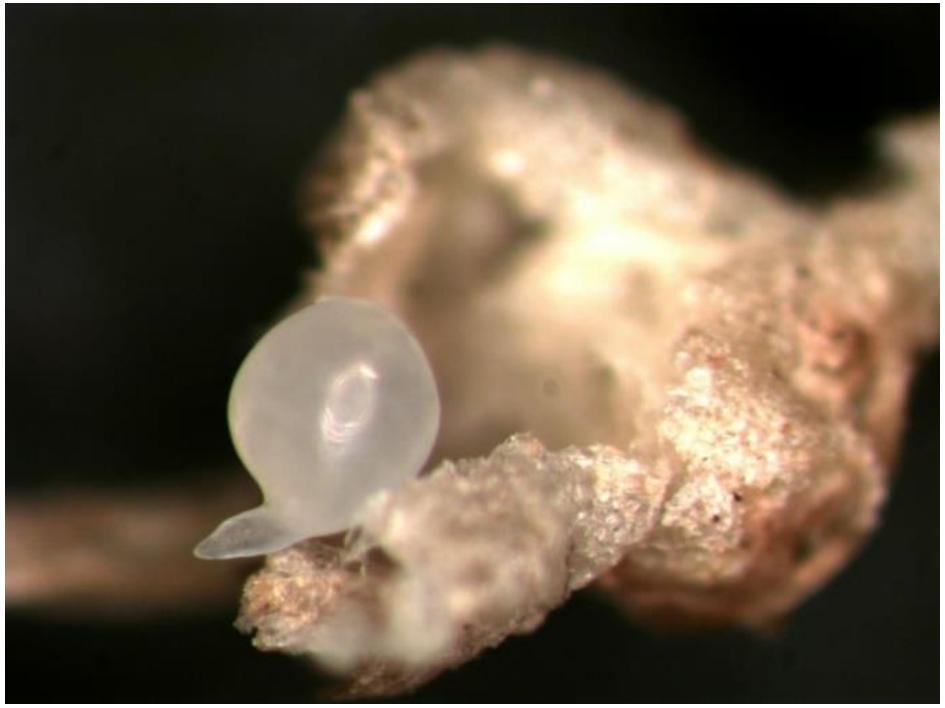
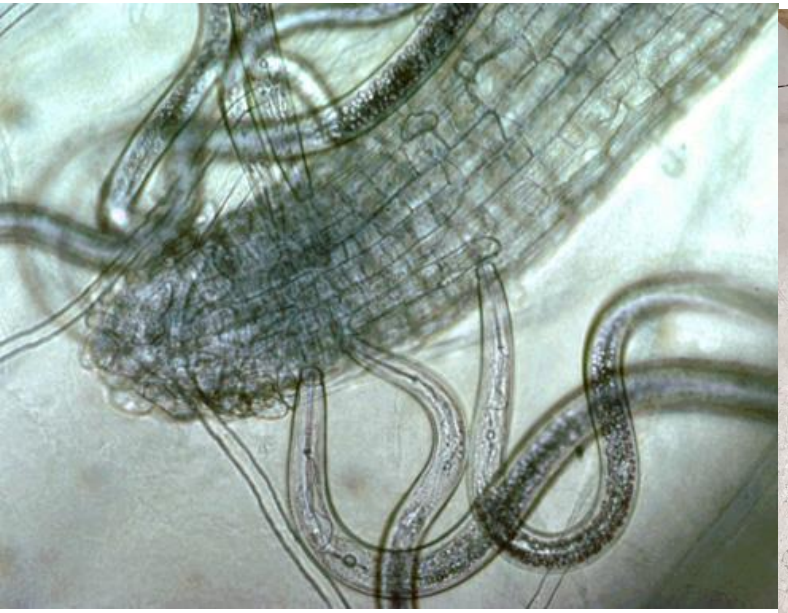
Nematodes in peanut production: Peanut root-knot nematode and Javanese root-knot nematode



Juvenile (left) and female (right) root-knot nematode

Severe foliar symptoms of root-knot nematode (top) and galling on roots (top right) and pods (bottom right).

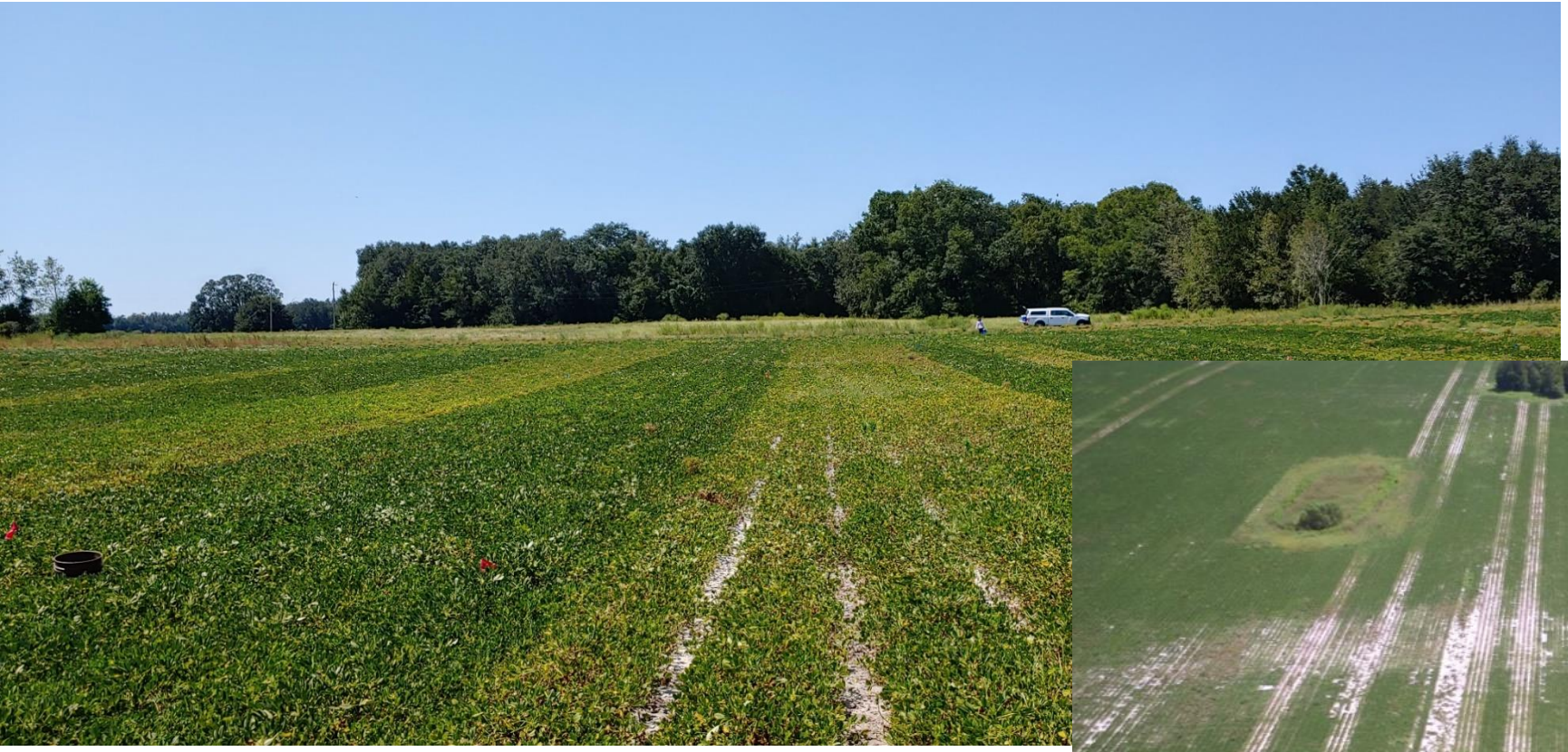
Sting nematode in peanut production



Sting nematode feeding (left), stunted and pruned roots from sting nematode (top) and pin prick lesions on pods (right)

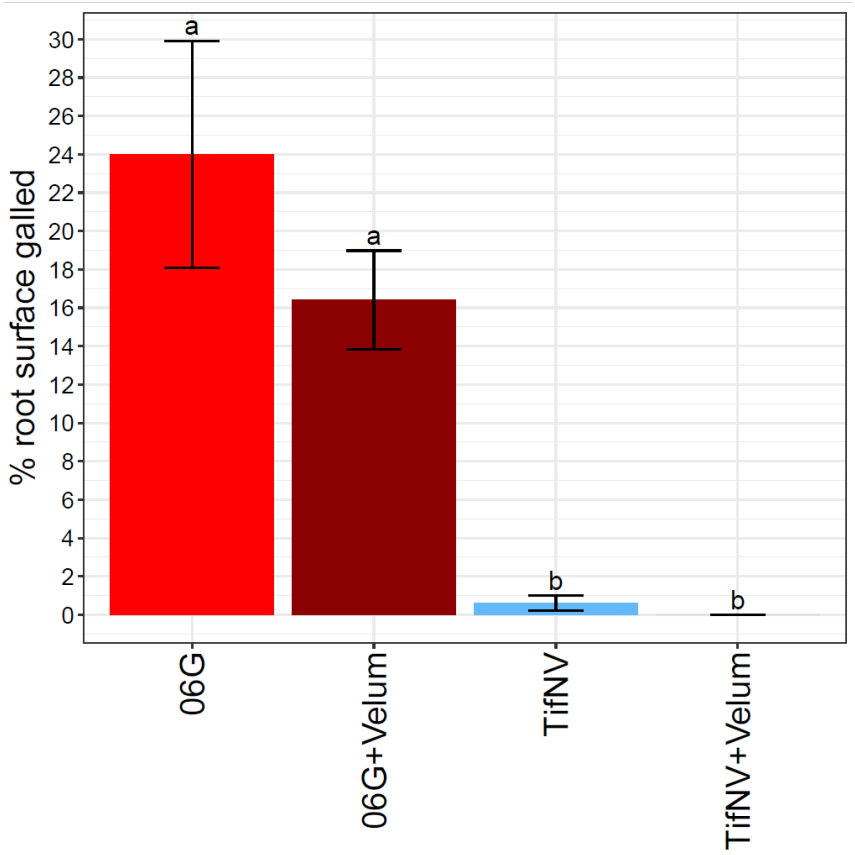
Severe foliar stunting from sting nematode

2019 Columbia County
on-farm trial

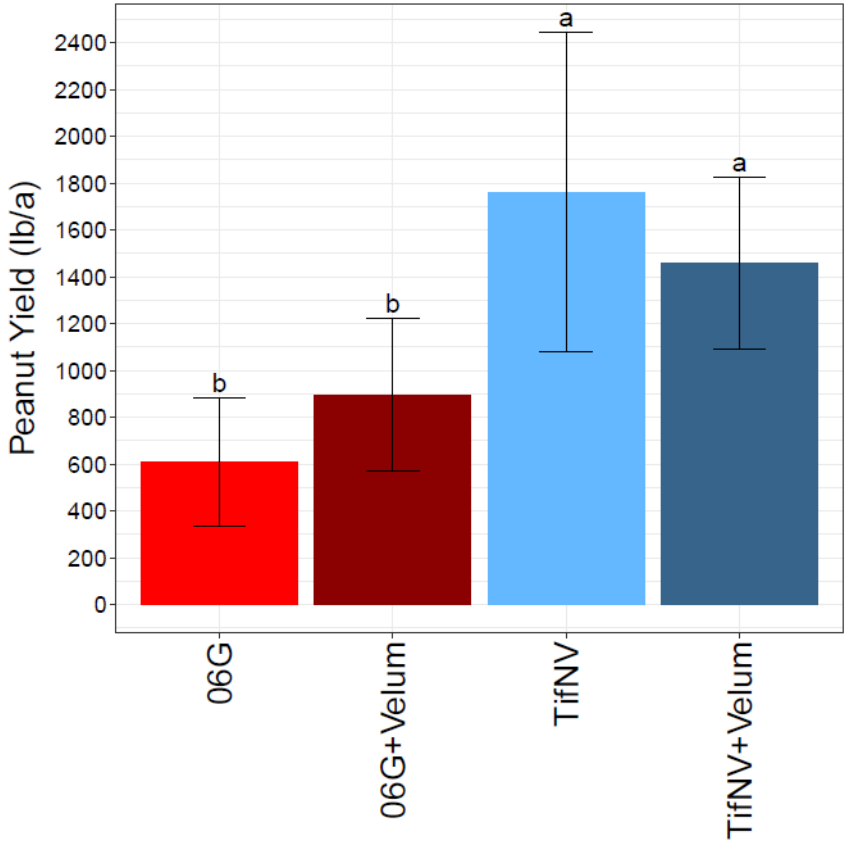


Root-knot nematode resistant peanut cultivar (green strips) vs. susceptible cultivar (yellowed strips with bare ground)

TifNV resistant cultivar reduced nematode infection and increased yield in heavily-infested field



Root galling at harvest



Yields underestimated

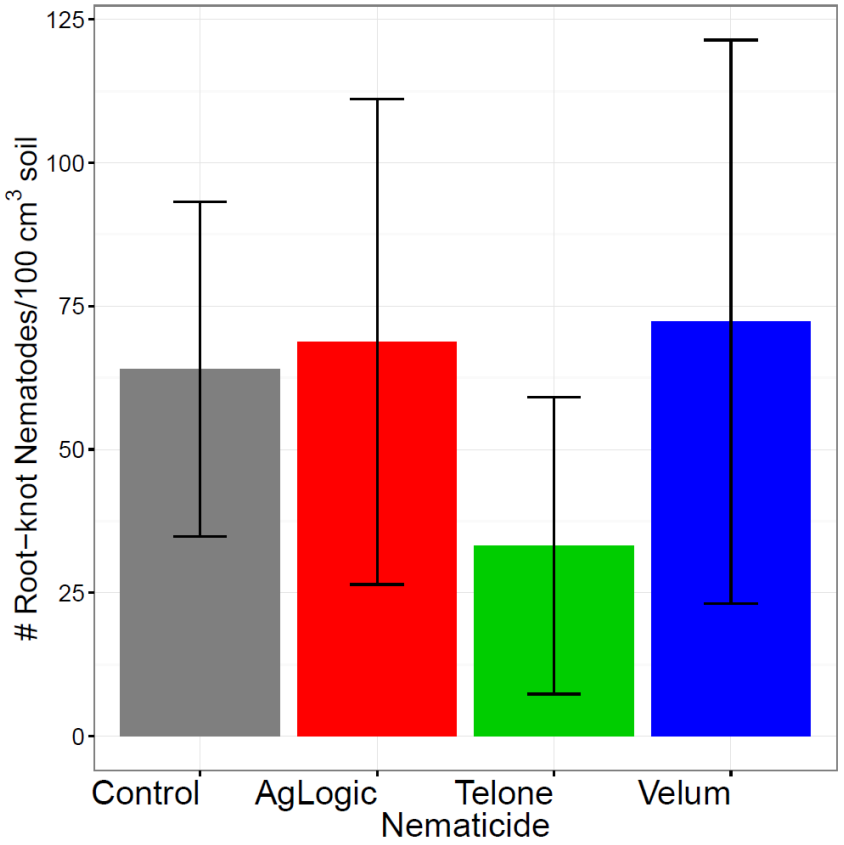
Nematode management: Nematicides

Trade Name/ active ingredient	Maximum Rate	Timing	Application method
Telone (1,3-D)	12 gal (3-6 typical)	Preplant	Fumigant
Velum Total (fluopyram)*	18 oz/A	At plant	In-furrow spray
Propulse* (fluopyram)	13.7 oz/A per application	At pegging	Foliar spray
AgLogic 15GG (aldicarb)	7 lb/A preplant 5 lb/A pegging	1. At plant 2. Pegging	In-furrow granular
Vydate/Return (oxamyl)	136 oz/A per year (5 apps)	1. At-planting 2. Post-emerge spray	In-furrow/ foliar spray

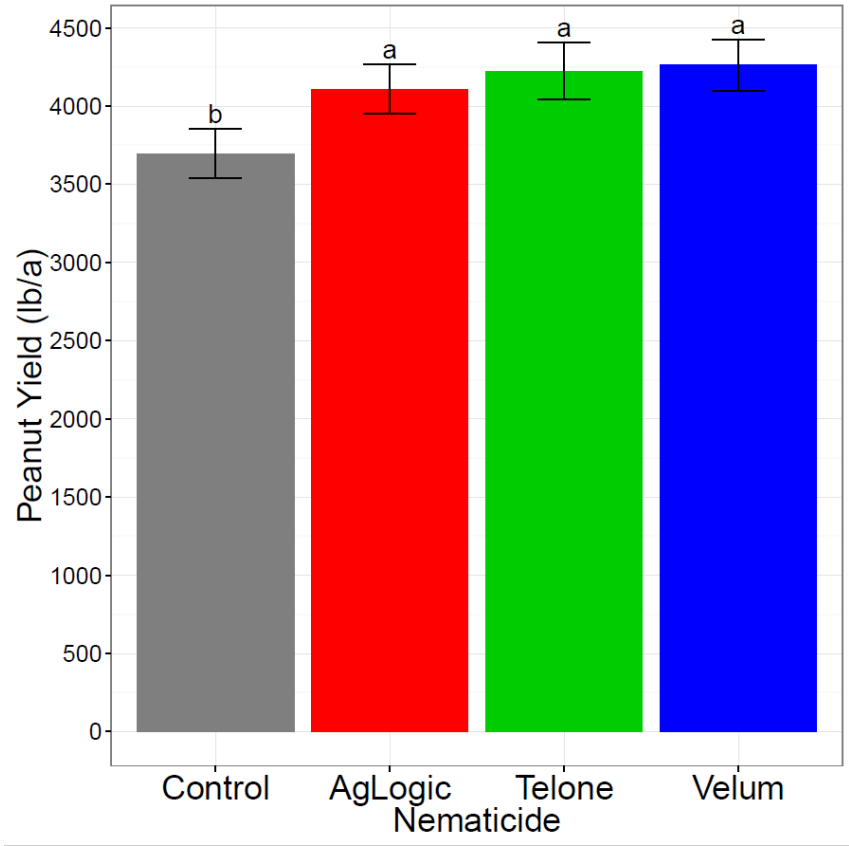
*In 2021 in-furrow fluopyram will have a new name and formulation (no imidacloprid)
*Velum Total also contains imidacloprid insecticide & propulse has prothioconazole fungicide

Cost? About $40/acre for most in-furrow nematicides at full retail

2017 on-farm peanut nematicide trial: all nematicides increased yield

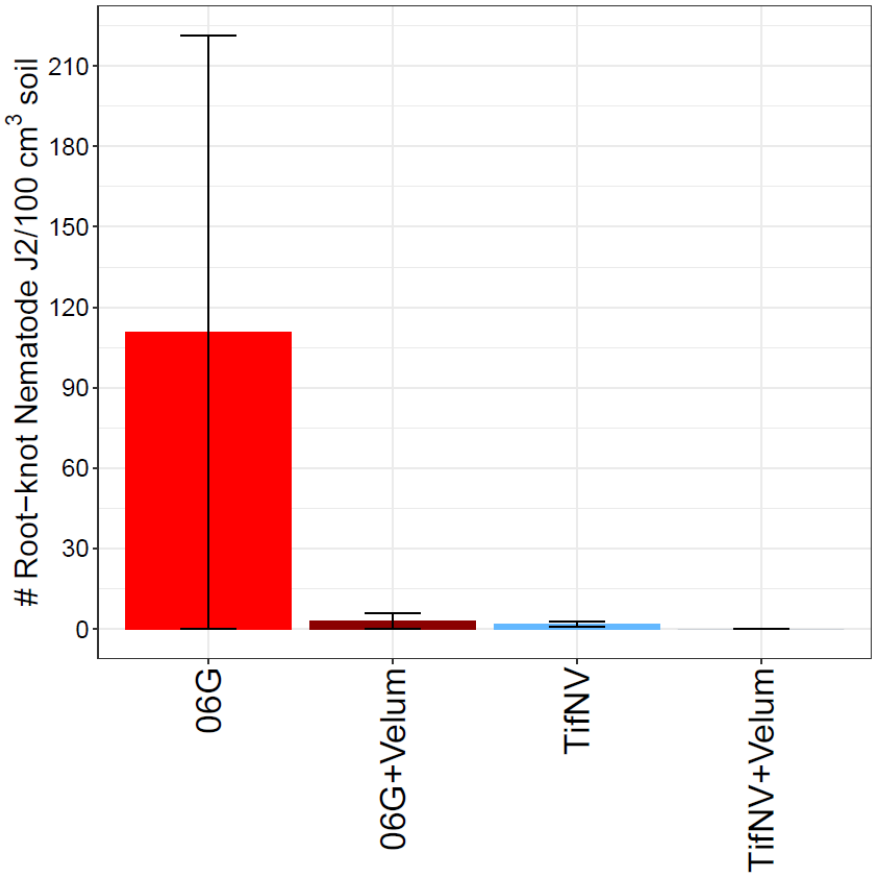


Midseason nematode counts

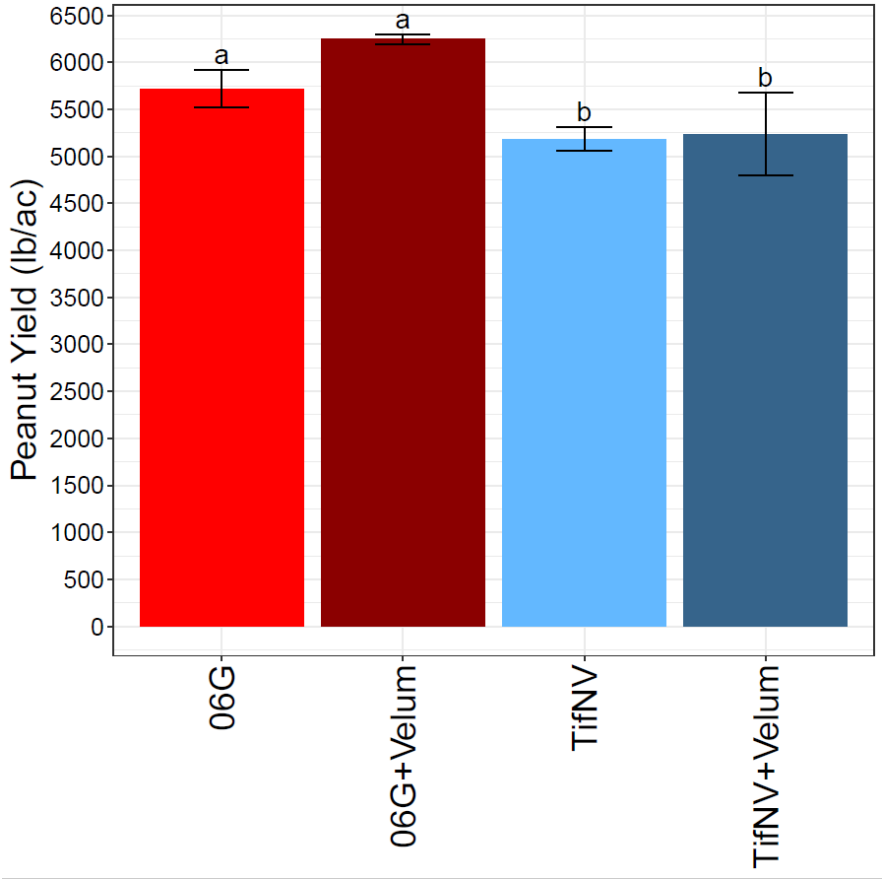


Flat results in 2018

Under low pressure, yield greater for 06G than TifNV (Jackson County)



Soil counts at harvest



Nematode management: Rotation

- Grow non-host, nematodes decline, yields increase
  - Varies by nematode species

Crop	Peanut root-knot	Sting*
Cotton	Good	Bad
Peanut	Bad	Bad
Corn	Good	Bad
Soybean	Bad	Bad

* Grasses are worst for sting, avoid them. Host range varies by sting nematode population.