

2016 Baker County Peanut on Farm Test Plot

The farmers are planting more peanut acres to maintain sustainable farm income. The Peanut Growers were offered a 25 dollar per ton premium to plant high oleic peanut varieties.

This test is to see the difference in two available high oleic peanut varieties. Reducing the peanut rotation causes the nematodes & diseases to increase while the yield decreases. This created the need to test the economics for using a plant nematicide, fungicide & inoculant.

- Plant Stand with and without Proline Fungicide in Furrow at planting.
- Thrip control with and without Velum Nematicide in furrow at planting.
- Yield comparison between two high oleic peanut varieties GA 09B and GA14N.
- Peanut yield of GA09B treated with nematicide compared to GA14N Nematode Resistant variety without nematicide treatment.
- GA 14N variety yield comparison with and without peanut inoculant.
- Effect of Inoculant mixed with Velum & Proline compared to Inoculant by its self.

Plan of action: To plant a replicated peanut test plot, designed by the UGA Peanut team, to evaluate Velum in-furrow peanut nematicide treatment compared to resistant variety. Evaluating an inoculant used with velum nematicide versus and inoculant used with a resistant variety. All plots will be evaluated for germination, diseases, yield, and grade. Nematode resistant variety Georgia 14N is a later maturing variety and will be planted at least 14 days before Georgia 09B.

Randomized 6 Row Plot Design

1. Georgia 14N
2. Georgia 14N plus Inoculant
3. Georgia 09B
4. Georgia 09B plus Velum
5. Georgia 09B plus Velum plus Inoculant
6. Georgia 09B plus Velum plus Inoculant plus Proline

Both Georgia 14N and Georgia 09B are high oleic peanut varieties. Georgia 14N takes two weeks longer to mature than Georgia 09B. The plan is to plant the GA 14N and plant GA09B two weeks later.

Planting Dates

- **May 12, 2016 planted Georgia 14N**
- **May 31, 2016 GA09B were planted in Plot plan**



Two Six row planters

6 Row Randomized Plot Plan & Treatment (Replicated six times)

1. GA14N
2. GA14N+Inoculant
3. GA90B + Velum
4. GA09B
5. GA09B + Velum + Proline
6. GA09B + Velum + Proline + Inoculant
7. GA09B + Velum + Proline
8. GA09B + Velum + Proline + Inoculant
9. GA14N
10. GA14N+I
11. GA09B
12. GA09B + Velum
13. GA09B + Velum + Proline
14. GA09B + Velum + Proline + Inoculant
15. GA09B
16. GA09B + Velum
17. GA14N+Inoculant
18. GA14N
19. GA09B
20. GA09B + Velum
21. GA14N
22. GA14N+Inoculant
23. GA09B + Velum + Proline + Inoculant
24. GA09B + Velum + Proline
25. GA09B + Velum

26. GA09B
27. GA14N+Inoculant
28. GA14N
29. GA09B + Velum + Proline
30. GA09B + Velum + Proline + Inoculant
31. GA09B + Velum + Proline
32. GA09B + Velum + Proline + Inoculant
33. GA09B
34. GA09B + Velum
35. GA14N
36. GA14N+I

GA09B Peanuts Were Planted 19 days later.



Test rows were six rows wide, 1000 plus feet long and randomly planted six times.



Plant Stand on GA14N Twelve Days After Planting Averaged:

GA14N	4.3 plants per foot
GA14N + Inoculant	4.5 plants per foot

- Plant Stand on GA 09B Twelve Days After Planting Averaged:

GA 09B	4.1 plants per foot
GA 09B + Inoculant	4.2 plants per foot
GA 09B + Proline + Inoculant	4.6 plants per foot
GA 09B + Velum + Proline + Inoculant	4.6 plants per foot

• **Plant Stand GA09B with and without Proline Fungicide in Furrow at planting?**

Plant stand with proline in furrow averaged 4.6 plants per foot

Plant stand with-out proline in furrow averaged 4.1/2 plants per foot.

Planting last of May in ideal soil environment there is no advantage to proline in-furrow. Planting earlier in worse soil environment will increase need for proline to get good plant stand.

- Thrip Damage on Ten point scale GA14N Twelve Days After Planting Averaged:

GA14N	4
GA14N + Inoculant	3

- Thrip Damage on Ten point scale GA 09B Twelve Days After Planting Averaged:

GA09B	4
GA09B + Velum	2
GA09B + Velum + Proline	2
GA09B + Velum + Proline + Inoculant	2

- **GA09B Thrip control with and without Velum Nematicide in furrow at planting.**
Thrip control with Velum in furrow averaged 2 on ten point scale.
Thrip control with-out velum in furrow averaged 4 on a ten point scale.

Velum applied in furrow last of May in ideal environment gave good thrip control.
Velum applied to peanuts planted earlier with heavy thrip pressure could be of great economic value.

- **Yield comparison between two high oleic peanut varieties GA 09B and GA14N.**

High Oleic Peanut Variety Test

No Rootknot Nematodes were found in soil test at harvest.

<u>Variety</u>	<u>Pounds/Acre</u>	<u>Grade SMKRS %</u>
GA09B	5874	77
GA09B +V+P+I	5694	75
GA09B+V	5675	77
GA14N+I	5539	76
GA09B+V+P	5506	75
GA14N	5277	74

- **GA 14N Variety Yield Comparison with and without Peanut Inoculant**

<u>Variety & Treatment</u>	<u>Pounds/acre</u>	<u>Grade SMKRS %.</u>
GA14N+I	5539	76
GA14N	5277	74

- **Effect of Inoculant mixed with Velum & Proline Compared to only Inoculant.**

<u>Variety & Treatment</u>	<u>Pounds/Acre</u>	<u>Grade SMKRS %</u>
GA09B+V+P+I	5694	76
GA09B+V	5674	77
GA09B	5874	77