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Peanut fungicide comments 2016

- ❑ Apply the first spray at R3 (very early pod) or R3 + 2 weeks on Bailey. Well rotated peanuts need a total 5 sprays (4 sprays for Bailey) applied at 2 week intervals in most seasons. The number of sprays required can be reduced by using the peanut leaf spot advisory after the first spray.
- ❑ Sullivan and Wynne probably can be managed like Bailey. However, pending further study I am not ready to make definitive recommendations for these cultivars, particularly for high pressure conditions (shorter rotations, irrigation, Southeastern counties). **For all cultivars, scout frequently to monitor performance of disease control programs**
- ❑ The right program for a particular field depends on the cultivar, irrigation, and the field's disease and cropping history. Fields on short rotations (less than three years between peanut crops) and irrigated fields are at higher risk for soilborne diseases.
- ❑ Rotational crops that increase risk of soilborne diseases include soybeans, tobacco, tomatoes, melons, and many other vegetables. Remember that diseases caused by peanut pathogens can have different names in other crops or regions. For example: stem rot = white mold (peanut) or Southern blight; Rhizoctonia = sore-shin, belly rot, damping off; CBR = red crown rot; Sclerotinia blight = white mold (vegetables)
- ❑ The major fungicides on the market all perform well. In my opinion, overall differences in the most widely available products in groups 3, 7, 11 are not great enough to justify agonizing over fungicide choices. Consider using inexpensive generic equivalents when possible.
- ❑ However, no fungicide is perfect. All have relative strengths and weaknesses. Fungicides from different groups (3, 7, 11) tend to be complementary in their activity.
- ❑ A fungicide program that alternates different groups fungicides takes advantage of the strengths of different groups (3, 7, 11) and also helps to reduce the risk of fungicide resistance.
- ❑ Use a multisite (Group M) fungicide to prevent fungicide resistance to any or groups 3, 7, or 11. Be aware that Group M fungicides only control foliar diseases when used alone.
- ❑ Repeated applications of the fungicide chlorothalonil (Bravo; Group M) can flare spider mites and make Sclerotinia blight worse. Switch to a different fungicide during hot, dry periods. Minimize applications of **all** fungicides during these periods by using leaf spot advisories. Avoid repeated applications of chlorothalonil in fields with a history of Sclerotinia blight.
- ❑ The programs listed are adaptable to an advisory program.
- ❑ The products listed are the ones most commonly used in our area. Not all labeled products are listed for sake of brevity and simplicity. Please check the North Carolina Agricultural Chemicals Manual for a complete listing of fungicides registered on peanuts in North Carolina

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Situation 1 (most fields): Bailey with good rotation
Stem rot and/or CBR possible
4 spray program

Apply the first spray at R3 (very early pod) + 2 weeks on Bailey. Well rotated peanuts need a total of 4 sprays for Bailey applied at 2 week intervals in most seasons. The number of sprays required can be reduced by using the peanut leaf spot advisory after the first spray.

Spray 1 (R3)	**Spray 2, 3, OR 4 (1 application during this period)**	**Sprays 2, 3 and 4 (2 applications during this period)**		**Spray 5**	**Remarks**
		option 1 (leaf spot + stem rot control)	***option 2 (leaf spot only)***		
None	Provost 8 to 10 oz (Group 3)	Abound 12.7 -18 oz (Group 11) **OR** Headline 6 -15 oz (Group 11) **OR** Custodia 15.5 oz (Group 11 + 3) **OR** Priaxor 6 - 8 oz (Group 11 + 7***) **OR** Elatus 7.3 oz (Group 11 + 7***)	Chlorothalonil 1.5 pt **	Chlorothalonil 1.5 pt **	•Very good leaf spot control; very good stem rot control •Option 1 may enhance stem rot control; higher rates will give more control **Full season use of chlorothalonil could increase spider mite and/or Sclerotinia problems ***Limits for Group 7: Unmixed - 1 of 4 applications; Mixture – 2 of 4 applications
	Tebuconazole 7.2 oz (Group 3) + Chlorothalonil 1-1.5 pt**				
	Convoy 13 oz (Group 7***) + Chlorothalonil 1.5 pt**		Group M	Group M	
	Fontelis 16 oz (Group 7***)				

Program 1 is most appropriate when Bailey has been planted and soilborne diseases (stem rot, CBR, Rhizoctonia limb rot, or pod rot) may be present (most fields). Use if any of these apply: *Fields with a known history of these diseases *Fields with less than four years between peanut crops *Fields rotated with susceptible crops (soybeans, tobacco, tomatoes, melons, and many other vegetables) *Irrigated or wet fields *Fields where rank vine growth can be expected. **Mid-July to mid-August is the critical period for stem rot control.**

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Situation 2:
Susceptible cultivar, stem rot and/or CBR a concern
5 spray program

Apply the first spray at R3 (very early pod). Well rotated peanuts need a total 5 sprays applied at 2 week intervals in most seasons. The number of sprays required can be reduced by using the peanut leaf spot advisory after the first spray.

Spray 1 (R3)	**2nd and 4th spray**	**3rd spray *option 1 (leaf spot only)***	**3rd spray *option 2 (leaf spot + stem rot)***	**Remarks**
Chlorothalonil** 1.5 pt Group M **OR** Chlorothalonil 1.5 pt ** + Alto 5.5 oz (Group 3 + M) **OR** Chlorothalonil 1. 5pt ** + Topguard 7-14 oz (Group 3 + M)	Provost 8 to 10 oz (Group 3) Tebuconazole 7.2 oz (Group 3) + Chlorothalonil 1-1.5 pt** Convoy 13 oz (Group 7) + Chlorothalonil 1.5 pt** Fontelis 16 oz (Group 7***)	Chlorothalonil 1.5 pt** Group M	Abound 12.7 -18 oz (group 11) **OR** Headline 6 -15 oz (Group 11) **OR** Custodia 15.5 oz (Group 11 + 3) **OR** Priaxor 6 – 8 oz (Group 11 + 7***) **OR** Elatus 7.3 oz (Group 11 + 7***)	•Very good leaf spot control; very good stem rot control. •Use option 2 for the 3rd spray to enhance leaf spot and stem rot control **Full season use of chlorothalonil with this option could increase spider mite and/or Sclerotinia problems ***Limits for Group 7: Unmixed or mixed - 2 of 5 applications

Program 2 is most appropriate when soilborne diseases (stem rot, CBR, Rhizoctonia limb rot, or pod rot) are a concern. Examples include: *Fields planted to a susceptible variety *Fields with a known history of these diseases *Fields with less than four years between peanut crops *Fields rotated with susceptible crops (soybeans, tobacco, tomatoes, melons, and many other vegetables) *Irrigated or wet fields *Fields where rank vine growth can be expected. **Mid-July to mid-August is the critical period for stem rot control.**

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Situation 3:
Bailey, long rotation, minimal stem rot
4 spray program

Apply the first spray R3 (very early pod) + 2 weeks on Bailey. Well rotated peanuts need a total of 4 sprays for Bailey applied at 2 week intervals in most seasons. The number of sprays required can be reduced by using the peanut leaf spot advisory after the first spray.

Spray 1 (R3)	**Sprays 2 & 4**	**Spray 3**	**Spray 5**	**Remarks**
None	Abound 12.7 -18 oz (Group 11) **OR** Headline 6 -15 oz Group 11 **OR** Priaxor 6 – 8 oz (Group 11 + 7***) **OR** Custodia (Group 11 + 3) **OR** Elatus 7.3 oz (Group 11 + 7***)	Chlorothalonil 1.5 pt** Group M	Chlorothalonil 1.5 pt** Group M	•Excellent leaf spot control; stem rot control depends on rates used (higher rates will give more control) ** Frequent use of chlorothalonil can increase spider mite problems in dry years ***Limits for Group 7: Unmixed - 1 of 4 applications Mixture – 2 of 4 applications

Program 3 is most appropriate when leaf spot control is a greater consideration than control of soil borne diseases. Assumes: *Field rotated for more than 3 years to a non-susceptible crop (soybean, tobacco, vegetables, melons) with no history of soil borne diseases, Bailey, non-irrigated.

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Situation 4:
Susceptible cultivar, excellent rotation, minimal stem rot
5 spray program

Apply the first spray at R3 (very early pod). Well rotated peanuts need a total 5 sprays applied at 2 week intervals in most seasons. The number of sprays required can be reduced by using the peanut leaf spot advisory after the first spray.

Spray 1 (R3)	**Sprays 2 & 4**	**Spray 3** ***option 1 (leaf spot only)***	**Spray 3** ***option 2 (leaf spot + stem rot)*** **(pick one)**	**Spray 5**	**Remarks**
Chlorothalonil 1.5 pt** Group M **OR** Chlorothalonil 1.5 pt**+ Alto 5.5 oz (Group 3 + M) **OR** Chlorothalonil 1.5 pt** + Topguard 7-14 oz (Group 3 + M)	Abound 12.7 -18 oz (Group 11) **OR** Headline 6 -15 oz (Group 11) **OR** Custodia 15.5 oz (Group 11 + 3) **OR** Priaxor 6 - 8 oz (Group 11 + 7***)	Chlorothalonil 1.5 pt** Group M	Provost 8 to 10 oz (Group 3) Convoy 13 oz (Group 7***) + Chlorothalonil 1.5 pt** Fontelis 16 oz (Group 7***) Elatus 7.3 oz (Group 11 + 7***)	Chlorothalonil 1.5 pt** Group M	•Excellent leaf spot control •Use option 2 for the 3rd spray to enhance stem rot control; stem rot control depends on rate used (higher rates will give more control) ** Frequent use of chlorothalonil can increase spider mite problems in dry years ***Limits for Group 7: Unmixed or mixed - 2 of 5 applications

Program 4 is most appropriate when leaf spot control is a greater consideration than control of soil borne diseases. Assumes: *New fields or fields rotated for more than 4 years to a non-susceptible crop (soybean, tobacco, vegetables, melons), *no history of soil borne diseases, *Non-irrigated.

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Situation 5:
Bailey, history of Sclerotinia blight
4 spray program

Apply the first spray at R3 (very early pod) + 2 weeks on Bailey. Well rotated peanuts need a total of 4 sprays for Bailey applied at 2 week intervals in most seasons. The number of sprays required can be reduced by using the peanut leaf spot advisory after the first spray.

<table>
<tr><th>Spray 1 (R3)</th><th>Spray 2</th><th>Spray 3</th><th>Spray 4</th><th>Spray 5</th><th>Remarks</th></tr>
<tr><td rowspan="4">None</td><td colspan="3">Select from this line:</td><td rowspan="4">Chlorothalonil 1.5 pt**

Group M</td><td rowspan="4">•Very good leaf spot control; very good stem rot control
•This program is for leaf spot and stem rot control only. The 16 oz rate of Fontelis does not take the place of a Sclerotinia fungicide (such as Omega) in fields with heavy disease pressure or a history of disease.
•Sprays of Omega may be necessary to control Sclerotinia blight
**Frequent use of chlorothalonil can increase risk of Sclerotinia blight.
***Limits for Group 7: Unmixed - 1 of 4 applications; Mixture – 2 of 4 applications</td></tr>
<tr><td>Provost 8 to 10 oz
(Group 3)</td><td>Abound 12.7 -18 oz
(Group 11)
OR
Headline 6 - 15 oz
(Group 11)
OR
Fontelis 16 oz
(Group 7***)
OR
Elatus 7.3 oz
(Group 11 + 7)</td><td>Provost 8 to 10 oz
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Headline 6 - 15 oz
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Fontelis 16 oz
(Group 7***)
OR
Elatus 7.3 oz
(Group 11 + 7***)</td></tr>
</table>

Program 5 minimizes chlorothalonil sprays and is appropriate when Sclerotinia blight is a concern. Bailey is recommended when Sclerotinia is a threat. Mid-July to mid-August is the critical period for stem rot control; scout and follow advisories to determine when Sclerotinia is active.

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Comparison of commonly used peanut fungicides 2016

Fungicide oz/A	Group	Leaf spots	Stem rot/ Limb rot	Strengths	Limitations
Abound (azoxystrobin) 12 – 18 oz (or generic)	11	✓	✓	•Very good leaf spot and web blotch control •Good stem rot control •Excellent Rhizoctonia limb and pod rot control	•Less effective against established stem rot infections than some other products •Rain or irrigation is needed to optimize benefits of high rates (18 oz) for stem rot control •No more than 2 applications per year due to high resistance risk
Alto (cyproconazole) 5.5 oz	3	✓		•Limited curative action •Very good leaf spot control •Substitute for Tilt for first spray	•Moderate resistance risk •Mix with chlorothalonil •Limited control of soil borne pathogens
Bravo (chlorothalonil) 1.5 pt (or generic)	M	✓		•Low cost •Resistance management alone or mixed •Very good leaf spot control	•No control of soil borne pathogens •Full season use can flare spider mites and make Sclerotinia blight worse •Non-systemic with no curative action
Convoy (flutolonil) 13 -16 oz	7		✓	•Very good – excellent stem rot control	•NO leaf spot control. MUST be mixed with a leaf spot fungicide. •Follow resistance guidelines for Group 7
Fontelis (penthiopyrad) 16 oz	7	✓	✓	•Very good stem rot control •Some suppression of Sclerotinia blight at high rates (>16 oz)	•Appears to be slightly less effective against leaf spot than industry standards •No more than 2 of 5 (or 1 of 4) applications due to resistance risk
Elatus (azoxystrobin + benzovindiflupyr) 7.3 oz – 9.5 oz	11 + 7	✓	✓	•Very good – excellent stem rot control •Excellent leaf spot control	•Follow resistance management guidelines for Group 11 and Group 7 •Spray interval may be extended if using 9.5 oz rate

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Comparison of commonly used peanut fungicides 2016 (cont)

Fungicide oz/A	Group	Leaf spots	Stem rot/ Limb rot	Strengths	Limitations
Headline (pyraclostrobin) 6 – 15 oz (or generic)	11	✓	✓	•Long residual and wash–off resistance •Excellent leaf spot and web blotch control •Some curative action	•High rates are needed for stem rot control and stem rot control can be erratic •No more than 2 applications per year due to high resistance risk
Priaxor (pyraclostrobin + fluxapyroxad) 6 -8 oz	11 + 7	✓	✓	•Long residual and wash–off resistance •Excellent leaf spot and web blotch control •Some curative action	•Use higher rates for stem rot control •Follow resistance management guidelines for Group 11 and Group 7
Provost (tebuconazole + prothioconazole) 8 – 10 oz	3	✓	✓	•Very good – excellent stem rot, limb rot and pod rot control •CBR suppression •Very good leaf spot control	•Moderate resistance risk. Alternate with other chemistry to prevent loss of effectiveness
Tebuconazole 7.2 oz (generic)	3	✓	✓	•Very good – excellent stem rot, limb rot and pod rot control •Poor - good leaf spot control •Low cost of generics	•Erratic leaf spot control due to fungicide resistance in some locations; not effective against late leaf spot due to resistance **•Always mix with chlorothalonil or other product for leaf spot control**
Topguard 7-14 oz	3	✓		•Good leaf spot control •Substitute for Tilt for first spray	•Most useful mixed with another a.i. •Moderate resistance risk