July 13, 2015

**Chlorothalonil Shortage in Peanuts**

Austin Hagan  
Extension Specialist and Professor  
Department of Entomology and Plant Pathology, Auburn University, AL

Once again, there is a shortage of the fungicide chlorothalonil for disease control in peanut. There are also chlorothalonil combination products such as Muscle ADV and Echo Eminent Co-Pack that are available for use in peanut but supplies of these products may be limited. In peanut, chlorothalonil is a critical broad-spectrum anchor in nearly all fungicide programs due its good activity at relatively low cost against early and late leaf spot diseases as well as peanut rust, and value as a resistance management tool with strobilurin and triazole fungicides.

Due to the existing risk of resistance-related control failures for triazole fungicides like tebuconazole (Muscle, TebuStar, etc), metconazole (Quash), and propiconazole (Bumper, Propimax, Tilt) as well as potential for risk for resistance-related control failures with the strobilurin fungicides azoxystrobin (Abound 2SC and Azaka), pyraclostrobin (Headline 2.09SC), and fluoxastrobin (Evito), total application numbers of these fungicides is limited to half or less of the total required for a peanut disease control program. With the limitations to the use of the above systemic, single site fungicides, there are not a lot of broad-spectrum fungicide alternatives to chlorothalonil in peanut or other crops. Some options for stretching chlorothalonil supplies are listed below.

1. Reducing chlorothalonil application rates from 1.5 to 1.0 pints/A or 1.4 to 0.9 pounds/A for flowable and dry flowable formulations on peanuts in 2 or 3 year out rotations except in high rainfall areas such as Baldwin, Mobile, and Escambia Co. Combining a reduced rate of chlorothalonil with a 3 spray block program with Fontelis at 16 to 24 fluid ounces/A, 4 spray block with Provost 433SC at 8 to 10.7 fluid ounces/A, or 2 spray program with Headline 2.08SC at 9 or 12 fluid ounces/A, 2 application program of Abound 2SC or Azaka at 12 to 18.2 fluid ounces/A, 12 to 18.2 fluid ounces/A Abound 2SC + 5.5 fluid ounces/A Alto, 2 or 3 application program with 4 to 8 fluid ounces/A Priaxor, or 15 fluid ounces/A Custodia, or a 4 spray block of 7 to 14 fluid ounces/A Topguard or 2 pints/A Muscle ADV should work fine.

2. Tank mix 1.0 pint or 0.9 pound/A rate of chlorothalonil + 2 to 4 fluid ounces/A of propiconazole (Bumper, Propimax, Tilt), 5 to 10 fluid ounces/A of thiophanate methyl...
(Topsin M, T-Methyl), 1 to 1.25 pounds/A of Kocide 3000, 5.5 fluid ounces/A Alto, 6 to 12 fluid ounces/A Abound or Azaka, or 7.2 fluid ounces/acre of generic tebuconazole (Monsoon, Muscle, TebuStar, etc).

3. Begin fungicide program with one or two applications of 3.5 fluid ounces/A Absolute 500SC or 1.5 to 2.25 pints/A of Tilt/Bravo then switch to a recommended rate of Headline, Abound (or the generic Azaka) alone or tank mixed with 5.5 fluid ounces/A Alto, 16 to 24 fluid ounces/A Fontelis, or 4 to 8 fluid ounces/A Priaxor, followed by a final application of chlorothalonil or tank mix combinations listed below.

4. Tank mix 10 fluid ounces/A T-Methyl or Topsin M 4.5F (generic thiophanate-methyl) + 5.5 fluid ounces/A Alto, 7.2 fluid ounces/A generic tebuconazole (Monsoon, Muscle, TebuStar, etc), Quash, 4 fluid ounces/A propiconazole (Tilt, Bumper, Propimax), or 7 to 14 fluid ounces/A Topguard.

5. Tank mix 26 to 32 fluid ounces/A Artisan with 1 pt/A of a chlorothalonil fungicide as well as 10 to 20 fluid ounces/A of T-Methyl or Topsin M 4.5F, 6 fluid ounces/A of Headline 2.09SC, 6 to 12 fluid ounces of Abound 2SC or Azaka, 5.7 fluid ounces/A Evito or 6 to 11.2 fluid ounces of Evito T, 1 to 2 pounds/A Koverall (mancozeb), Elast at 15 fl oz/A, and 1 to 1.25 pounds/A Kocide 3000 copper fungicide.

6. Tank mix 15 fluid ounces/A Elast (dodine) + recommended rates of Alto, generic thiophanate-methyl (T-Methyl or Topsin M), generic tebuconazole (Monsoon, Muscle, TebuStar, etc), or Quash. Add 10 to 32 fluid ounces/A Convoy to latter tank mixtures to control white mold or follow with two or more applications of recommended rates of Abound, Artisan, Azaka, Custodia, Evito, Evito T, Fontelis, Headline, Muscle ADV, Priaxor, Provost, or Topguard to control white mold.

7. Peanut Rx programs have been promoted by nearly all brand-name fungicide distributors (BASF, Bayer CropScience, Nichino, Syngenta, etc.) as a means of managing fungicide program costs by eliminating two or three applications of chlorothalonil depending on peanut cropping frequency and background disease pressure.

8. Make an application of 9.0 fluid ounces/A of Headline 2.09SC at 45 DAP (days after planting), thereby eliminating the 30 DAP applications of chlorothalonil. Producers also have the option of applying 9 fluid ounces/A of Headline 2.09SC and waiting 21 days to make the next fungicide application. Two applications of Headline 2.09SC split by an application of another fungicide on the above schedule will save one fungicide application.

9. Last but not least, a mancozeb fungicide such as Koverall or Manzate Flowable may be substituted as a tank mix partner with a thiophanate-methyl or triazole fungicide (i.e. generic tebuconazole) in place of chlorothalonil. Application rate for Koverall is 1 to 2 lb/A and Manzate Flowable at 0.8 to 1.6 qt/A but the higher rate of either fungicide
would have better activity against leaf spot diseases and rust. Efficacy and residual activity of mancozeb is limited when compared with chlorothalonil and it should not be applied alone for foliar disease control on peanut.

Regardless of the program chosen, growers are advised to scout their peanuts weekly for leaf spot diseases and to shorten the spray schedule, increase fungicide rates, and if necessary insert an extra application of Headline 2.09SC at a minimum of 9 fluid ounces/A. Producers also need to be advised to scout their peanuts starting in mid- to late-July for rust. Should leaf spot or rust appear, they are advised to shorten the time interval between fungicide applications or switch to a more effective fungicide.

**Tropical Storm Rule** - It’s also been years since Alabama’s been visited by a tropical storm and we’re due. If peanuts have received a fungicide application within 5 to 7 days of a tropical storm strike, then they should be ok. If more than 7 days have passed, growers are advised to make another fungicide application before the storm hits. When a pre-tropical storm application is needed, I’d suggest an application of 9 fluid ounces/A of Headline 2.09SC as this fungicide has excellent residual activity on peanut foliage.