Summary of Herbicide and Fungicide Use in Peanut in North Carolina and Virginia in 2021

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A survey was administered at county extension meetings in North Carolina and the state peanut production meeting in Virginia to determine herbicide and fungicide use. The survey instrument included the following questions: 1) peanut yield and acreage, 2) what was your most common weed management program for the 2021 peanut crop, and 3) what was your fungicide spray program on a 2-week or bi-weekly schedule. Categories for herbicides included: preplant burndown (PPL), preplant incorporated (PPI), preemergence (PRE), cracking or emergence stage (GC), early postemergence (EPOST) within the first 30 days after peanut emergence (DAE), mid-postemergence (MPOST) 30 to 60 DAE, and greater than 60 DAE. Approximately 76 growers completed the survey, which represented 27,000 acres (22% of acres in the region).

A total of 502 herbicide listings were observed across all timings for the 76 growers. Eighty-one percent of growers made at least three to five applications during the growing season. The highest number of applications was noted for preemergence and early postemergence timings (27 to 31% of applications) with 20%, 14%, and 8% of growers applying herbicides at cracking state of peanut (AC), 30-60 days after peanut emergence (DAE), and greater than 60 DAE, respectively. Out of the 107 herbicides listed for preplant applications, 49% were glyphosate with 17% 2,4-D. Thirty percent of listings included pendimethalin. Forty-one percent of herbicides listed included flumioxazin preemergence with 35% as metolachlor. Paraquat was listed for 35% of applications at the GC stage followed by metolachlor (20%) and bentazon (18%). At the EPOST timing, 2,4-DB was listed the most times (21%) followed by acifluorfen plus bentazon (16%), imazapic (13%), bentazon (12%), and metolachlor (8%). Clethodim and lactofen were listed 5% of the time at the EPOST timing. At the MPOST timing, 2,4-DB was also listed the most (44%) followed by acifluorfen plus bentazon (20%), clethodim (10%), pyroxasulfone (6%), imazapic (5%), metolachlor (5%), and lactofen (4%). When herbicides were applied 60 DAE or later, clethodim constituted 39% of the listings followed by 2,4-DB (32%) and Ultra Blazer (10%).

A total of 408 fungicide listings were noted across all surveys and the timings of application. The majority of growers applied four or five sprays (28% and 23%, respectively) with approximately 10% making two or six applications. Chlorothalonil was listed 29% of the time for all fungicide listings followed by prothioconazole plus tebuconazole (18%), pydiflumetafen (15%), tebuconazole (14%), and azoxystrobin plus benzovindiflupyr (10%). When one application of pydiflumetafen was listed, 14% and 21% of the listings included co-application with azoxystrobin plus benzovindiflupyr. When applied twice, pydiflumetafen was listed 2% of the time alone and 9% of time when applied with azoxystrobin plus benzovindiflupyr. Other fungicides mixed with pydiflumetafen were listed less frequently (no more than 3% of listings) and included tebuconazole and flutolanil. At least one application of chlorothalonil was listed as following sprays of pydiflumetafen (67%) with prothioconazole plus tebuconazole listed 13% of the time. Several other fungicides were listed 10% of the time. Ten percent of the listings included pydiflumetafen were not followed by other fungicides.