

Financial Returns for Weed and Disease Management Inputs in Peanuts in Southern Ghana

S. ARTHUR, G. BOLFREY-ARKU, A. DANKYI, and M.B. MOCHIAH, Council for Scientific and Industrial Research-Crops Research Institute, Kumasi, Ghana, R. AKROMAH and J. SARKODIE-ADDO, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana; **D.L. JORDAN*** and R.L. BRANDENBURG, North Carolina State University, Raleigh, NC 27695; G. MACDONALD, University of Florida, Gainesville, FL 32611, B. BRAVO-URETA, University of Connecticut, Storrs, CT 06269, and D. HOISINGTON and J. RHOADS, Feed the Future Innovation Lab for Peanut, University of Georgia, Athens, GA 30602.

Peanut (*Arachis hypogaea* L.) yield and financial return can be negatively affected by weeds and leaf spot disease [caused by *Cercospora arachidicola* Hori and *Cercosporidium personatum* (Berk. & M.A. Curtis) Deighton] in Ghana. Research was conducted in southern Ghana to evaluate hand weeding, herbicide applied preemergence (PRE), herbicide applied postemergence (POST), a combination of PRE and POST herbicides, and PRE or POST herbicides supplemented with hand weeding and disease management practices (i.e., no fungicide or a two sequential fungicide applications 45 and 60 days after planting). Peanut grain yield and financial return based on yield and cost of pest management practices were affected by weed management and disease management practices individually but seldom interacted with one another. The weed management practices with the highest financial return included a POST herbicide with or without hand weeding and a PRE herbicide followed by hand weeding or a POST herbicide. Control of pathogens by fungicide provided greater grain yield and financial return with the leaf spot susceptible cultivar Konkoma than with the leaf spot tolerant cultivar Yenyawoso.