Testing Use of Fungicide, Early Sowing, and Improved Cultivars to Increase Peanut Yield in Ghana.

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This research was part of a peanut collaborative research support project focused to improve crop resource management to increase peanut production in Ghana. Prior research had been conducted on sowing dates and cultivars. Field measurements and systems analyses showed that water was not a major limitation in this rainfall zone, and further suggested that peanut yield could be increased considerably if foliage loss could be prevented. Growth analyses showed that peanut lost most of its leaves by harvest time. Thus, an experiment was conducted on two cultivars, sown at three dates, with split-plot folicure fungicide treatment applied bi-weekly. The study was carried out at Nyankpala for 3 years and at Wa for 2 years. Folicure fungicide treatment reduced defoliation and disease score, and resulted in a 75% increase in yield, averaged over all studies. The 120-day cultivar F-mix yielded 41% more than the 90-day Chinese cultivar. Early sowing increased yield 22% and 60% over the second and third later sowing dates, in part because disease score and defoliation were less. As a result of these studies, we recommended on-farm trials to see if similar yield response could be obtained with fungicide treatment in grower fields. We recommended economic feasibility studies be conducted to see if fungicide treatment is economically feasible. For the early sowing date, pod yield with improved technology (F-mix cultivar with fungicide) averaged 3857 kg ha-1, compared to 1742 kg ha-1 for the standard practice (Chinese cultivar with no fungicide).