Researchers and farmers link up!
Working hand in hand for superior planting material

The forest-savannah transitional belt and the Guinea savannah zone of Ghana are believed to have the most favorable conditions for cashew cultivation in West Africa. However, in spite of an average annual rainfall of more than 100 cm, relatively well drained soil and an annual dry spell, production is still low. To determine reasons for minor cashew productivity, the Cocoa Research Institute of Ghana (CRIG), as part of the ACi Matching Fund, assessed cashew trees in farmer plots on vegetative growth, yield efficiency as well as pest and diseases resistance.

Distinguishing superior cashew trees

In its continuous efforts to develop improved planting material, CRIG uses DNA fingerprints of cashew trees to detect the most effective and resistant type of tree. At the same time, CRIG also examined soil conditions in various cashew cultivation areas that might have an effect on growth, yield and pest and diseases resistance. As a result, high acidity levels were found in the soil due to the frequent occurrence of bushfires. Acidity reduced the cashew trees ability to absorb nutrients and therefore grow and achieve high yields.

Another attribute of superior genetic material of cashew trees is a trees tolerance to pest and diseases. CRIG's research results disclosed that leaf miners and leaf rust are the two most common diseases, not only reducing cashew yield significantly but also destroy entire cashew orchards. Conclusively, using certain obsolete planting materials give way to pests and diseases.

The combination on the application of Good Agricultural Practices (GAP) and the use of improved planning material reduce the attacks of pest and diseases. Hence, CRIG organized training sessions on replacing the canopies of unproductive trees to increase cashew yields. The trainings are targeted towards farmers, researchers and nursery operators. So far, CRIG has trained 162 farmers and their assistance in 25 different locations on Good Agricultural Practices. One of the high points of this project is the introduction of the predatory insect, Oecophylla longinoda to cashew farms. These ants are effectively reducing infestation of the sap-sucking pest, Anoplocnemis curvipes, a major cause of poor production.

Oecophylla longinoda successfully established in the canopy of a cashew tree prevents feeding by A. curvipes

More research is on its way, with a special focus on combining rather traditional practices with scientific research to control factors that are limiting the productivity of cashew orchards.

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