

Ground(nut rosette) Breaking Research

Groundnut is one of the most profitable crops to produce in the Teso system of eastern Uganda, providing that farmers can control groundnut rosette disease, a virus spread by an insect vector that can cause stunting of the plant and crop failure.



Symptoms of chlorotic (left) and green (centre and right) rosette disease in a susceptible groundnut variety

Current management methods include the use of insecticides to control the vector, or planting disease-resistant varieties. Production by poor households in the Teso is very limited, however, because they cannot afford to spray against the vector and because farmers lack access to good seed. A CPP project (R7445) involving Serere Agricultural and Animal Research Institute (SAARI), ICRISAT-Malawi, AT-Uganda, SOCODIDO and NRI, UK, has been working on this disease for the past three years in the Teso and has assessed new disease resistant lines with farmers. One new line (ICG 12991), which is resistant to the vector rather than the virus disease, gives farmers 30% yield gains compared with existing varieties, and



Yield of three improved groundnut rosette resistant lines (three bags to the left) from equivalent areas of land is greater than the farmer's variety (right)

will be released shortly as a commercial variety by the national programme.

On 3 April 2002 two short duration varieties were officially released by the National Variety Release Committee – ICGV-SM 93530 was released as Serenut 3R and ICG 12991 was released as Serenut 4T.

Unfortunately, few poor farmers are able to purchase groundnut seed as it is very expensive and a high seed planting rate required. Furthermore, commercial seed companies have tended to shy away from groundnut seed production because of previous germination and storage problems. If, however, poor farmers can learn to multiply their own resistant seed, production of groundnuts is likely to increase and become sustainable. Poor farmers who are net groundnut consumers should benefit through increased production of groundnuts – a high protein food source – and they may also have a surplus to sell. To address these issues a new promotional CPP project arising from the earlier research project is helping farmers to multiply and maintain their own improved seed stocks. Led by AT-Uganda and SAARI, it is estimated that by the end of the three-year project, annual production of groundnuts by 9000 participating farmers in the Teso system will increase by 50%. A similar project has also been approved by the DFID-NARO COARDP. Both efforts will ensure good stocks of seed should be available to poor farmers.

Increased production could result in a fall in price if the absolute volume increase is significant, but the potential loss of income that commercial farmers may suffer will be offset by the lower production costs as the need to use insecticide is reduced. Lower production costs may also make Ugandan groundnuts more competitive on the international market, and may actually improve the market in the long run.

The *Groundnut Production Manual for Uganda*, prepared by project staff and launched at the project workshop held at Kumi in 2002, provides recommended groundnut production practices.

R7445: *Groundnut rosette disease management.*
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