

Alliance for a Green Revolution in Africa (AGRA): *Background and Useful Terms*

Alliance for a Green Revolution in Africa (AGRA): a public charity, is a joint initiative of the Rockefeller Foundation and the Bill and Melinda Gates Foundation committed to reducing hunger and poverty in Africa through agricultural development. The primary goal of the Alliance is to increase the productivity and profitability of small-scale farming using technological, policy and institutional innovations that are environmentally and economically sustainable.

Program for a Green Revolution in Africa (ProGRA): a supporting organization that will be administered under the aegis of the Alliance for a Green Revolution in Africa (AGRA).

The first program of ProGRA is the **Program for Africa's Seed Systems (PASS)**. It will be funded with a total of \$150 million over a five-year period beginning in 2006. It has four main components, listed below, which provide an integrated approach to the scientific, educational, economic and policy aspects of building seed systems in Africa.

- **Education for African Crop Improvement**

This program will provide training for a new generation of crop breeders and agricultural scientists. Areas of focus include:

- Identify training needs for crop breeders at the country level.
- Enrich M.Sc. and Ph.D. training curricula, strengthening universities and recruiting qualified candidates.
- Train 220 new African crop scientists to the M.Sc. and Ph.D. levels

- **The Fund for the Improvement and Adoption of African Crops**

This program funds crop breeding in Africa to improve crop varieties and promote their distribution and adoption by small-holder farmers. Approximately 200 new improved crop varieties are expected to be developed and commercialized within five years. Other activities include:

- Develop breeding and testing strategies.
- Support approximately 200 crop breeding programs conducted by national agricultural research teams throughout Africa
- Support efficient completion of regulatory requirements.
- Link breeders with seed companies.
- Broker agreements between public breeding institutes and seed companies.
- Identify policy constraints and advocate for change in institutional and national seed and intellectual property policies.

- **The Seed Production for Africa Initiative**

This program will ensure that improved crop varieties are produced and distributed through private and public channels, including seed companies, public community seed systems and public extension. A substantial increase in the supply of improved seed is expected within several years. Other activities include:

- Provide business management training and investment capital for growth of approximately 60 African seed companies.
- Develop national seed trade associations and support seed industry research.
- Experiment with ways to embed breeding within seed companies.
- Experiment with pricing and packaging of seed for small-scale farmers.
- Promote improvements in institutional seed licensing policies.
- Promote changes in national and institutional financing policies that assist seed companies to access affordable financing.

- **The Agro-Dealer Development Program**

This program provides training, capital and credit to establish and strengthen small agro-dealers who are a primary conduit of seeds, fertilizers and other farm inputs, including knowledge on how to use them, to small-holder farmers to increase their productivity and incomes. Other goals include:

- Develop agro-dealer associations and map agro-dealer market penetration.
- Train and provide credit for 10,000 agro-dealers in Afirca
- Link agro-dealers to wholesalers, seed companies and market information systems.
- Promote changes in national and institutional financing policies that assist agro-dealers and farmers to access affordable financing.

Other Useful Terms

- **agro-dealers** –village retailers who sell seeds, fertilizer and farm tools.
- **business development services** – practical advice and training offered to managers of emerging businesses, such as young, African seed companies, regarding how to plan and structure their businesses and develop their markets.
- **commercial seed supply** – supply of seed to farmers through formally-regulated, generally private, channels.
- **community-based seed supply** – supply of seed to farmers through multiplication of seeds on local or collective farms.
- **crop scientist** – biologist who has received specialized training in one of several disciplines (including pathology, entomology, physiology, or breeding) related to the growth and production of crops.
- **cross-pollinated crops** – crops? species (including corn, millet, and cassava) which propagate themselves via pollination between separate plants.
- **germplasm** – any individual product or set of genetic products used in the breeding of improved crop varieties. Germplasm movement is regulated worldwide to control seed-borne pests and diseases. Increasingly, it is also controlled by governments, private companies, and individuals involved in crop genetic improvement to control the exchange of products that may represent valuable intellectual properties.
- **Green Revolution** – term coined in the 1960's to describe the dramatic technology-based increase in farmer productivity taking place in Asia at that time. However, the first Green Revolution, in retrospect, began in Mexico in the 1940's, and spread through Latin-America; after being extended to Asia, it was later replanted in India.
- **hybrid variety** – a crop variety formed through a cross between two or more inbred parental lines. The value of hybrids is in their more vigorous growth, and generally higher yield potential. Second generation seed from hybrids will germinate and grow; however, for best performance hybrids must be purchased anew each season.
- **improved crop variety** – a type of seed or other planting material that has undergone genetic enhancement (through breeding or other means) to allow it to perform better than

other local or “land race” varieties. Improvements might include resistance to insects, diseases, drought, earlier maturity, or more vigorous growth.

- **inbred lines** – or simply “inbreds”, are seeds or other planting materials that result from successive generations of self-pollinations. Inbred lines of self-pollinated crops can be released and used as planting material. Inbred lines of cross-pollinated crops are generally used as parents of hybrids.
- **input markets** – inter-linked chain of private businesses or public agencies involved in the importation, local production, wholesaling, and retail distribution of farming tools, supplies and production inputs.
- **land race** – a local or “traditional” variety of a crop species handed down from generation to generation among local farmers. Land race varieties often have numerous characteristics that farmers appreciate, but often have low yield potential.
- **official release** – the decision made by public regulatory bodies to sanction the multiplication and exchange of an improved variety, usually following a number of years of breeding and testing to verify the variety’s worth to local farmers.
- **open-pollinated variety** – any crop variety that is non-hybrid in its makeup and which can be propagated through natural uncontrolled pollination.
- **output markets** – system of private and/or publicly-supported exchange for moving farmers’ harvested produce from farm gates to storage facilities, processors and human and animal food producers and consumers within a country or internationally.
- **participatory plant breeding** – plant breeding that involves local farmers in the identification of traits for variety improvement and later in the identification of which experimental varieties to recommend for official release and distribution.
- **plant biotechnology** – methods of crop genetic improvement that involve either tissue culture, selection using molecular markers, or gene transfer.
- **plant breeding** – the series of plant crossing, inbreeding, evaluation, and selection activities that give rise to improved crop varieties. Most breeding initiatives begin with one or more controlled pollinations between selected parents, followed by identification of superior individual plants over successive generations.
- **public extension** – network of government-supported agents mandated to provide farmers with information or products for the production and marketing of crops and livestock.
- **seed system** – the linked set of activities and functions, both formal and informal, that supply farmers with seed and other planting materials, including plant breeding, multiplication, promotion, and distribution of seeds and seedlings.
- **self-pollinated crops** – crop species (including rice, beans, and cowpeas?) that propagate themselves via pollinations on an individual plant.
- **stockist** – any small private retail business that has the potential to sell commercial-grade agricultural inputs such as seeds and fertilizers, thus becoming an agro-dealer.