



UniBRAIN
Universities, Business
and Research in
Agricultural INnovation

**Realising the Potential
of Africa's Youth:**

*Linking university
education, research and business
in sustainable agriculture*



About UniBRAIN

An Initiative supported by Royal Danish Ministry of Foreign Affairs (Danida)

Background

UniBRAIN (Universities, Business and Research in Agricultural Innovation) is addressing one of the five core initiatives identified through 15 comprehensive consultations held by the Africa Commission in 2008, which found that: “African universities are not sufficiently geared to meet the needs of industry. Graduates often cannot find employment, while many small businesses lack staff with the education and skills needed to drive innovation. Essentially, the relationship between the demands of the private sector and what universities teach is too weak.”

UniBRAIN is pioneering a new approach to promoting agricultural innovation and improving tertiary agribusiness education in Africa.

UniBRAIN will step away from the mainstream to bring African Universities into agricultural innovation through increased and strengthened collaboration between universities, research institutions and the private sector, improved teaching and learning and knowledge sharing.

UniBRAIN is being implemented by a consortium led by Forum for Agricultural Research in Africa (FARA), with the African Network for Agriculture, Agro-forestry and Natural Resources Education (ANAFE), the African Technology Policy Studies Network (ATPS) and the Pan African Agribusiness and Agro-industry Consortium (PanAAC) and the Sub-Regional Organisations (SROs); the Association for Strengthening Agricultural Research in East and Central Africa (ASARECA), West and Central African Council for Agricultural Research and Development (CORAF/WECARD) and the Centre for Coordination of

Agricultural Research and Development for Southern Africa (CCARDESA).

UniBRAIN will promote agricultural innovation and produce graduates with entrepreneurial and business skills and research-based knowledge that is relevant to the development of African agriculture and



agribusiness.

African agriculture is open for business with unrivalled assets that include:

- Great room for improvement in crop and livestock yields. For example currently cereal yields are two times higher in South



Asia and two and a half times higher in East Asia;

- An African population predicted to reach 2 billion by 2050, the most assuredly growing global market for food and agricultural commodities.
- An abundance of labour with great potential for acquiring high-level skills
- More capital than can be currently absorbed
- Opportunities for addressing the big issues of the 21st century, i.e., hunger and poverty through employment (especially of youths), climate change and water scarcity.

- Socially responsible, profitable and sustainable innovation in agriculture and the environment

These constraints must be addressed because failure to produce high-impact innovations is not an option as it would result in:

- Africa failing to take advantage of its demographic bonus of having the highest proportion of working age people in its population. This would leave tens of millions of young people unemployed, frustrated and angry
- Accelerated destruction of African forests - the world's second lung
- Loss of irreplaceable biodiversity
- Increased food insecurity if land is devoted to non-food crops without improved productivity of food crops and livestock.

African universities have demonstrated that they are prepared for radical change

The Millennium Declaration of the Association of African Universities (AAU) was an urgent call for change and this been a constant theme at the AAU General Meeting in May 2009. But there will still be resistance:

- There will be those who think they are ready for change but do not actually understand what the changes are really about
- There will be clashes of cultures between universities, business and research and between public and private institutions
- There will be those that will not like it when they see how the changes will affect them

(Ethiopian proverb: slowly slowly the egg will walk)



However there are serious constraints that are impeding African agricultural innovation

Africa is short of:

- High level human and institutional capacity
- Entrepreneurs and problem solvers
- Leadership in identifying and exploiting socially responsible opportunities for investment in agriculture and the environment
- African agricultural and environmental entrepreneurs

UniBRAIN is a facility for linking university education, research and business in sustainable agriculture which will support the following interventions:

- Development and implementation of collaborative programmes between universities, research institutions and the private sector which foster innovation
- Development and implementation of improved and better contextualised undergraduate and postgraduate agribusiness teaching and learning
- Facilitating exchange of experiences and sharing of resources and knowledge

UniBRAIN will support the establishment of agribusiness innovation incubators that will function as research and advisory centres for SME's, start-ups and enterprises undertaking change and innovation



The mission of the incubators is:

- to facilitate the creation of competitive agribusiness enterprises through technology development and commercialization
- to support start-up entrepreneurs and new or expanding enterprises with the kind of services they want from conceptualization to implementation and scaling up

The Incubators will have:

- a lead Institution in one of the Danida priority countries, i.e. Benin, Burkina Faso, Ghana, Kenya, Mali, Mozambique, Tanzania, Uganda, Zambia
- clear identities, expressed by the incubator's name, its logo or stated in its value proposition
- access to qualified research and development personnel in the areas of knowledge with which they identify
- ability to market high value products and services
- the capability to provide marketing expertise and managerial skills to firms, particularly small and medium sized enterprises, that do not have such resources in-house
- access to well qualified mentors
- competent assistance in conducting feasibility studies and developing business plans
- access to cost-effective problem solving expertise
- access to adequately equipped laboratories and field sites for multiplication and testing of technologies
- effective advocacy in raising capital for implementing and up-scaling innovations

- open doors for clients to return for help with unpredicted emerging problems

The incubators will be able to:

- select firms on their business plan's coherence with the incubator's identity
- identify innovations and business opportunities that will interest the different parties
- protect product and process secrets, via patents, and commercial confidentiality
- protect IP rights
- involve different university faculties, businesses and research institutions
- respect the different roles of the partners

The incubators will provide:

- Coordination and integration of business and agricultural technical knowledge
- One stop advisory services for existing and new businesses
- Advice on new approaches to agribusiness development
- Training of entrepreneurs in collaboration with complementary centres
- Opportunities for further support and investment through alliances with other centres

The Incubators will advance:

Social Considerations:

- Emphasis on development and support to female entrepreneurs
- Emphasis on development and support to young entrepreneurs
- Emphasis on rural participation in agro value chains
- Emphasis on sustainable energy and agro-water management schemes (e.g. harvesting rain water for agrobusiness)

Value chain constraints resolution:

National value chains:

- Low end values (enrichment required)
- Fragmentation, disconnections

Regional value chains:

- Absent, but new prospects are emerging

Global value chains:

- Lead firm constraints
- Limited to too few product lines, countries and regions

The Incubators will be promoted and sustained by:

Prioritising global issues such as women and youth employment, water, and climate change with a view to engaging social enterprise funding:

- Management with expertise in financial matters
- Stable political, economic and regulatory regimes, providing a sound business environment
- Infrastructure, initial funds, to facilitate venture creation despite the inherent risks
- Competitiveness strategy which has analyzed and identified the sub-sectors of advantage, selected the change agents and markets
- Human resources development to help build the full range of specializations needed, from trainer to technician, innovator to manager
- Functioning institutions for banking, insurance, stock markets, tax, intellectual property and environmental protection

The university incentives for establishing agribusiness incubators are the opportunities they will provide for:

- career enhancing research
- meaningful postgraduate research

- student placements
- commercializing their innovation with IP protection and fair royalties for individuals and departments
- access to up-to-date and contextualised information and data for agribusiness teaching and training
- funding for on-campus research related to the innovations
- access to private enterprise and research communities for advice on curricula reform to produce the kind of graduates that are needed for today's industry, i.e. problems solvers and job creators

The agricultural research incentives for collaborating in agribusiness incubator consortia are:

- opportunities to contribute to innovations that will promote wide-scale African agriculture and natural resource management
- opportunities for themselves to contribute to commercial innovations that will scale-up their research results, products and outputs
- opportunities to benefit professionally and financially from interaction with colleagues in universities and private enterprises to produce high-impact commercial innovations

The agribusinesses incentives for collaborating in agribusiness incubator consortia are:

- access to wide ranges of diverse high-level human resources as and when required
- access to laboratories and field testing sites in different farming systems and ecologies
- support in sourcing capital for investing in fabricating, marketing and scaling up their innovations

This will be underpinned by assurance:

- that the other partners are serious and conscious of the cost of time and have the capacity and expertise to be of real assistance (need to engage both agriculture and agribusiness faculties)
- that IP and commercial confidentiality will be respected
- the partnership will endure to help with future problems

To facilitate sourcing of favourable start-up investment enterprises will be encouraged to have the following characteristics:

1. Enterprise orientation:

Produce goods or provide services for identified markets and seeking to be viable trading organisations

2. Social Aims:

Have explicit social aims such as job creation especially for women and youths, training or the provision of local services

3. Social ownership:

Be autonomous organisations with governance and ownership structures based on participation by stakeholder groups



Sustaining the incubators requires:

- Supporting high growth agri-based entrepreneurs
- Developing a new generation of entrepreneurs,
- Supporting rural agriculture through outreach facilitation of out-growers, cooperatives, marketing groups etc
- A tertiary education network with Africa wide coverage that is committed to the initiative
- Early success in commercialising innovations
- Association with other incubators such as Aalborg business park and Egypt-ICRISAT as sources of knowledge on managing agricultural innovation incubators
- As venues for training in managing incubators
- As sources of scientific and technical expertise that can be called on when needed

The university aspects will be facilitated by ANAFE through:

- Raising and sustaining awareness on the UniBRAIN initiative, its products



and outcomes among its stakeholder communities

- Supporting the universities in curricula change
- Advising agricultural research and agro-businesses on the prospects and modalities of working with universities
- Being a knowledge centre for university capacities that agro-business and agricultural research can refer to when seeking partnerships
- Quality assurance of university contributions and products
- Fostering linkages and interactions with non-African universities and capacity building institutions
- Facilitating engagement with universities that are not directly involved
- To widen the opportunities for supporting innovation development and up-scaling

ATPS will facilitate the agribusiness innovation incubators and incubatees through:

- Raising and sustaining awareness on the UniBRAIN initiative, its products and outcomes among its stakeholder communities, including: policymakers, incubator networks and potential incubatees, etc;
- Fostering and supporting the development of the UniBRAIN Agribusiness Innovation Incubator Consortia (AIIC) through technical advice, training and facilitation activities on innovation Incubation;
- Providing technical support for collaboration amongst the UniBRAIN AIIC to build a culture of innovation and entrepreneurship;
- Technical Capacity building support for the AIIC on incubator management,

operation and governance; knowledge management and intellectual property rights; etc.

- Liaising with other UniBRAIN Team (UT) members to develop a comprehensive communications strategy to upscale the AIIIC products and processes and engage with the relevant stakeholders in Africa;
- Engaging advisory services as a means of ensuring that the agribusiness incubators can provide services effectively along the value chains of agricultural products and processes;
- Engaging African Governments and Policy-makers to support the UniBRAIN initiative.

The agribusiness aspects will be facilitated by the PanAAC through:

- Raising and sustaining awareness on the UniBRAIN initiative, its products and outcomes among its stakeholder communities
- Facilitating agricultural agribusiness participation in the Programme's competitive grants
- Advising universities and agricultural research institutions on the prospects and modalities of working with agribusinesses
- Being a knowledge centre and directory for agribusinesses capacities and performance records
- Quality assurance of agribusiness contributions and products

The agricultural research aspects are facilitated by FARA and the Sub-Regional Organisations; ASARECA, CORAF/WECARD and CCARDESA.

- Raising and sustaining awareness on the UniBRAIN initiative, its products

and outcomes among its stakeholder communities

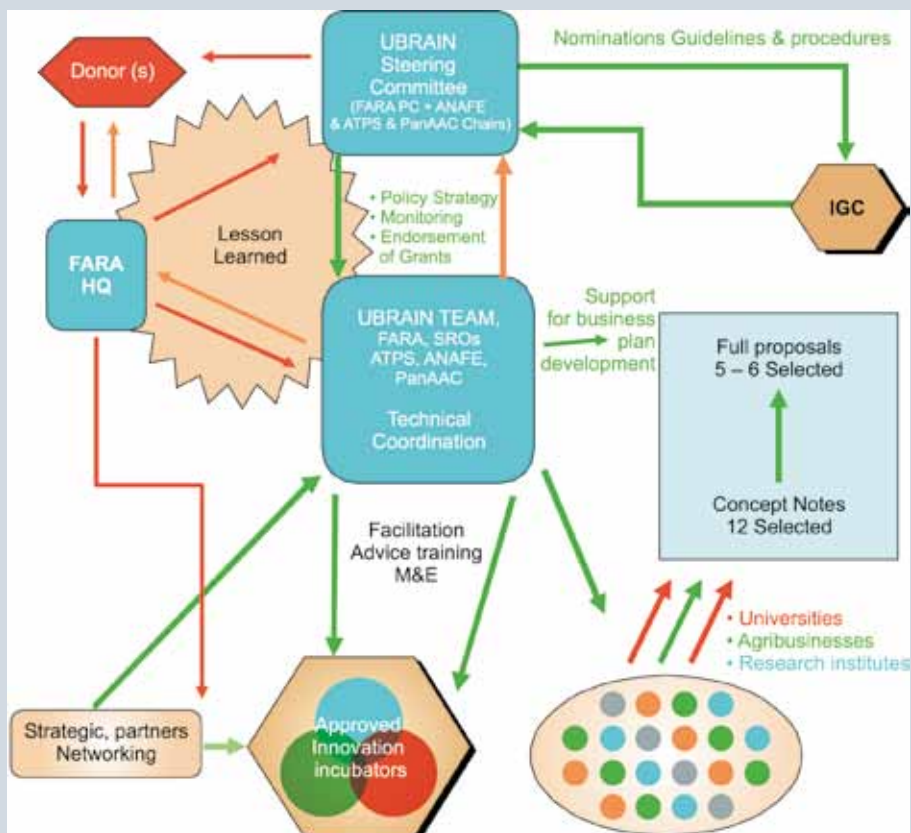
- Facilitating agricultural research institutes' participation in the Programme's competitive grants
- Advising universities and agribusinesses on the prospects and modalities of working with agricultural research institutions
- Being a knowledge centre and directory for agricultural research capacities and performance records
- Quality assurance of agricultural research contributions and products

The contribution of Danish university, agribusiness and agricultural research is facilitated by DDRN.

- Raising and sustaining awareness on the UniBRAIN initiative, its products and outcomes among its stakeholder communities
- Ensuring that African institutions can access information on the interests and capacities of Danish universities, agricultural research and business
- Advising universities and agribusinesses on the prospects and modalities of working with agricultural research institutions
- facilitating Danish and other non-African institutions' collaboration with the agribusiness innovation incubators

Governance and management of UniBRAIN

- FARA's Executive Board representing FARA's diverse stakeholders has overall responsibility for governance in accordance with FARA's agreement with Danida
- FARA's Executive Director is responsible for day-to-day management
- UniBRAIN's Steering Committee is comprised of members of the FARA Executive Board's Programme Committee and the Board Chairs of ANAFE, ATPS and PanAAC
- UniBRAIN has an Independent Grants Policy Committee that will review concept notes and full business plans submitted by competing agribusiness innovation incubators, and make recommendations to the UniBRAIN Steering Committee
- Grants will be made on a competitive basis to agribusiness innovation incubators consortia that will be managed by boards comprised of university, business, research and civil society representatives
- The granting process will involve invitations to submit concept notes, selection of 12 concept notes for development into full proposals and the selection of 5-6 full proposals for eventual funding
- Prospective consortia that are selected to move to next step will be offered support by the UniBRAIN partners



UniBRAIN Partners

The Forum for Agricultural Research in Africa (FARA)



FARA is the apex organisation for agricultural research in Africa. The Forum's mission is to create broad-based improvements in agricultural

productivity, competitiveness and markets by supporting Africa's sub-regional organisations and the National Agricultural Research Systems (NARS) in strengthening capacity for agricultural innovation. FARA works with and through the sub-regional organisations, ASARECA, SADC/FANR until the inauguration of CCARDESA and CORAF/WECARD to provide a strategic platform to foster continental and global networking that reinforces the capacities of Africa's national agricultural research systems.

FARA and the SROs are committed to leading the implementation of Pillar IV of the Comprehensive Africa Agriculture Development Programme (CAADP) which encompasses agricultural research, technology development and dissemination with crosscutting capacity strengthening.

African Network for Agriculture, Agroforestry & Natural Resources Education (ANAFE)



African Network for
Agriculture, Agroforestry
& Natural Resources Education

The African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE) is a network of 131 educational institutions in 35 African countries whose objective is to strengthen the teaching of multi-disciplinary approaches to land management. The ANAFE

Secretariat is hosted at the International Centre for Research in Agroforestry (ICRAF) headquarters in Nairobi. This provides a vantage for network management, linkages with the research and development activities of ICRAF and its partners, and convenient communication facilities.

African Technology Policy Studies Network (ATPS)



ATPS is a multi-disciplinary network of researchers, private sector actors, policy makers and civil society actors promoting the generation, dissemination, use and mastery of science, technology and innovation (STI) for African development, environmental sustainability and global inclusion. With a regional secretariat in Nairobi, it operates through national chapters in 23 countries with an expansion plan in place to cover the entire sub-Saharan Africa

Pan African Agri-Business & Agro-industry Consortium (PanAAC)



PanAAC is a continental network bringing together agribusiness value chain stakeholders in Africa. PanAAC's constituents comprise of contract-producers, input providers, dealers, logistics providers, marketers, processors, financiers, exporters and consultants. Its mission is to promote agribusiness in Africa through enhanced investment, productivity and competitiveness in the national, regional and global markets.

Acronyms and abbreviations

ANAFE	African Network for Agriculture, Agroforestry and Natural Resources Education
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ATPS	African Technology Policy Studies network
CCARDESA	Centre for Coordination of Agricultural Research and Development for Southern Africa
CORAF/WECARD	Conseil Ouest et Centre Africain pour la recherche et le développement agricole/ West and Central African Council for Agricultural Research and Development
DDRN	Danish Development Research Network
FARA	Forum for Agricultural Research in Africa
IP	Intellectual Property
PanAAC	Pan African Agribusiness and Agro-industry Consortium
SME	Small and Medium Enterprises
SRO	Sub-Regional Organisation

For more information, contact:

UniBRAIN Technical Coordinator:

Mr Ralph von Kaufmann

Forum for Agricultural Research in Africa (FARA), 12 Anmeda Street, Roman Ridge, PMB CT 173, Accra, Ghana

Tel: +233 302 772823/779421

Fax: +233 302 773676

Personal contact details:

Box 1160, Karen 00502, Kenya

Roaming tel: +254 733 634 508

Email: r.vonkaufmann@fara-africa.org

Website: www.fara-africa.org / www.fara-africa.org/our-projects/unibrain/

African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE)

Contact person:

Dr Aïssétou Dramé Yayé

Executive Secretary

United Nations Avenue

P O Box 30677-00100

Nairobi, Kenya

Tel: 254-20-7224135 (Direct)

254-20-7224000 (Operator)

Fax: 254-20-7224001

Email: a.yaye@cgiar.org/

Website: www.anafeafrica.org

Pan African Agribusiness and Agro Industry Consortium (PanAAC)

Contact person: Ms Lucy Muchoki

Chief Executive Officer

P O Box 2542-00200,

Finance House, 5th floor

Nairobi, Kenya

Tel: +254 20 2371307, 2213303, 2213304

Direct: 254 20 2041136

Fax : +254 20 2246737

Mobile: +254 722 510 210

Email: ceo@panaac.org

Website: www.panaac.org

Forum for Agricultural Research in Africa (FARA)

Contact persons: Prof Monty Jones

Executive Director

Email: mjones@fara-africa.org

Dr Irene Annor-Frempong

Director, Capacity Strengthening

Email: ifrempong@fara-africa.org

12 Anmeda Street, Roman Ridge

Mailing address: PMB CT 173

Accra, Ghana

Office: +233-21 772823, 779421

Fax: +233 21 773676

Mobile: +233-244277015,

+233-206437083

Website: www.fara-africa.org

African Technology Policy Studies Network (ATPS)

Contact person: Dr. Kevin Urama

Executive Director

3rd Floor, The Chancery

Valley Road, P O Box 10081

Nairobi 00100, Kenya

Tel: +254 20 2714092

Direct: +254 20 2723875

Mobile: +254 728 607703

Fax: +254 20 2714028

Email: executivedirector@atpsnet.org

Website: www.atpsnet.org

Association for strengthening Agricultural Research in Eastern and Central Africa (ASARECA)

Contact Person: Dr. Joseph Methu

Plot 15 John Babiha Rd.

P O Box 765, Entebbe, Uganda

Tel: +256 41 4320212

Fax: +256 41 4321126

Email: j.methu@asareca.org

Website: www.asareca.org

West & Central African Council for Agricultural Research and Development (CORAF/WECARD)

Contact person: Dr Sidi Sanyang

7 Avenue Bourguiba

BP 48 Dakar RP,

CP 18523, Dakar, Senegal

Tel: +221 869 9618/ 869 9629

Fax: +221 869 9631

Email: sidi.sanyang@coraf.org

Website: www.coraf.org

Southern African Development Community – Food and Natural Resources Directorate (SADC-FANR)

Contact Person:

Dr Keoagile Molapong

SADC House, Khama Crescent

Private Bag 0095, Gaborone

Tel: +267 3181293

Email: kmolapong@sadc.int

Website: www.sadc.int/fanr



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