

Demand-led training publication – references

Unit 1 Introduction and core principles

Outlook for African Agriculture

- World Bank (2013)
- Kimani et al (2014)
- Kimani and Kirkby (2001)
- FARA (2013)
- World Bank (2014)

Variety adoption in Africa

- Mwangi, M. and Kariuki, S. (2015) Factors determining adoption of new agricultural technology by smallholder farmers in developing countries. Journal of economics and sustainable development. Vol. 6, no.5, 208-216. ISSN2221700
<http://www.iiste.org/Journals/index.php/JEDS/article/viewFile/20710/21632>
- Walker et al (2014)
- Mbwika (2006)
- FARA (2006, as cited in Lynam, 2010)
- Kaliba et al (1998)
- Tesfaye et al (2001)
- Abay and Assefa (2004)
- Tura et al (2010)
- Doss (2005)
- Kaplan and Norton (2008)
- World Bank (2001)
- Nickel et al (2008).
- Odame et al (2013)
- Zelleke et al (2010)
- Hassan et al (2001)
- Alene and Mwalughali (2012b)
- Mausch and Simtowe (2012)
- DIIVA study in Africa (2014)
- ASARECA study (2013)

Breeding goals

- Odame et al (2013)
- Baum et al (1999)
- Anthony (2014)

Demand-led Approaches

- Weltzien, et al (2003)
- Ceccareli et al (2000)

Unit 2 Visioning and foresight for setting breeding goals

African agricultural policy and challenges

- CAADP development strategy <http://www.caadp.net/>
- ReSakss Regional strategic Analysis and knowledge support system (African country investment documents) <http://www.resakss.org/publication-categories/caadp-country-investment-plans>
- African Union (2014) Implementation strategy and roadmap (ISR) to achieve the 2025 Vision on CAADP. African Union Commission, Addis Ababa, Ethiopia.
http://caadp.net/sites/default/files/documents/Resources/CAADPGuides/implementation_strategy_report_english.pdf
- Worldbank/FAO (2009) Awakening Africa's sleeping giant. Prospectives for commercial agriculture in the guinea savannah zone and beyond (2009). pp236. Washington DC, USA. ISBN 9780821379417 http://siteresources.worldbank.org/INTARD/Resources/sleeping_giant.pdf

African R&D strategy and capacity

- African Union (2014). African Science, technology and innovation strategy for Africa STISA-2024. Addis Abba, Ethiopia. pp51 <http://hrst.au.int/en/sites/default/files/STISA-Published%20Book.pdf>
- FARA (2014). Science agenda for agriculture in Africa (S3A): "Connecting Science" to transform agriculture in Africa. Forum for Agricultural Research in Africa (FARA), Accra, Ghana. pp96
- Beintema, N. and Stads, G.J (2014) Taking stock of national agricultural R&D capacity in Africa south of the Sahara. ASTI Synthesis report IFPRI. Washington DC pp.28. ISBN: 978-0-89629-867-5. <http://www.ifpri.org/sites/default/files/publications/astiafricasynthesis.pdf>
- Tadele, Z. (2014) Role of Crop Research and Development in food Security of Africa. Int J Plant Biol Res 2(3): 1019. pp1-7
- Lynam, J. (2010) Evolving a plant breeding and seed system in Sub-Sahara Africa in an era of donor dependence. A report for the Global Partnership Initiative for Plant Breeding Capacity Initiative. FAO plant production and protection paper. pp210 ISSN02592517. <http://www.fao.org/3/a-at535e.pdf>

Seed systems

- AGRA (2013) Africa agriculture status report: focus on staple crops. Nairobi Kenya: Alliance for Green Revolution in Africa pp.204. ISBN879-9299005446 <http://agra-alliance.org/our-results/agra-status-reports/>
- Boettiger, S. O'Connor, A. Mabaya, E. Anthony, V. Sperling, L. Barker, I. Le Page, L. Haile, S. Kuhlmann, K. (2015) Growing Smartly: Scaling Up Seed Systems for Smallholder Farmers. ISBN 9780692242766

Forecasting and scenarios - STEEP process

- Schwartz, P. (1996) The art of the long view: paths to strategic insight for yourself and your company. Random House. [ISBN 0-385-26732-0](#)
- Kyler, J. (2003) Assessing Your External Environment: STEEP Analysis. Competia.com, Issue 33 - December 2002 - January 2003 [MBA Boost - STEEP Analysis Tool](#) <http://www.mbaboost.com/content/177/#ixzz3SxRKGQAM>

Social drivers

- [FAO food balance sheets](#): per capita consumption by food type
- Palacios, A.C. (2012). Drivers of Change, Agricultural modernization and women's status in SAT India. Working Paper Series no. 35. Pantacheru 502 324, Andhra Pradesh, India: International Crops Research Institute for the Semi-Arid Tropics. 32 pp

Economic drivers

- World Bank (2009) [Awakening Africa's Sleeping Giant: Prospects for Commercial Agriculture in the Guinea-Savannah Zone and Beyond](#)
- Rabobank (2014) 'Unleashing the Potential of Global F&A
- KPMG (2013) [The Agricultural and Food Value Chain: Entering a new Era of Cooperation](#)
- Reardon, T. (2011) The global rise and impact of supermarkets: an international perspective. Proceedings of the Crawford Fund 2011 Annual Parliamentary Conference. pp29 <http://ageconsearch.umn.edu/bitstream/125312/1/Reardon2011.pdf>
- Keyser, J. (2013) Opening up the markets for seed trade in Africa. Africa trade practice working paper series; no. 2. Washington DC; World Bank. <http://documents.worldbank.org/curated/en/2013/10/18444842/opening-up-markets-seed-trade-africa>
- Informa (2014) The Commercial Seed Market in Africa
- [International Trade Centre](#) – Seed imports and trade figures

Environmental drivers

- Alliance for a green revolution in Africa (AGRA) Africa Agriculture Status report 2014: Climate change and smallholder agriculture in Sub-Saharan Agriculture. Issue No.2. pp 216. ISSN 23135387 <http://agra-alliance.org/our-results/agra-status-reports/>

Technology drivers

- Petrobelli, C. and Puppato, F. (2015) Technology foresight and industrial strategy in developing countries- United Nations University- MERIT working paper pp28. Maastricht, Netherlands. ISSN18719872
- Monsanto's technology platform in Wheat. <http://www.monsanto.com/products/pages/wheat-technology-platform.aspx>
- New technologies for plant breeding. <https://www.integratedbreeding.net/courses/plant-breeding-concepts-and-methods/index-id=073.php.html>
- The speed breeding journey: From garbage bins to Bill Gates. <http://www.qaafi.uq.edu.au/the-speed-breeding-journey-from-garbage-bins-to-bill-gates>
- Chikelu, M. Guimaraes, E. Ghosh, K. (2012) Re-orientating crop improvement for the changing climatic conditions of the 21st century. Agriculture and food security 1:7. <http://www.agricultureandfoodsecurity.com/content/1/1/7>

Politics and policy drivers

Research and development

- African Union (2015) Agenda 2063 –the Africa we want (2nd Edition). Addis Abba, Ethiopia. pp20 <http://agenda2063.au.int/en/home>
- African Union (2014). African Science, technology and innovation strategy for Africa. Addis Abba, Ethiopia. pp51
- FARA (2014). Science agenda for agriculture in Africa (S3A): “Connecting Science” to transform agriculture in Africa. Forum for Agricultural Research in Africa (FARA), Accra, Ghana. pp96

Trade

- Rosegrant, M.W. and the IMPACT Development Team (2012). International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT): Model Description. International Food Policy Research Institute (IFPRI), Washington, D.C.

Country statistics

- Food and Agriculture Organisation of the United Nations FAOSTAT database – agriculture production by crop, country and year <http://faostat.fao.org/site/339/default.aspx>
- FAO country profiles: (1) economic situation, (2) food nutrition and food security, (3) population, (4) land use, (5) water resources, (6) agriculture production and trade, and (7) forestry production and trade <http://www.fao.org/countryprofiles/index/en/?iso3=MWI>

- FAO agricultural trade by country (imports and exports) <http://faostat.fao.org/desktopdefault.aspx?pageid=342&lang=en&country=81>
- World Bank Development Indicators (WDI) – many per country including population, economy, millennium goals, agricultural inputs e.g. fertilizer use <http://wdi.worldbank.org/tables>
- ASTI Agricultural R&D indicators: African country factsheets <http://www.asti.cgiar.org/countries>
- International trade centre: trade statistics. <http://www.intracen.org/itc/market-info-tools/trade-statistics/>

Genetically modified crops

- Chambers, J.A, Zambrano, P. Falck-Zepeda, J. Gruère, G. Sengupta, D. and Hokanson, K. (2014) GM agricultural technologies for Africa: a state of affairs. Report of a study commissioned by the African Development Bank. International Food Policy Institute (IFPRI), Washington DC. Pp146 http://www.ifpri.org/sites/default/files/publications/pbs_afdb_report.pdf
- ISAAA (2014) Global Status of Commercialized Biotech/GM Crops: 2014 Brief 49 <http://www.isaaa.org/resources/publications/briefs/49/executivesummary/default.asp>
- ISAAA biotech trait database <http://www.isaaa.org/gmapprovaldatabase/default.asp>
- CropLife biotechnology benefits database <http://biotechbenefits.croplife.org/>

Unit 3 Clients and value chains

- Wikipedia – Market segmentation http://en.wikipedia.org/wiki/Market_segmentation
- Wikipedia - Market research https://en.wikipedia.org/wiki/Market_research
- Efiue, A. Tongoona, P. Derera, J. Langyintuo, A. Laing, M. and Ubi, B. (2008) Farmers perceptions on rice varieties in Sikasso region of Mali and their implications for rice breeding. *Journal of Agronomy and Crop Science* 194, 393-400.
- Lockley, LC. (1950) Notes on the History of Marketing Research. *Journal of Marketing* Vol. 14, No. 5, pp. 733-736.
<http://www.jstor.org/discover/10.2307/1246952?uid=3737760&uid=2&uid=4&sid=21104705243867>

Unit 4 New variety design

- Wikipedia – Market segmentation http://en.wikipedia.org/wiki/Market_segmentation
- International treaty on plant genetic resources for food and agriculture <http://www.planttreaty.org/>
- Convention on biodiversity <http://www.cbd.int/>
- Dry beans: production guideline (2010). Department of Agriculture, Forestry and Fisheries, Republic of South Africa www.nda.agric.za/docs/Brochures/prodGuideDryBeans.pdf
- Wheat: production guideline (2010) Department of Agriculture, Forestry and Fisheries, Republic of South Africa www.daff.gov.za/docs/brochures/prodguidewheat
- Guidelines for the production of small grains in the summer rainfall region (2014) Compiled by: ARC-Small Grain Institute, University of the Free State, SAB Maltings (Pty) Ltd <http://www.arc.agric.za/arc-sgi/Product%20Catalogue%20Library/Guideline%20for%20production%20of%20small%20grains%20in%20the%20summer%20rainfall%20area.pdf>
- IBPGR/ICRISAT (1993) Descriptors for Sorghum [Sorghum bicolor(L) Moench]. International Board of Plant Genetic Resources. Rome, Italy/International Crop Research Institute for Semi-Arid Tropics, Patancheru, India.
- Huamán, Z. (1999) Botany, origin, evolution and biodiversity of the sweet potato: Sweet potato germplasm management training manual CIP, Lima.
- Huaman, Z. Williams, JT. Salhuan, W. and Vincent, L. (1977). Descriptors for the cultivated potato. International Board for Plant Genetic Resources, Rome, Italy.
- Anthony, V. (2013) Demand-driven variety design. In: Scaling seed systems and ag technologies for smallholders. Commissioned article from USAID/Syngenta Foundation for Sustainable Agriculture. pp8. http://media.wix.com/ugd/ad2c36_49f5003c432d2d6a4281626ccca63ea6.pdf
- The Purple Tomato FAQ: http://horticulture.oregonstate.edu/purple_tomato_faq
- Demand-led design <http://www.syngentafoundation.org/index.cfm?pageID=768>

Unit 5 Variety development

- Shimelis, H. and Laing, M. (2012) Timelines in conventional crop improvement: pre-breeding and breeding procedure. Australian Journal of Crop Science. Vol 6(11) pp: 1542-1549.

Variety registration

- Setimela P.S., Badu-Apraku, B. and Mwangi, W. (2009) Variety testing and release approaches in DTMA project countries in sub-Saharan Africa. Harare, Zimbabwe, CIMMYT. <http://repository.cimmyt.org/xmlui/bitstream/handle/10883/807/93477.pdf?sequence=1>
- Zulu, E.D and Goldschagg, E. (2008) Harmonization of seed regulations to promote seed trade in the SADC region, with focus on Seed Certification; Crop Variety Release and Phytosanitary for Seed systems.
- Harries, A. and Cortes, J. (2008) Procedure manual for variety registration in the national catalogue for crop species and varieties in West African countries. Seed Science Center, Iowa State University.
- Kuhlmann, K. (2014) Harmonising regional seed regulation in sub-sahara Africa – A comparative assessment. pp.1-59.
- Keyser, J.C. (2013) Opening up the markets for seed trade in Africa. Africa Trade Practice Working Paper Series No2. Oct 2013. pp 1-28. Worldbank Publication.
- Keyser, J.C. et al (2015) Towards an integrated market for seeds and fertilizers in West Africa. Worldbank publication Jan 2015. pp 1-64 http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/01/15/000470435_20150115132901/Rendered/PDF/936300REVISED00REVISED0FINAL0TO0DC.pdf

Benefits case

- Australian Government Grains Research and Development Corporation – Impact assessment of crop breeding programmes <http://www.grdc.com.au/Research-and-Development/Impact-Assessment>.
- Lee Hickey (2014) -Speed breeding u-tube training video <http://www.gaafi.uq.edu.au/the-speed-breeding-journey-from-garbage-bins-to-bill-gates>
- Ceccarelli, S. (2015) Efficiency of plant breeding. Crop science 55, 87-97 <https://www.crops.org/publications/cs/pdfs/55/1/87>
- Morris, M.L and Heisey, P.W. (2003) Estimating the benefits of plant breeding research: methodological issues and practical challenges. Agricultural economics 29, 241-252. <http://impact.cgiar.org/pdf/108.pdf>
- Heisey, P.W. Srinivasan, C.S. and Thirtle, C. (2001) Public sector plant breeding in a privatizing world. Resource Economics Division. Economics Research Service. US. Department of Agriculture. Agriculture information bulletin no. 772. 1-19. http://www.ers.usda.gov/media/890776/aib772_002.pdf

- Tripp, R. and Byelee, D. (2000) Public plant breeding in an era of privatisation. Department for International Development. ODI Natural Resource Perspectives no 57. ISSN1356-9228.
- State Government Victoria, Australia (2005) Plant breeding policies and principles for investment. Energy and Earth resources. Department of primary industries. Agriculture Division Policy Paper. <http://www.energyandresources.vic.gov.au/about-us/publications/economics-and-policy-research/2005-publications/plant-breeding-policies-and-principles-for-investment>
- Andoseh, S., Bahn, R. And Gu, J. (2013) The case for a real options approach to ex-ante cost-benefit analyses of agricultural research projects. Food policy. http://pdf.usaid.gov/pdf_docs/pnaec758.pdf
- British Society of Pant Breeders (2012) Lobby paper to British government on the need for investment in plant breeding <http://www.publications.parliament.uk/pa/cm201213/cmselect/cmsctech/348/348vw20.htm>
- Artmann, C. (2009) The Value of Information Updating in New Product development. Springer-Verlag, Berlin Chapter 2. Pp1-39. ISBN 9783540938323 http://www.springer.com/cda/content/document/cda_downloaddocument/9783540938323-c2.pdf?SGWID=0-0-45-685409-p173876683
- Boettiger, S., Anthony, V., Booker K., and Starbuck C. (2013) Public-private partnerships in plant genomics for global food security. pp33. International Development Research Centre (IDRC) commissioned paper, Canada. ISBN:9780989074704.

Unit 6 Monitoring, evaluation and learning

Variety adoption and performance tracking

- Echeverria, (1990)
- Alston et al. (2000)
- Evenson (2001)
- Larotelle et al. (2012)
- Assefa et al., (2006)
- Assefa et al. (2005)
- TLII (2011)
- Katungi and Gebeyehu (2011)
- Gebeyehu and Dadi (2010)
- IPMS (2010)
- Teshale et al. (2007)