

Biodata SKOV Seminar December 2

Nandudu Leah

Nandudu Leah, an MSc student in plant science at WUR, is our invited lady in chair, representing UCAS; Nandudu is from Uganda, where she studied at the Uganda Christian University. Her research interest is in plant breeding for resistance and increased yield. She has worked with the International Institute for Tropical Agriculture in banana breeding project, Japanese international cooperation agency where she worked with farmers to improve rice cultivation and take it as a business among others. She also worked on banana wilt disease, rice production and indigenous vegetables in Uganda. She has a keen interest in agricultural value addition and creating entrepreneurship skills among farmers in Uganda and Africa at large.



Martin van Ittersum

Graduated from Wageningen University. He is personal professor at the Plant Production Systems group. His research and teaching focus on methodologies for the analysis, design and integrated assessment of agricultural systems at multiple scales. Keywords of his expertise include: agro-ecology; land use analysis; farming systems; systems analysis; optimization modeling; designing production systems; integrated assessment; policy evaluation and global food security.

He is initiator, coordinator and co-applicant of a substantial number of projects with external funding (EU, NWO, BSIK, Gates Foundation) on developing and applying integrated methods for analysis, design and assessment of agricultural land use systems. He was the coordinator of the SEAMLESS project: System for Environmental and Agricultural Modeling; Linking European Science and Society; an EU FP6 project (2005-2009) with 30 universities and approx. 150 researchers. Currently he is co-leading the Global Yield Gap Atlas project (funded by the Gates foundation – www.yieldgap.org) and a large strategic programme of Wageningen University aiming to map options for sustainable intensification. He has been co-editor-in-chief of *Agricultural Systems*, is member of several editorial boards and guest-edited ca. 10 special issues. In 2013 he was the co-chair of the 1st International Conference on Global Food Security.

<http://www.wageningenur.nl/en/Persons/prof.dr.ir.-MK-Martin-van-Ittersum.htm>



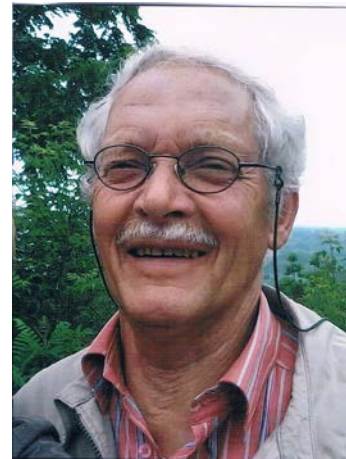
Nienke Boderie and Evelien de Jong.

Evelien de Jong is a second year bachelor student International Development Studies and board member of study association Ipso-Facto. Nienke Boderie is a third year bachelor student Health and Society and board member of student association D.L.V. Nji-Sri Together they assist the board of the SKOV during organising the seminars. This seminar they will give the student opinion on Africa from their own perspective.



Wout van Hoof

Born and grown up in a mixed farming rural family in the South of The Netherlands, dr.ir. Wout van Hoof has studied tropical crop science in Wageningen. His professional career has consisted in work for an international agency, for governmental organizations and for non-governmental programmes, covering lecturing, research and advisory work in the field of agricultural production and rural development. Smallholder farmer families have always had his keen interest, with an accent on multiple cropping and on low external input farming. He has lived for many years with his family in Africa and Asia and he has visited numerous countries in Africa, Latin America, Asia and Central and Eastern Europe for agricultural advisory work.



Herbert A.M. van der Vossen

Herbert A.M. van der Vossen graduated from the Wageningen Agricultural University in 1964 with an Ir(MSc) degree in tropical agronomy and plant breeding, and obtained his PhD degree at WAU in 1974 with a thesis on breeding and quantitative genetics of the oil palm. He was research officer in-charge of the Oil Palm Research Centre near Kade, Ghana in 1964 – 1971 (Ghana Government) and head of the Coffee Breeding Unit at the Coffee Research Institute near Ruiru, Kenya in 1971 – 1981 (Kenya-Netherlands development cooperation). After returning to the Netherlands with his family in 1981, he joined Sluis & Groot Seed Company BV (now Syngenta Seeds BV) at Enkhuizen as research manager and subsequently as director of the breeding programmes for vegetable and flower seed crops. Following early retirement in 1993, he went overseas once more (with his wife) to become seed policy adviser to the Ministry of Agriculture at Dhaka, Bangladesh until 1996 (Bangladesh-Netherlands development cooperation).



Since then he has been active as freelance consultant for agricultural development projects, including 36 assignments on coffee, oil palm, cocoa, vegetable seeds, cereals and potato in Africa, South-East Asia, India and Latin America. He has published > 80 scientific papers since 1969, including chapters in 9 books on coffee and other crops. He is also a member of the ASIC (Association for Science and Information on Coffee) Board since 2001.

Summary of the presentations for SKOV seminar on December 2, 2015

Narrowing the yield gap, prof.dr.ir. Martin van Ittersum, WUR Plant Science.

Yield gap analysis is a helpful method to understand the scope for sustainable intensification. In this presentation I will show results of the Global Yield Gap and Water Productivity Atlas and demonstrate how its results can be used to assess the need for an intensification of agriculture in sub-Saharan Africa and to what extent such intensification can help to prevent crop area expansion or import dependency. I will also discuss the implications in terms of fertilizer use for SSA and how future patterns of fertilizer use may and should differ across continents.

Smallholder food crop production, dr. Ir. Wout van Hoof, Tropical agriculturist.

Small scale producers in Africa feed over 80% of the continent's people. The usual pattern of rural smallholder families is mixed farming of food crops, cash crops and livestock production. Bee-keeping is sometimes an additional activity. Self-subsistence farmers need many different products and practice risk avoidance. On small farms around Jimma, Ethiopia, land preparation is carried out by three plowings in order to kill weeds. A wide variety of crops is grown, such as tef, maize and beans, cocoyam, enset, tchat and coffee plants.

On small farms in Kaloleni, in the Coast Province of Kenya, the farmers use wild plants, grow annual crops, grow perennial crops, keep livestock and make a living by off-farm work. Kasasire Farm near Mzuzu in North Malawi has a huge area under young macadamia trees. In the surrounding small farms, young macadamia trees are planted between other crops. The smallholders will be out-growers for the Kasasire Farm, that will process the macadamia harvest of the out-growers. Actual nutrient depletion, characteristic of land use in many parts of Sub-Saharan Africa, constitutes a serious problem. Soil erosion should be halted by soil conservation. Mixed cropping can give an additional production compared with sole cropping. Ways of measuring results of mixed cropping and improvements towards sustainable farming systems will be discussed.

Smallholder coffee production, dr.ir. Herbert van der Vossen, Tropical agriculturist.

The stimulant beverage Coffee is consumed by at least half of the world population and by about 85% of all people in Holland. It is one of the most important agricultural commodities in global trade. World coffee production in 2014 was 8.5 Mt (from 12.5 Mha of land in > 50 countries between the tropics), 60% from arabica (*Coffea arabica*) and 40% from robusta (*Coffea canephora*) coffee trees. The value of the green coffee exported in 2014 from all producing countries together was about US\$ 18 billion, whereas the annual turnover in the total supply chain (from tree to cup) is estimated to be more than US\$ 100 billion.

Coffee is regarded as a lead indicator for sustainable commodity crops. About 70% of all coffee is produced by smallholder farmers. Coffee provides livelihoods to some 25 million rural families, or at least 100 million people (women constitute 50% of the work force), not counting the millions additionally employed in the other sectors of the coffee supply chain.

Coffee production will have to be at least 15% (1.3. Mt) higher in 2020 to meet the expected increase in demand. At current yield levels, this would require an additional 1.9 Mha of new coffee fields largely from freshly cleared forests. Narrowing the yield gap by increasing yields per ha by about 20% on average will be a sustainable alternative to deforestation.

Important aspects in consideration of narrowing the yield gap of coffee production by small-holders include: (1) restoration of soil quality and nutrient balance, (2) cultivation of coffee under agroforestry or non-shaded conditions and the use of F1 hybrid (arabica) cultivars, (3) control of diseases by developing resistant cultivars, and of pests by IPM, (4) access to information and training on crop management, (5) improvement of methods of harvesting and primary processing (berries to beans), (6) mitigation of potentially negative effects of climate change on coffee production, (7) the vagaries of farmers' incomes (profitability of coffee production, price volatility, access to credits) and (8) the controversial impact of Fair Trade, Organic Farming and other certification systems on the socio-economic status of smallholder coffee growers.