
13.5 Expert knowledge in twentieth-century agriculture

Room 203

Chair: Jules Pretty

13.51 Jan Roobrouck – Promoting agricultural progress through science in Belgium (1944-95)

After the second World War, Western democracies fully embraced modern science and technology to foster economic growth and serve strategic interests. Governments poured more money into the applied sciences and technology than ever before. States guided and supported the creation of new knowledge and its applications. This official ‘cult of scientific and technological power’ had many followers. Professionals and experts from all areas transformed an often nearly archaic world into a system of clockwork efficiency and utilitarian ingenuity. Agriculture, a strategic economic sector, did not escape this tendency towards mechanisation and rationalisation.

The scientific structures designed to facilitate the modernisation process were effective in increasing agricultural productivity, but they were less adapted to meet the challenges posed by social or environmental pressures. The development of an agricultural research policy (1945-1995) clearly illustrates how the Belgian administration paired knowledge expansion to welfare construction. Using a unique budgetary dataset, meeting records and interviews, we will demonstrate how state officials, scientists and politicians were expected to reconcile the interests of farmers, industrialists and consumers. We will link these policy issues to broader social and agricultural developments while tracing the dynamic of rural change in Belgium.

Jan Roobrouck (b.1983) received his Master’s degree as a historian at K.U.Leuven (Belgium) in 2005. After brief academic trips to the US (Furman University, Greenville, SC) and Canada (University of Toronto), he started working in Rome (Italy) on a two-year project. This project linked Belgian political and social history to the papacy of Pius XI (1921-1939). Jan is currently writing a doctoral thesis entitled ‘In Search of Elegant Solutions: Agronomy and Agricultural Policy in Belgium (1945-2002)’ under the assignment of the Leuven Interfaculty Centre for Agricultural History (ICAG) and the Flemish Institute for Agriculture and Fisheries Research (ILVO). His interest lies in the history of agriculture, science, religion and politics – any subject with a transnational dimension.

13.52 Gabriel Söderberg – Science and scale: application of knowledge in twentieth-century Swedish agriculture

This paper uses a Schumpeterian model to suggest the importance of market power in the creation and application of scientific knowledge in economic growth and modernisation. It focuses on Swedish agriculture, 1890 to 1960, in which a sector consisting of many small production units modernised alongside a growing, more concentrated industrial sector. The research question for this paper is: How did the specific market structure of agriculture influence the way agricultural science was initiated, financed and implemented in the creation of modern agriculture? Case studies of two components of modern agriculture – plant breeding and artificial fertilisers – follow. In plant breeding, dissatisfaction with the quality of domestic grain among refinement industries – mills, bakeries, breweries – led them to favour imported grain. As domestic grain producers lacked scale and resources to refine grain quality on their own, the Swedish Seed Association, with support by the state and in co-operation with above-mentioned industries, initiated programs to create more suitable grain. In the case of artificial fertilisers the state research system in association with the regional agricultural associations carried out considerable research, increasingly in co-operation with a cartel of fertiliser producers. In this way application of and expansion of agricultural science, went hand-in-hand with increased agricultural regulations, in creating a place for domestic agriculture in industrialised Sweden.

Gabriel Söderberg began as an economist and entered economic history to pursue inquiries outside the constraints of conventional economic theory. Research focuses on knowledge creation, technological development and the role of market power in agriculture. The classical market structure for agriculture is many small farms spread out in rural areas, making producer collusion difficult. This goes for pooling resources in order to advance knowledge and technology as well. Studying this problem thus not only sheds light on the conditions of rural areas during modernisation, but also gives important clues on the links in general between market structure and technological development.

13.53 Jovica Lukovic – Peasants: an anti-modernist class? Introducing expert knowledge to Yugoslav agriculture, 1918–1941

When the south-eastern European states were founded after the First World War, they were genuinely agrarian states. In inter-war Yugoslavia – on which I will concentrate here – 75 per cent of the population lived on agriculture, which provided 50 per cent of the gross national product. Altogether, peasants were the most important productive class of the country.

Yugoslav agricultural politics faced a double task: Firstly, to develop efficient structures for its rather backward agriculture, e.g. by regulating property, homogenising the domestic markets, capitalising production, etc. Secondly, it was necessary to increase the efficiency of individual farms fairly quickly.

To achieve modernisation, it was necessary to improve the educational background of the peasants, whose illiteracy rate was over 80 per cent. The introduction of agricultural machines, new seeds and stock races as well as the capitalisation of production required specific training. Experts of different sorts made their appearance and tried to spread scientific knowledge among peasants.

The implementation of expert knowledge often clashed with the peasants' traditional concepts of work techniques, farm management etc. As a consequence, they were perceived as uninterested and unwilling to learn; certain experts even alleged that peasants did not have the 'psychological disposition' to assume a modern, scientific attitude. This idea was spread by experts such as economic theorists and agricultural practitioners, which reinforced the popular stereotype of the anti-modernist peasant. In my paper, I will question this hypothesis which still persists in agricultural history.

I will underline my argument with two examples that show that peasants did actively approach agricultural problems: the letters and reports of young peasants who had taken the opportunity of a work placement on modern farms in Switzerland. The standard of knowledge among Yugoslav peasants did remain low in general, but this was not to blame on the peasants' lack of interest only but just as well on the experts' inadequate practices of knowledge transfer.

Jovica Lukovic (b.1965, Yugoslavia) is doing a PhD in South-Eastern European History at the Free University of Berlin (Prof. Dr. Holm Sundhaussen, Institute for Eastern Europe). His PhD thesis is 'From peasants to labourers? Social differentiation as acculturation of a transitional class in Yugoslavia, 1918–1941'. He has recently been a Visiting Fellow at the project '*Ergänzungsraum* South-Eastern Europe: Concepts and Strategies of the '*Mitteleuropäischer Wirtschaftstag*' at the University of Vienna, Austria. His latest publications focus on agricultural reforms and the property rights of peasants in South-Eastern Europe.

13.54 Yves Segers – Agricultural science and the establishment of a knowledge network in Belgian Congo, 1908-1933

According to the French colonial historian Christophe Bonneuil, agricultural science played a crucial role in the creation of 'developmentalist states' in tropical Africa. The aim of this interventionist policy, a form of 'authoritarian economic and social engineering' from above, was to reorganise modes of production and improve living conditions of African rural society. Bonneuil situates this development in the 1930s, in reaction to the Great Depression.

It is my hypothesis that Belgian Congo functioned already earlier as a ‘laboratory’ for state interventionism, via investments in land reclamation and cultivation, the introduction of ‘cultures obligatoires’ and the start of an ‘agricultural science offensive’. Via new research and education initiatives, the Belgian government tried to raise knowledge regarding farming in an equatorial environment, to dismantle indigenous ‘routines’ and to ‘improve’ and rationalise African farming systems.

In this paper I analyse the establishment by the Belgian authorities of an agricultural knowledge network on behalf of its colonial interests and objectives during the period 1908-1933 (or between the end of Congo Free State and the establishment of *INEAC: Institut National pour l’Etude Agronomique du Congo Belge*). I analyse the specificity of the Belgian case, which is clearly understudied in the national and international literature, and compare with other African colonies. Did a specific ‘Belgian colonial farming model’ already exist in this period or not?

Yves Segers is professor of Rural History and director of the Interfaculty Centre for Agrarian History of the University of Leuven, and professor of Economic History at Hogeschool-Universiteit Brussel (HUB). His research interests focus on the history of agriculture, rural societies and the food chain since the late eighteenth century. In recent years he has published on the history of agricultural education, agricultural machinery exhibitions, the allotment movement, food consumption and living standards. He published articles in peer-reviewed journals such as *Agricultural History Review*, *Appetite*, *Food & History*, *European Review of Economic History*, *Histoire & Mesure*. Together with Leen Van Molle he edited the general synthesis: *Leven van het land. Boeren in België, 1750-2000 (Living from the land. Farming in Belgium, 1750-2000)*. Leuven, 2004. Yves Segers is also a member of the general board of the research network CORN.

13.55 Margreet van den Burg – Rice research for global food security, stability and welfare: 50 years of the International Rice Research Institute, IRRI, Philippines

The fiftieth anniversary of the International Rice Research Institute (IRRI), Los Banos, the Philippines, in 2010, called for a well-contextualised historical analysis contributing to the consolidation of IRRI’s heritage for future generations. Rice production, considered as indispensable for global food security after WWII turned out to be of strategic importance in the era of Cold War rivalry. IRRI received an international mandate to work on the improvement of rice varieties. Although the funds came largely from two giant US Foundations, Rockefeller and Ford Foundations, and the Philippines provided land to build the institute on, IRRI was international in its intention, mandate and status.

For this contribution I will focus on the way the (changing) research policies of IRRI were framed and justified in relation to successes, criticism and financial cutbacks. It will show how IRRI redefined its field of expertise and what scientists and programmes it attracted for widening their scientific authority accordingly. Source materials will be public speeches, (IRRI) policy papers, annual reports and research programme reports. The trends spotted will be related to overall developments in agricultural research.

The research programming will also be contrasted to the ongoing critical voices of especially environmental and feminist activists, supported by critical scientists. Here, I will especially address their challenges to IRRI in relation to reversing growing environmental degradation, gender inequality and human rights violations. This comparison will show several science dynamics phenomena at work, both in the diverging identifications of what is ‘really’ going on and what contributes towards improvement (diagnostics), and in scientific development suffering from mutual failing in thoroughly in-depth exchange and communication. For this purpose the various roles of IRRI within the global arena must be considered within the wider historical picture of international aid, clashing and changing views on human and economic development, and the role of technology in such development.

Margreet van der Burg is UD (university lecturer/researcher) at Wageningen University, the Netherlands. She is part of the Department of Social Sciences and posted in the Rural History Group. Since 2002, she is especially entrusted with rural history gender studies. In 2006 she hold the Maria Goeppert-Meyer Guest Professoriate for international gender studies at the Institute for Rural Development, Faculty of Agricultural Sciences, Georg-August University at Göttingen, Germany. Her publications mainly deal with genderedness in agricultural modernisation, rural development and their institutionalisation processes. In three major studies, she analysed the genderedness of the Dutch agricultural knowledge system and its institutions (science, extension and education) in relation to agricultural modernisation policies, changes in family farming and farm labour, rural activism and rural development. All show a strong underlying interest in representations of gender, class, race and generation with respect to the opportunities and disadvantages in rural contexts that are connected to perceptions of rurality. Her main focus used to be Europe and the northern Americas, but this has been gradually extended towards a (contemporary) global context along the lines of historical colonial and imperialistic hegemonies and dependencies.