ZUG
ZENTRUM FÜR UMWELTGESCHICHTE
CENTRE FOR ENVIRONMENTAL HISTORY

BOKU
Universität für Bodenkultur Wien

Carbon dynamics in French cropland: a bio-political history

90th Minisymposium of the Centre for Environmental History

Presentation:
Dr. Julia Le Noë
Institute of Social Ecology, BOKU

Moderation:
Dr. Simone Gingrich
Centre for Environmental History
Institute of Social Ecology, BOKU

Source:www.mes-annees-50.fr/tracteurs_jura/Massey25.jpg

Place: Universität für Bodenkultur Wien | **Standort Schottenfeldgasse 29**, **1070 Wien**
Time: Thursday, 29 November 2018, 18.15 – 20.00

Abstract:

Just after the COP 21, it has been pointed out that carbon (C) accumulation in soil at a rate of 4 ‰ of the current stock per year could offset the anthropogenic annual emission of carbon dioxide. However, C storage in soils depends on the long-term dynamics of C. In this context, my aim was to estimate the status of C in French cropland from 1852 to 2014, trying to identify different types of historical trajectories, by coupling the GRAFS model with the AMG model.
The period from 1850 to WWII is characterized in France by a stagnation of agricultural development and production compared with other modern European countries such as UK and Germany. By contrast, the period from 1950 to 1980 is marked by a phenomenal increase in N and P fertilizer use and Net Primary Production (NPP), leading to additional C inputs to cropland and increased soil C accumulation rate. The period from 1980 to 2014 shows a slowdown in NPP, and cropland soil C accumulation drops around 1 ‰ per year. These evolutions are closely linked to changes in the French social political context, from the second Empire to the Cold War and the advent of a neo-liberal mass consumption society. This research highlights that changes in C stocks requires a system perspective to account for both biogeochemical process and the political and economic context that shapes material fluxes.

SAVE THE DATE: 31.1.2019
John Kim: Human appropriation of the calcium cycle: from rain, land, food, to water