"Germany's Oil Fields: A Material History of the Crop Plant Rapeseed (1897–2017)"

By Sarah Waltenberger. Paderborn: Ferdinand Schöningh, Brill Verlag, 2020. Pp. 322.

Research into the history of materials and substances has not only experienced an enormous upswing in the last two decades, but has also made quite considerable methodological progress. The reflective and productive methodology of Sara Waltenberger's dissertation, "Germany's Oil Fields," demonstrates this.

The study focuses on the history of the crop plant rapeseed and the substances derived from it, in particular rapeseed oil and feed cakes, for a period of around 120 years. Waltenberger covers the history of rapeseed in the German Democratic Republic (GDR) thoroughly and in detail. The work is divided into four chapters, but with completely different weightings. The main part is made up of chapter three with over 200 pages; the other three chapters together comprise only around 60 pages. Rapeseed's history is presented in three phases (not surprisingly); the first phase, from 1916 to 1945, is particularly devoted to the role of rapeseed in the famine periods of the First and Second World Wars. Here rapeseed was propagated and cultivated as a substitute source of fat. The second phase, which, in addition to the period 1945 to 1975, also includes the year 1990 (German reunification), describes its development in the Federal Republic of Germany (FRG) and the GDR. The author gives it the title "Crisis Intervention" to underline once more the importance of political planning and intervention for rapeseed. The third phase () is entitled "Boom." This deals with the latest rapeseed that has been technologically and genetically optimized (or could have been), and could be used in extensive new or reactivated fields of application, such as a gasoline replacement to help combat climate change. While the first and third of these phases are very conclusively substantiated, the middle, second phase deals with quite heterogeneous trends, which are difficult to fit into an overall picture. However, the great significance of political intervention for this plant and, at the same time, its connection with systematic stockbreeding,

is made clear throughout. For her work, the author evaluates completely new, previously untapped archival materials that are fluidly integrated into a dense narrative.

In her work, Waltenberger confirms a primacy of discourse that is also often found in other areas of historical science. But she does not overlook materiality. For example, she works out that even the newer, milder rapeseed varieties created unexpected problems due to their changed materiality: because they were less bitter, for example, they were now consumed by wildlife, which could not, however, tolerate this diet and died at the edge of the field.

The explanations in the author's conclusion are particularly worthwhile and illuminating, because here she addresses an overarching methodological problem: namely that the history of materials, due to its concentration on only one substance, often provides insights that are scarcely transferable. This pitfall is countered by the author in her critical analysis of the narrative of the "all-rounder," a "jack-of-all-trades." In her concluding observations, she describes this narrative (i.e. that rapeseed could solve any problem) as a "discursive cage" that is likely to prove problematic. This consideration is transferable to other substances.

All in all, this is an almost exemplary study of the history of materials, and likely will be widely received both by all those involved in the world of rapeseed as well as in the field of research into the history of materials, and, of course, also in the field of historical studies on crop plants.

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Jens Soentgen is scientific director of the Environmental Science Center at Augsburg University. Since his Ph.D., he has worked on materiality from a humanities perspective. His last book, *Matters of Conflict: Carbon Dioxide, Heroine, and other Contested Substances* (Munich 2019), offers an integrated concept for research in the area of material histories.