

Female figures for the USDA

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[Female Figures for the USDA: Early 20th Century Farmer's Bulletins as a Medium for Women Food Scientists](#)

Discussion published by Simone Schleper on Tuesday, September 24, 2019

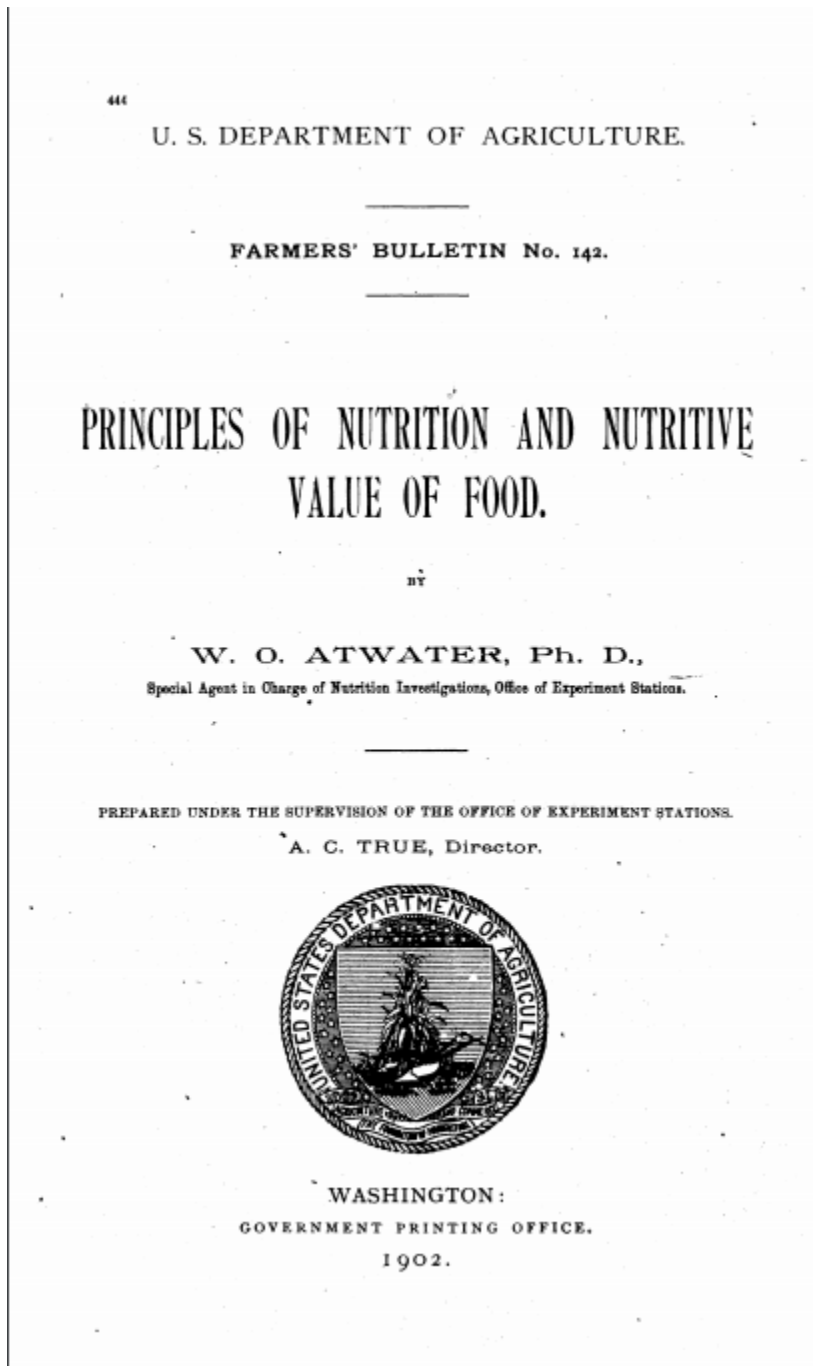
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The Farmers' Bulletins, published by the United States Department of Agriculture (USDA) since 1889, are doubly useful to historians: For one, these booklets provide insight into what was known and new about nutrition. On top of this, they serve as sources for discussions on authorship and audiences. In particular, they help us understand the gender politics of food science and education at the time. This contribution looks at two Farmers' Bulletins from 1902 and 1917. The first was written by a male, the second by two female authors: *Principles of Nutrition and Nutritive Value of Food* (Atwater, 1902) by the chemist Wilbur Olin Atwater (1844-1907) and *How to Select Foods: 1. What the Body Needs* (Hunt & Atwater, 1917) by the home economists Caroline Hunt (1865-1927) and Helen Woodard Atwater (1876-1947), W. Atwater's daughter. A comparison of the two Bulletins reveals significant changes in their style, scope and focus. More importantly, we see that within the fifteen years between the Bulletins' dissemination, the USDA began to put new emphasis on the applicability of nutritional knowledge in country homes. This, in turn, allowed authors like Hunt and H. Atwater to carve out a new sphere of female expertise.

[schleperfigure1watwater1902.png](#)



In 1902, W. Atwater based his 48 page-long Bulletin (Figure 1) on a series of articles he had written in the 1880s and 1890s for the magazine *The Century* (e.g. Atwater, 1887, 1888, 1891). The length, structure, and numeric emphasis of *Principles of Nutrition* closely resemble this series. In it, W. Atwater presented to the predominantly male, middle-class readership of *The Century* the political argument that purchasing expensive rather than nutritious foods was common practice of the less affluent parts of society (see Carpenter, 1994, p. 104 ff.). *Principles of Nutrition* conveys a similar

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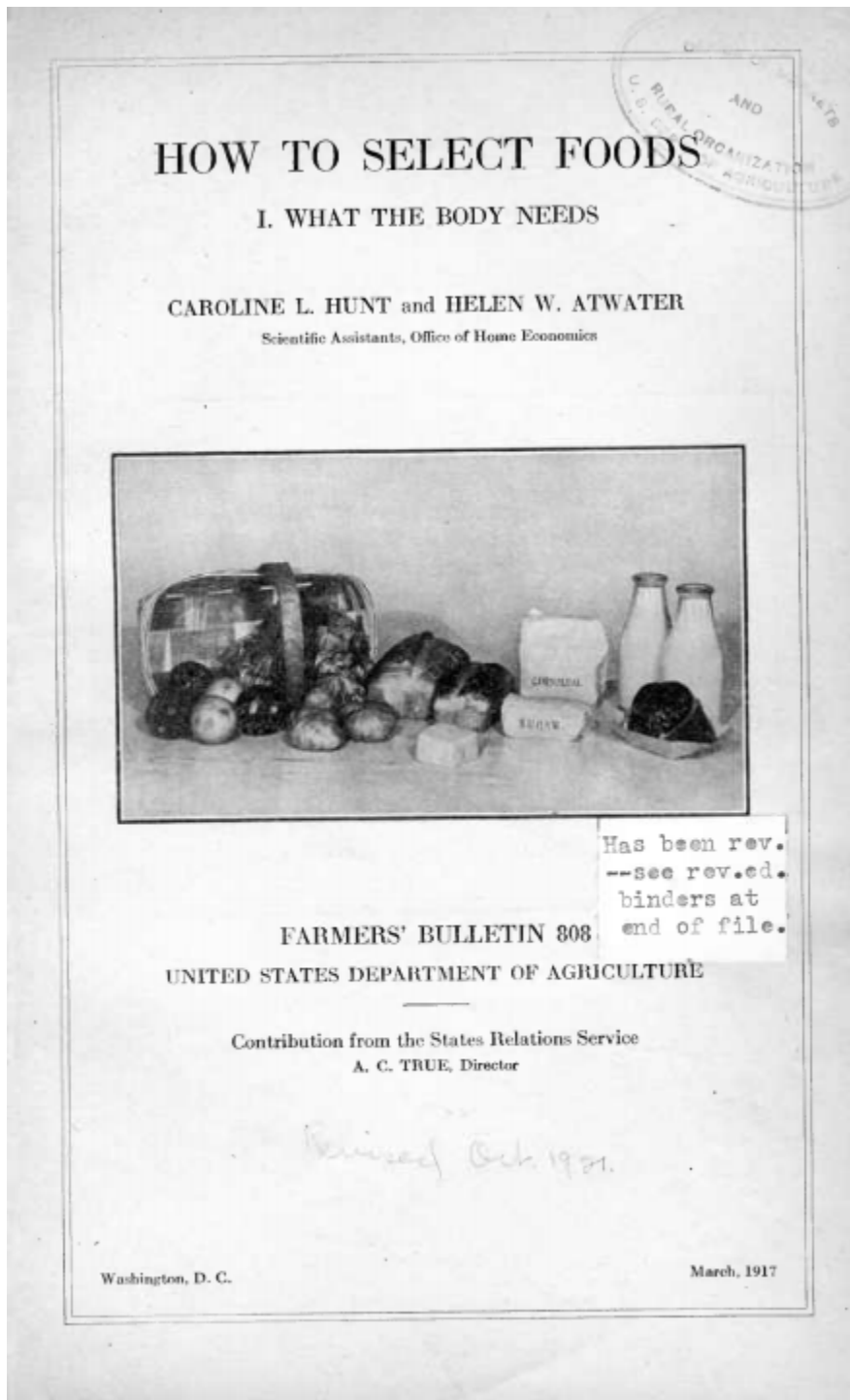
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message. From W. Atwater's *Bulletin*, it is hard to derive, however, whom he made responsible for the implementation of the information he provides. The readership of the *Farmers' Bulletins* most probably did not extend to larger audiences beyond the group of educated middle-class women who visited the women's clubs where these booklets were freely distributed (Hunt & Atwater, 1917, p. 14). However, the 48 page-long *Principles of Nutrition* is strikingly mismatched to this kind of readership. Atwater's treatise on economising food, and his emphasis on the consumption of enough "body-building" proteins, clearly addressed the food habits of the manually labouring classes (Atwater, 1902, pp. 8-10). At the same time, *Principles of Nutrition* contained lengthy explanations on the underlying experiments and the instruments used, as well as detailed tables of calorie values (Atwater, 1902, pp. 15-30). Little of this would have helped the average housekeeper in preparing a family's daily meals.

Hunt's and H. Atwater's *How to Select Foods* (Figure 2), too, discusses the economy of food and introduced the chemistry of different foodstuffs. Yet, there are significant changes in structure, length, and display. From the 1910s onward, a growing number of *Bulletins* were written by female authors of the relatively new discipline of home economics. *How to Select Foods* not only had two female authors. The short and attractively illustrated booklet of 13 pages exclusively addressed female housekeepers. The information given in *How to Select Foods*, while leaving out much of Atwater's lengthy theoretical treatises on the composition and digestion of food, seems much better suited for a practical application in the country kitchen. Significant, too, is the change of formal structure of the *Bulletins* that went hand-in-hand with the transition to a more pragmatic tone. *Principles of Nutrition*, for instance, features an official "Letter of Transmittal" by the USDA Office of Experiment Stations, signed by the Director (A.C. True) and the Secretary of Agriculture (Hon. James Wilson). Until 1915, these letters were part of the editorial of the *Bulletins* (e.g. Abel, 1915). In *How to Select Foods*, however, the official letter of transmittal, and with it the accentuation of male, expert supervision, had disappeared into a footnote (Hunt & Atwater, 1917, p. 3).

[schleperfigure2hunthatwater1917.png](#)



The change in tone and format of the Bulletins after 1915 suggests that female authors were increasingly able to publish for the USDA. More than that, they had been deliberately asked to write for types of audiences that male authors had difficulties addressing. These women had skills that male researchers were lacking, yet which were needed to achieve the USDA's political agenda. In the

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early 20th century, while the majority of the population still lived on the countryside, the United States experienced an increasing rural-to-urban migration (e.g. Ragonesi, 1983, p. 48). The social consequences of growing rural industrialisation and migration to American cities caused Malthusian fears. As a consequence, politicians of the Progressive Era held on to what the historian Richard Hofstadter has famously called the “agrarian myth” (Hofstadter, 1955, p. 29). Regarding an efficient agricultural sector as the backbone of a healthy society, reformers of the Country Life movement^[1] lobbied for rural education and scientific and technological innovation (Kline, 2000, p. 91 ff.). Farmers’ Bulletins like *How to Select Foods* fed into this Country Life ideology, whose promoters demanded science-based advice for women’s “special field and sphere,” the home (e.g. Bailey, 1911, p. 95).

This growing domestic reliance on science, technology and education has been defined by historian Rima Apple as scientific motherhood (Apple, 2006). With this concept, Apple describes how in the early 20th century, American working-class and immigrant women, especially, relied on the authority of male nutrition scientists, in order to be accepted as successful mothers (Apple, 2006, p. 38 ff.). The Bulletins show, however, what has at times remained inexplicit in the historiography on female nutritionists. While male reformers and food chemists employed much narrower definition of the home and the domestic sphere, seeing the purpose of home economics literarily in making better homes (Stage, 1997, p. 30), female authors like Hunt and H. Atwater used a rhetoric that stressed female responsibility and expertise. They provided explanations rather than instructions: “This rather rough calculation [of a day’s food] is based on the assumption that cereals contain, on the average, 12 per cent of protein, 1 per cent of fat, and 75 per cent of carbohydrates” (Hunt & Atwater, 1917, p. 4). By integrating the discussion of food compositions into exemplary meal plans and visualizing them in a separate chart similar to present-day food groups (Figure 2), the two authors educated and encouraged women to turn the growing, purchasing, and cooking of groceries into intellectual exercises.

Male reformers believed that science and technology would only reinforce a gender-based division of farm labor, enabling women to focus on light domestic tasks. Yet, a new generation of women home economists like Hunt and H. Atwater promoted the scientific training for female homemakers and, to some extent, successfully claimed status as nutrition experts for themselves. They did so by explicitly addressing female audiences, providing them with concrete and applicable examples that invited women to think about nutritional variety and value. In this effort, intelligible figures and illustrations served as effective tools to replace lengthy descriptions of laboratory experiments and page-long calculations that had characterized the Bulletins by male authors into the 1910s.

[1]

The Country Life movement was social movement that aimed at improving the living conditions of the rural segment of early 20th-century American society. Supported by both agrarians and urbanists, the movement believed in the moral superiority of rural values and lifestyles. At the same time, members of the movement sought to optimize and professionalize the agrarian sector by introducing scientific methods and technologically advance machinery.

Figures

Figure 1: Retrieved from <https://archive.org/details/CAT10306183/page/n1>

Figure 2: Retrieved from <https://archive.org/details/CAT87202531>

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