

Accounting for agricultural development?

The case of the Netherlands, 1840–1940*

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Abstract

In the second half of the nineteenth century Dutch agronomists and government officials promoted bookkeeping as a means to raise agricultural productivity. However, most farmers were only interested in cash flow management for which they relied on their memory, unstructured private notebooks, accounts kept by their suppliers and, from the 1880s onwards, the accounts kept on their behalf by rural co-operatives. Farmers in the Netherlands only took to formal accounting when in 1914 the government extended the national income tax to all farmers earning 600 guilders or more. As farmers – and tax inspectors – struggled to estimate individual incomes, farmers' associations created accounting agencies to support the drafting of their tax returns. The success of these agencies shows that the fiscal imperative for bookkeeping was much stronger than the desire of farmers to raise farm productivity through more extensive accounting.

The growth of agricultural productivity is key to reducing poverty among farmers. But what can policy makers do to help subsistence-oriented smallholders make the transition to commercial farming for regional, national, or even international markets? In addition to technical advice on farming methods and the provision of different types of micro-finance, development economists have begun to explore the effects of business training to smallholders. Teaching them how to calculate the value of their inputs and outputs and then use this knowledge to make informed decisions about investments could raise the productivity of their land, labour, and capital.¹ The empirical support for this contention is weak, however. Smallholders seldom keep written records on their own initiative and when business training is offered to them as part of more extensive micro-finance programs it seems to make little difference. Randomized trials manipulating the training offered to rural households only find weak effects on economic performance, or none at all.²

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¹ Lisa Xu and Bilal Zia, Financial literacy around the world. An overview of the evidence with practical suggestions for the way forward (World Bank Policy Research Working Paper, 6107, 2012).

² David McKenzie and Christopher Woodruff, 'What are we learning from business training and

The agricultural history of Europe and North America can help to explain this limited effect of business training on economic performance. In the eighteenth and nineteenth centuries Europe agronomists began to promote the adoption of farm accounting to raise agricultural productivity.³ They were able to motivate a small number of eager experimenters, for instance in Danish dairy farming, but beyond that detailed accounts were only kept by big commercial farmers with large numbers of buyers and suppliers, and stewards of landed estates who had to report to their absentee owners.⁴ That is not to say that other farmers were ignorant about their income and expenditure. They kept track of operations through mental accounting, as often as not supported by simple recordings in private notebooks or the accounts kept by local shopkeepers, artisans, and other suppliers.⁵ Thus, when French farmers' unions became aware that their members preferred simple forms of registration, they began to promote the use of almanacs, diaries and private notebooks.⁶ Observing the same preference for rudimentary annotations, in the Netherlands commercial suppliers of fertilizer, seeds, and other farm inputs distributed small booklets with practical information about their products and either blank or preprinted pages to record cash transactions.⁷

What these examples show is that farmers big and small carefully weighed the costs and benefits of keeping more or less elaborate accounts. This is also what emerges from changing accounting

Note 2 *continued*

entrepreneurship evaluations around the developing world', *World Bank Research Observer* 29 (2014), pp. 48–82; David John McKenzie and Susana Puerto, 'Growing markets through business training for female entrepreneurs: A market-level randomized experiment in Kenya (World Bank Policy Research Working Paper 7993, 2017); Tim Kaiser and Lukas Menkhoff, 'Does financial education impact financial literacy and financial behavior, and if so, when?' (Deutsches Institut für Wirtschaftsforschung Berlin, Discussion Paper, 1562, 2017); Erwin Bulte, Robert Lensink and Nhung Vu, 'Do gender and business trainings affect business outcomes? Experimental evidence from Vietnam', *Management Science* 63 (2017), pp. 2885–902.

³ Nathalie Joly, 'Shaping records on the farm: agricultural record keeping in France from the nineteenth century to the Liberation', *AgHR* 59 (2011), pp. 61–80; *ead.*, 'Educating in economic calculus: the invention of the enlightened peasant via manuals of agriculture, 1830–1870', *Accounting Hist. Rev.* 26 (2016), pp. 131–60; S. Felten, 'Unlikely Circuits: General Monetisation in a European Rural Society, c. 1700–1900' (unpublished PhD thesis, King's College, London, 2015); Thomas Depecker and François Vatin, 'Taking stock to yield a return: agricultural accounting, agronomometry and chemical statics in the early-nineteenth century', *Accounting Hist. Rev.* 26 (2016), pp. 107–29.

⁴ Markus Lampe and Paul Sharp, 'A quest for useful knowledge: the early development of agricultural

accounting in Denmark and Northern Germany', *Accounting Hist. Rev.* 27 (2017), pp. 73–99; M. Lampe and P. Sharp, *A land of milk and butter: How elites created the modern Danish dairy industry* (2018); *ead.*, 'Accounting for the wealth of Denmark: a case study of Smithian growth using the emergence of modern accounting in Danish dairying', *European J. Hist. Economic Thought*, 26 (2019), pp. 659–97; Garry D. Carnegie and Christopher J. Napier, 'Exploring comparative international accounting history', *Accounting, Auditing and Accountability J.* 15 (2002), pp. 689–718.

⁵ Thijs Lambrecht, 'Reciprocal exchange, credit and cash: agricultural labour markets and local economies in the southern Low Countries during the eighteenth century', *Continuity and Change* 18 (2003), p. 244; Sheilagh Ogilvie, Markus Küpker and Janine Mae-graith, 'Household debt in early modern Germany: evidence from personal inventories', *J. Econ. Hist.* 72 (2012), p. 146; Karin Lurvink, 'Strapped for Cash. Non-cash Payments on Louisiana Cotton Plantations, 1865–1908', *Tijdschrift voor Sociale en Economische Geschiedenis* 11 (2014), pp. 123–51.

⁶ Joly, 'Shaping records', pp. 71–3.

⁷ See below. In Italy, fascist organizations published similar booklets: Manuel Vaquero Piñeiro, 'Readings for farmers: agrarian almanacs in Italy from the eighteenth to the twentieth century', *AgHR* 63 (2015), pp. 243–64.

⁸ Alan L. Olmstead and Paul W. Rhode, *Creating abundance. Biological innovation and American agricultural development, 1700–1960* (2008).

practices in the United States. In the nineteenth century American farmers were able to make informed decisions about which crops to grow and how, but they did so without any recourse to detailed accounting.⁸ Only plantation owners in the South developed far more elaborate – and dehumanizing – systems of accounting and control.⁹ This changed with the introduction of a new income tax in 1914, which pushed farmers to record income and expenditure in much greater detail, simply because it would help them to minimize their tax bill.¹⁰ A similar pecuniary motive surfaced 20 years later, when the Great Depression threatened the livelihood of scores of small farmers. They were not interested in accounting as a means to raise the productivity of their farms, but to qualify for emergency loans smallholders in distress had to produce a paper trail of their transactions using pre-printed accounts provided by the government.¹¹

The case of New Zealand also points to financial rather than technological motives for more extensive farm accounting.¹² In 1915 the government subjected farmers to an income tax to finance the country's war effort. But their very rudimentary administration, often no more than simple diary notes, was completely unsuited to calculate income. So the government introduced a system of standard values and New Zealand's farmers engaged accountants to file their tax returns for them. Their efforts merely went into minimizing the tax bill and it was only in the 1960s that the farm accounts started being used to evaluate and improve farm performance. Before that date causality did not run from accounting to increased productivity but instead the growth of farmers' incomes induced the government to tax these revenues which in turn led to greater accounting efforts.

To further explore why farmers keep more or less elaborate accounts we analyze the diffusion of farm accounting in the Netherlands between 1840 and 1940. As elsewhere, Dutch agronomists, school teachers, and public officials actively promoted bookkeeping as a means to raise farm productivity, at a time when many other science-based improvements in farm exploitation occurred.¹³ But while farmers readily adopted new farm methods from the 1890s onwards, they seldom kept accounts detailed enough to guide these investment decisions.¹⁴

⁹ Caitlin C. Rosenthal, 'From memory to mastery: Accounting for control in America, 1750–1880', *Enterprise and Society* 14 (2013), pp. 732–48.

¹⁰ Deborah Kay Fitzgerald, *Every farm a factory: The industrial ideal in American agriculture* (2003), pp. 47, 73. In Britain tax assessments continued to be based on the rental value of the land, as a result of which very few farmers felt the need to keep detailed accounts: John Martin, *The development of modern agriculture: British farming since 1931* (2000), p. 20.

¹¹ O. F. Larson and J. N. Zimmerman, *Sociology in government. The Galpin-Taylor years in the U.S. Department of Agriculture 1919–1953* (2003), p. 203; S. P. Walker, 'Accounting and rural rehabilitation in New Deal America', *Accounting, Organizations and Society* 39 (2014), pp. 208–35.

¹² Jill Hooks and Ross E. Stewart, 'Farmers, politics, and accounting: the history of standard values – an accounting convenience or political arithmetic?',

Accounting Historians J. 38 (2011), pp. 47–75.

¹³ J. P. Smits, 'Technological change, institutional development and economic growth in Dutch agriculture, 1870–1939', in P. Lains and V. Pinilla (eds), *Agriculture and Economic Development in Europe since 1870* (2009), pp. 97–116; Merijn Knibbe and Marijn Molema, 'Institutionalisation of Knowledge-based Growth: the Case of the Dutch-Frisian Dairy Sector (1895–1950)', *Rural History: Economy, Society, Culture* 29 (2018), pp. 217–35; H. Zwarts, 'Knowledge, networks, and niches: Dutch agricultural innovation in an international perspective, c. 1880–1970' (Doctoral dissertation, Wageningen University, 2021).

¹⁴ J. A. Kuperus, 'Boekhoudingen op Nederlandse landbouwbedrijven voor 1900', in Ceres en Clio. Zeven variaties op het thema landbouwgeschiedenis (Wageningen, 1964); J. L. van Zanden, *De economische ontwikkeling van de Nederlandse landbouw in de negentiende eeuw, 1800–1914* (Wageningen, 1985).

That is, until in 1917 farmers' associations began to operate accounting agencies that helped thousands of members with their business.¹⁵ So what made them change their mind to engage these agencies after 1917?

We use government reports, newspaper articles, parliamentary proceedings, private farm accounts, and the extensive secondary literature on the organization of the Dutch rural economy to reconstruct the accounting practices of its farmers between 1840 and 1940. Section I analyses the individual efforts of agronomists and school teachers in the mid-nineteenth century to instruct farmers how to create a paper trail of their operations. In section II we consider the education and extension programs created by the central government during the severe agricultural crisis that began in 1878 and lasted until 1895. Section III highlights the role rural co-operatives began to play as record keepers for their members in the two decades following the crisis, when tens of thousands of small- and medium-sized family farms took to new technologies to produce dairy, vegetables, and fruit for rapidly growing export markets. In section IV we analyse the assistance accounting agencies offered to farmers subjected, from 1914 onwards, to the national income tax. In section V we study the relief program created by the Dutch government to help small family farms through the Great Depression. Section VI concludes.

I

In the second quarter of the nineteenth century several economic writers in the Netherlands drew attention to the value of farm accounting for increasing productivity.¹⁶ At the time, Dutch agriculture was not doing very well with productivity and employment stagnating and, for export-oriented farmers, growing competition from abroad.¹⁷ Taking their cue from scholars in neighboring countries, early agronomists like Winand Staring believed that keeping track of income and expenditure and carefully calculating returns on investment would stimulate the sector.¹⁸ Their first publications were mere theoretical treatises, but soon enough practical manuals appeared and in several parts of the countries self-taught school teachers started offering agricultural courses.¹⁹ To be sure, farm accounting as such was not

¹⁵ P. Coenemans, *Vijf en twintig jaar Boekhoud-bureau v.d. L.L.T.B., 1928–1953* (Roermond 1953); *id.*, *Geschiedenis van het Accountants – en Boekhoudadvies-bureau van de NCB, 1924–1974* (Tilburg, 1974).

¹⁶ Kuperus, 'Boekhoudingen'.

¹⁷ J. Bieleman, *Five centuries of farming. A short history of Dutch agriculture 1500–2000* (Wageningen, 2010), pp. 83, 155.

¹⁸ I. G. H. van den Bosch, *Handleiding tot het doelmatig boekhouden op een landelijk bedrijf, zijnde het bekroonde antwoord op eene, door de Zeeuwsche Commissie van Landbouw uitgeschrevene prijsvraag* (Mid-delburg 1843); W. C. H. Staring, *Het boekhouden voor den kleinen landbouwer* (Arnhem 1951); Jan Gerhardus Veldink, W. C. H. Staring 1808–1877: *geoloog en landbouwkundige* (Wageningen, 1970), pp. 10, 45, 95; Joly,

'Educating in economic calculus'; Martin Giraudeau, 'The farm as an accounting laboratory: an essay on the history of accounting and agriculture', *Accounting Hist. Rev.* 27.2 (2017), pp. 201–15; N. B. Goudswaard, *Agrarisch onderwijs in Nederland. Hoe het wor(s)telde en groeide* (Culemborg 1986).

¹⁹ M. van der Burg, 'Geen Tweede Boer'. *Gender, landbouwmodernisering en onderwijs aan plattelandsvrouwen in Nederland, 1863–1968* (Wageningen, 2002), pp. 71–2, 101, 113–14, 120, 147–8, 165; P. Kooij, 'Het landbouwonderwijs in de twintigste eeuw', in M. Duijvendak, E. H. Kaerl and P. Kooij (eds), *Groen Onderwijs. Terugblik en uitzicht naar aanleiding van het 100-jarig bestaan van de Vereniging voor Hoger Landbouw Onderwijs (1906–2006)* (Wageningen, Historia Agriculturae, 41, 2008), pp. 9–13.

new. Stewards managing the estates of absent land owners always had to report their results to their principals while the owners of large farms whose exploitation depended on wage labour were accustomed to running payrolls. But the agronomists' efforts were directed towards a new group of enterprising farmers keen to experiment with more scientific methods to increase productivity.²⁰

The farm accounts that survive from the nineteenth century in the Netherlands offer a first indication that few farmers responded to the call of the agronomists. Figure 1 reports for the years from 1851 through 1970 the number of farms for which financial records survive in Dutch archives.²¹ These farm accounts, especially the ones from the province of Groningen, figure prominently in Dutch agricultural history.²² But given that the Netherlands towards the end of the nineteenth century counted up to 200,000 farms the number of surviving accounts is very small indeed.²³ What is more, only a handful were full accounts which farmers may have used to evaluate performance. Especially before 1900 the majority of documents consisted of notebooks with more or less elaborate remarks about specific farm operations; receipts for goods and services received, and cashbooks detailing income and expenditure.²⁴

Surely, many documents will have been lost over time, while others may still remain in private hands. The crowd-sourcing project, *Kasboekje van Nederland*, broadcast on national television in 2018, provides more insight into the latter category. We asked Dutch citizens to share with us their own account books or those of their ancestors. Figure 2 shows that most accounts that have survived in private collections date from after 1910 and while this may be a simple survival bias it is noteworthy that most of these documents are cashbooks and full accounts – the more extensive records that also dominate archival collections from the first half of the twentieth century.

We already knew from the work of agricultural historians that the farm accounts that do survive from the second half of the nineteenth century were never kept in the comprehensive double-entry fashion advocated by agronomists.²⁵ Rather, the owners and stewards of large

²⁰ J. M. G. van der Poel, *Van Brakell van den Eng; Een Betuws hereboer uit het begin van de 19e eeuw* (Wageningen, 1959); Zanden, *De economische ontwikkeling*, pp. 189–93.

²¹ Figure 1 relates to private farm accounts only. Not included are (a) accounts of farms that belonged to churches, foundations, water boards, and other institutions; (b) accounts kept by landowners with no direct involvement in farm operations; and (c) accounts kept by stewards on behalf of absent landowners.

²² Peter R. Priester, *De economische ontwikkeling van de landbouw in Groningen, 1800–1910: een kwalitatieve en kwantitatieve analyse* (Wageningen, 1991); Richard Paping, “Voor een handvol stuivers”: *Werken, verdienen en besteden: de levensstandaard van boeren, arbeiders en middenstanders op de Groninger klei, 1770–1860* (Wageningen, *Historia Agriculturae*, 28, 1995).

²³ In 1900 the Netherlands counted 118,926 farms with at least one horse. In addition, there were tens of

thousands of smallholders working tiny plots of land without horses: Bieleman, *Five centuries of farming*, pp. 177, 229; Commissie van Advies Dienst Kleine Boerenbedrijven, *Rapport over den sociaal-economischen toestand der kleine boerenbedrijven in Nederland gevolgd door voorstellen ter verbetering van den bestaanden toestand* ('s-Gravenhage, 1937), p. 356.

²⁴ The distinction between these four types of documents was first applied by Kuperus in his overview of farm accounts surviving in Dutch archives: Kuperus, ‘Boekhoudingen’. We have used the same coding for additional farm accounts retrieved from the secondary literature, and from published inventories of Dutch archives. The ‘unspecified’ documents relate to accounts described in general terms only, e.g. ‘kasboek’.

²⁵ Zanden, *De economische ontwikkeling*, pp. 260–1; Priester, *De economische ontwikkeling*, pp. 255–6.

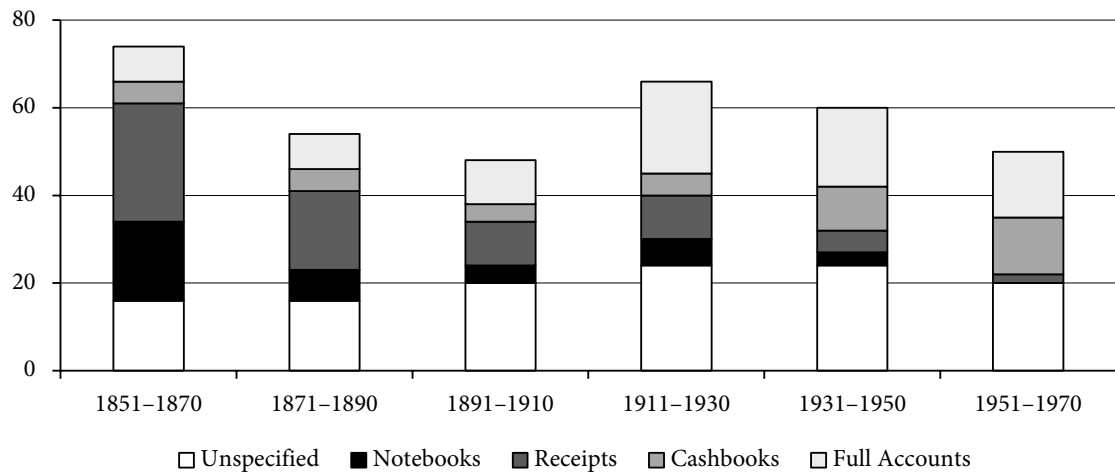


FIGURE 1. Private Farm Accounts Surviving in Dutch Archives, 1851-1970

Sources: Van der Poel, *Van Brakell van den Eng*; J. M. G. van der Poel, *De Wilhelminapolder 1809-1859* (Wageningen, 1959); J. A. Kuperus, 'Honderd jaar bedrijfsresultaten van de Wilhelminapolder (1814-1913)', *Historia Agriculturae* 6 (1962), pp. 117-273; Kuperus, 'Boekhoudingen'; J. C. G. M. Jansen, 'Landbouw rond Maastricht (1610-1865). Een analyse van de exploitatie-uitkomsten van enige lössbedrijven in halfwinning', *Studies over de sociaal-economische geschiedenis van Limburg* 13 (1968), pp. 1-98; C. Baars, 'Boekhoudingen van landbouwbedrijven in de Hoeksewaard uit de zeventiende en achttiende eeuw', *A.A.G. Bijdragen* 19 (1975); Zanden, *De economische ontwikkeling*; W. S. Verstegen and J. L. van Zanden, 'Landbouwers als ondernemers. Vier landbouwbedrijven op de Veluwe in de negentiende eeuw (1808-1867)', *Jaarboek voor de geschiedenis van bedrijf en techniek*, 4 (1987), pp. 85-105; Priester, *De economische ontwikkeling*; P. R. Priester, 'De economische ontwikkeling van de landbouw in het Oldambt in de negentiende eeuw', in J. N. H. Elerie and P. C. M. Hoppenbrouwers (eds), *Het Oldambt, deel 2; Nieuwe visies op geschiedenis en actuele problemen* (Groningen, 1991); Paping, "Voor een handvol stuivers"; Piet J. van Cruyningen, *Behoudend maar buigzaam: boeren in West-Zeeuws-Vlaanderen, 1650-1850* (2000); Amsterdams Archief, Inv. Nrs. 225: 384-5; 494: 311-12; 30702: 1-3, 15; Archief Achterhoek-Liemers Inv. Nr. 175: 205, 341: 15, 1469: 126, 1544: 69; Archief Barneveld Inv. Nr. 231: 109, 117; Archief Rivierenland Inv. Nr. 185: 2-10, 376: 1-6, 18, 49, 51, 53; Brabants Historisch informatie Centrum Inv. Nr. 319: 467; Drents Archief Inv. Nr. 184: 35, 294: 515, 794: 175-252, 764; Erfgoedcentrum Achterhoek en Liemers Inv. Nr. 499: 409, 341: 2-16, 1008: 694, 1544: 45; Gelders Archief Inv. Nr. 584: 91-92, 3027: 1803-1805; Gemeente Archief Goes Inv. Nr. 22: 69-182, 330: 31; Gemeentearchief Roermond Inv. Nr. 50520: 246-247; Groninger Archieven Inv. Nr. 110: 266-267, 550: 17, 20, 586: 18-29, 610: 2, 638: 18, 48, 52-56; 640: 1-5, 21, 649: 2, 1896: 45-78, 1910: 1-6, 2987: 248-249; Haags Gemeentearchief Inv. Nr. 0751-01: 1-19, 084-01: 111; Het Utrechts Archief Inv. Nr. 584-1: 212-222, 256-259; Historisch Archief Westland Aanwinsten (tuindersbedrijf A. van der Arend); Historisch Centrum Overijssel Inv. Nr. 563: 12, 1498: 30; Noord-Hollands Archief Inv. Nr. 197: 90-91, 7120: 12; Regionaal Archief Dordrecht Inv. Nr. 392: 323j; Regionaal Historisch Centrum Eindhoven Inv. Nr. 11137: 36-49, 12087: 662, 736b; Regionaal Historisch Centrum Zuidoost Utrecht Inv. Nr. 315: 1-5; Stadsarchief Kampen Inv. Nr. 134: 1-7; Streekarchief Langstraat Heusden Altena Inv. Nr. 149: 154; Tresoor Inv. Nr. 93-60: 531, 110: 6533, 318-19: 118, 318-32: 9, 325: 272, 334-06: 25, 334-11: 259, 344: 807-810, 347: 387, 348: 6290; Westfries Archief Inv. Nr. 117: 31, 167: 20, 204: 1, 549: 14, 778: 56, 359, 1012: 1, 1081: 1, 3; 1285: 2, 1733: 1-6; Zeeuws Archief Inv. Nr. 216: 3-6.

landed estates produced rent books or payrolls, while middle-sized market-oriented farmers simply wrote down income and expenditure – an appropriate means to monitor cash flows but not nearly enough to prepare or evaluate decision making, to calculate return on investment,

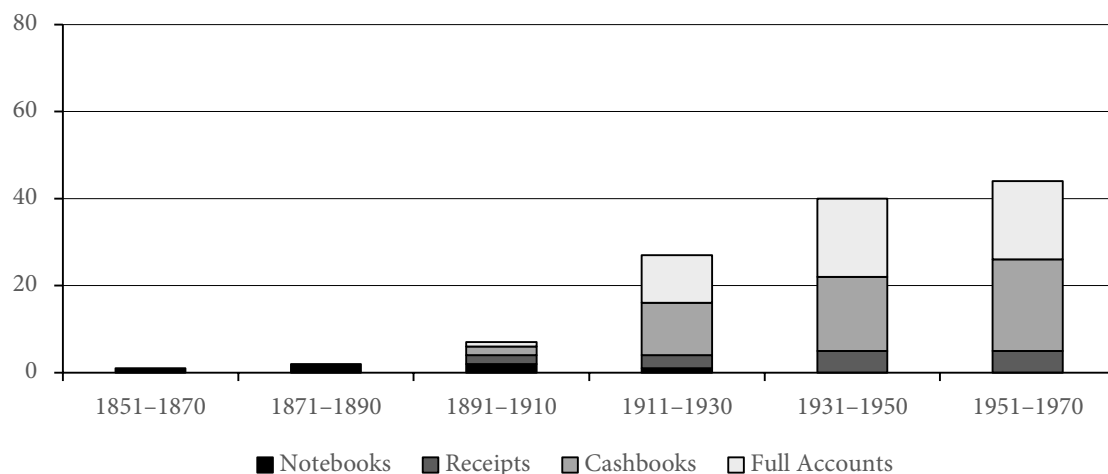


FIGURE 2. Private farm accounts retrieved through the Kasboekje van Nederland Crowd-Sourcing Project, 1851-1970

Sources: Universiteit Utrecht, Kasboekje van Nederland, Inv. nrs. 8; 22; 77; 104; 112; 130; 193; 202; 231; 236; 251; 253; 295; 298; 307; 321; 330; 334; 338; 341; 347; 372; 378; 380; 381; 386; 396; 420; 437; 448; 451; 474; 477; 1027; 1054; 1063; 1070; 1102; 1115; 1172; 1192.

or even calculate net farm income.²⁶ Smallholders did not do that. As one commentator observed, ‘the peasant feels no need to keep accounts, and as long as he does not, any effort to teach bookkeeping will be fruitless.’²⁷ Dutch politicians drew the same conclusion in 1871 when they considered the introduction of a general income tax. They recognized that farmers faced a brighter future since the liberalization of international trade in the late 1850s but taxing their income would be virtually impossible: ‘Even if we assume farmers are willing to file a tax return, there are so few in the Netherlands who know their income, because keeping proper farm accounts remains very rare.’²⁸

And yet it seems hard to believe that farmers did not know how much money they spent or received. Subsistence farmers on the sandy soils of the inland provinces will have been aware of the price their limited surpluses could fetch on the local market, and the bigger, more commercially oriented farmers in the coastal and riverine clay areas clearly responded

²⁶ E. Buringh, *Afdeling Blijham Groninger Mij. Van Landbouw, 1854-1954. Jubileumuitgave ter gelegenheid van het 100 jarig bestaan* (1954), pp. 129-37; J. A. Kuperus, *Resultaten van een Groninger landbouwbedrijf (1832-1876)* (Wageningen, *Historia Agriculturae*, 3, 1956), pp. 171-255; Jansen, ‘Landbouw rond Maastricht’, pp. 1-98; Zanden, *De economische ontwikkeling*, pp. 260-1; Priester, *De economische ontwikkeling*, pp. 255-6, 556-7; Verstegen, ‘Landbouwers als ondernemers’, pp. 85-105; Paping, “‘Voor een handvol stuivers’”, pp. 182, 226-7; Cruyningen, *Behoudend maar*

buigzaam, pp. 423-4.

²⁷ A de Heer, ‘Onderwijs in het landhuishoudkundig boekhouden.’, *De boerengoudmijn* 5 (1859), p. 26.

²⁸ ‘Bij den besten wil echter van de zijde der landbouwers, om aangifte hunner inkomsten te doen, zijn er slechts zeer enkelen in Nederland, die weten hoeveel hunne inkomsten bedragen, daar het voeren eener goede landbouw-boekhouding eene uitzondering is.’: ‘De Toepassing van het Beginsel’, *De Tijd: godsdienstig-staatkundig dagblad*, 10 Nov. 1871.

to changing prices in international markets.²⁹ These were certainly farmers who could read and write – as rural literacy rates were traditionally very high, especially in the Protestant provinces – and while they may not have kept extensive double entry books, they did have to pay rent or interest on their mortgage, while their livelihood depended on a positive margin between the money spent on farm inputs and revenue from sales.³⁰ How these farmers kept track of incoming and outgoing cash flows is very difficult to establish but we do know that farmers purchased tools, fodder, seeds, and other farm inputs from local suppliers who allowed them to buy on credit, and settled these accounts once a year with the farmers.³¹ Besides this delegation of accounting to shopkeepers and artisans, Dutch farmers practised something well known in other European countries as well: the use of almanacs as memory books.³²

In 1858, Antonie Geluk, an eager experimenter and self-appointed teacher on his farm on the island of Tholen, submitted a short article to the farmers' journal *Boerengoudmijn*, in which he deplored both the recent closure of Zeeland's first agricultural school in Goes (est. 1848) and the habit of many farmers of using their 'so-called green pocket almanacs' instead of more systematic accounts.³³ The almanacs he referred to were those written by the agronomist and farm education pioneer W. C. H. Staring from 1846 onwards.³⁴ Building on the century-old practice of publishing practical information on diverse topics in pocket-sized booklets, Staring's *Almanac voor de Landbouwer*, first published in September 1846 contained information on a host of agricultural matters: the annual cycle of husbandry and arable farming, weights and measures, seeds and fertilizers, and the latest developments in mechanization.³⁵ Already in the second edition the publisher added blank monthly pages for farmers to record income and expenditure, occasionally accompanied by an edifying comment: 'Order is the source of all prosperity ... let us take this opportunity and write what we spend and receive'.³⁶

²⁹ Hendrik Algra, *Kroniek van een Friese boer: de aantekeningen (1821–1856) van Doeke Wijgers Hellema te Wirdum* (Franeker, 1979), pp. 219–20, 239, 369; Zanden, *De economische ontwikkeling*; Bieleman, *Five centuries of farming*, p. 184.

³⁰ H. Knippenberg and B. de Pater, *De eenwording van Nederland: schaalvergroting en integratie sinds 1800* (Nijmegen, 1988), pp. 175–7; Paping, "'Voor een handvol stuivers'", p. 182.

³¹ Zanden, *De economische ontwikkeling*, pp. 239–40, 411n; Paping, "'Voor een handvol stuivers'", pp. 25–6; E. Kloos, *Rappe Handen. Zeeuwse vrouwenarbeid 1900–1940* (Goes, 1989), p. 30; E. J. van den Broecke-de Man and A. Francke, *Dialect op Walcheren* (Kruiningen 1987); R. F. J. Paping, 'Nederland in de negentiende eeuw. Enige perspectieven voor regionaal economisch-historisch onderzoek', *NEHA-Bulletin. Tijdschrift voor de economische geschiedenis in Nederland* 10 (1996), p. 9. Big farmers did the same with their farmhands and maids, offering them board and lodging, and paying a money wage every three, six, or

twelve months: Paping, "'Voor een handvol stuivers'", pp. 240–1.

³² Joly, 'Shaping records', pp. 61–80.

³³ A. J. Geluk, 'Over het boekhouden in den landbouw', *De Boerengoudmijn* 4 (1858), p. 17; A. J. Geluk, 'Het boekhouden in den landbouw', *De Boerengoudmijn* 5 (1859), pp. 16–18.

³⁴ Veldink, W. C. H. Staring.

³⁵ The Deventer printer J. P. Brinkgreve published an *Almanak, voor landman en burger* for the years 1845 and 1846 but his almanac contained only general information on holidays and some brief notes on agriculture. W. C. H. Staring's, *Almanak voor den Gelderschen, Overijsselschen en Drentschen landman* (1848–1850), continued as *Almanak voor den landman in Groningen, Friesland, Drenthe, Overijssel, Gelderland, Utrecht en Noord-Brabant* from 1851 onwards, contained far more information that was directly relevant to farmers.

³⁶ 'Het beginsel van allen voorspoed is orde op zijn zaken. Het beginsel van orde op zijn zaken is alles

Geluk's aversion to Staring's almanac-cum-notebook was not devoid of self-interest. In 1847 he had published his own *Geluks landbouwerszakboekje, geschikt voor dagelijksche aantekeningen*.³⁷ It was available through mail order from a book seller in Dordrecht but few farmers were interested. In 1854 Geluk published a second, revised edition but sales remained disappointing while a new edition of Staring's almanac including the empty notes pages in the monthly calendar, was published every year and readily available throughout the country.³⁸ The need to keep track of daily cash flows without the creation of elaborate and exhaustive records is very clear from a unique series of 35 almanacs from a dairy farmer in Lisse, which surfaced in the *Kasboekje van Nederland* project. Between 1866 and 1870 this farmer already used a blank notebook to jot down all deliveries of cheese, butter, and calves, and then in 1873 he bought his first green, leather-bound *Leidsche Brieventasch-almanak*, with a copper clasp and a pencil stuck in the book binding. He carved his initials on the cover and carried the booklet with him every day, buying a new copy every time the previous one was full.³⁹

With annual sales of butter and cheese of more than 3,000 guilders this was not a petty farmer, and the sheer length and consistency of the series of cash books suggests he was a very organized man. Indeed, in 1889 he began a separate notebook to register the wages owed to his personnel, subtracting all payments for food, clothes, and other expenses he made for them. He also kept, in very neat handwriting, a separate, hardcover notebook detailing the interest and rent paid and received.⁴⁰ The latter register ran from 1875 to his death in 1932. By then he was long retired, drawing an annual income of more than 3,500 guilders from loans extended and land leased to other farmers. This then was a financially very literate farmer who chose to combine simple memory books for daily transactions with a carefully kept capital account. This form of management was more than enough to monitor his financial situation even though he never used it to calculate annual profits or the return on specific farm investments, as learned agronomists would have liked.

Note 36 continued

opschrijven. (...) laten wij dan van de gelegenheid gebruik maken en hieronder opschrijven wat en waarvoor wij ontvangen en uitgeven': Tjeenk Willink, *Almanak voor den Gelderschen, Overijsselschen en Drenthschén Landman voor het jaar 1857*. Notes pages appeared for the first time in Volume 2 (1849). For an example of the use of Staring's Almanac as late as 1925, see Historisch Centrum Overijssel, inv. 1498, nr. 30.

³⁷ Lijst van nieuw uitgekomen boeken 1847 (Amsterdam, 1847), p. 334; Cf. also the advertisement for the almanac in: *De tijd: merkwaardigheden der letterkunde en geschiedenis van den dag voor de beschaafde wereld: met platen en portretten*, 7 (1947), pp. 100, 166; To date, one copy of Geluk's almanac survives in the library of Wageningen University.

³⁸ IJ. Botke, *Boer en Heer: 'De Groninger Boer', 1760–1960* (Assen, 2002), p. 492; *Verbeterd landbouwers-zakboekje voor dagelijkse aantekeningen* (1854). Cf. also: 'Daartoe zeer gemakkelijk ingerigte zakboekjes worden tegenwoordig overal verkocht' in 'Lessen voor beginnende landbouwers', *Maandblad voor den Nederlandschen landbouwer* (1862: 12), pp. 180–2. Staring himself, in a private library, did have a copy of Geluk's revised edition, cf. 'Starings bibliotheek', in *Catalogus van de bibliotheek der Rijkslandbouwschool te Wageningen* (1877), pp. 5–9, at 8 (nr. 50).

³⁹ Universiteit Utrecht, *Kasboekje van Nederland* [hereafter KvN], inv. nr. 130.1; It is possible that the first, general notebook (f. 130.5), belonged to the farmer's father.

⁴⁰ KvN, inv. nr. 130.38.

II

The urgency of business training for smaller farmers resurfaced when Dutch agriculture entered a deep crisis in 1878.⁴¹ The flooding of Europe with large quantities of grain from the US and Russia rapidly turned arable farming into a losing proposition while at the same time Dutch dairy farmers were losing out to technologically more advanced foreign competitors. For the bigger farmers who were already experimenting with artificial fertilizer, new fodder crops, and mechanical equipment the crisis simply offered an extra incentive to modernize farm operations but for small farmers it spelled trouble.⁴² They managed to absorb the first shock through dissaving and borrowing from local suppliers but as prices remained low their financial situation quickly deteriorated.⁴³ Farmers' organizations called on the government to intervene and in 1886 a National Agriculture Committee was set up to explore what could be done to improve the economic outlook of Dutch farmers.

Over the next few years the Agricultural Committee churned out a large number of proposals to reinforce two developments that had already begun before the crisis. One was the establishment of local co-operatives: for the purchase of seeds, fodder, and fertilizer; for the industrial processing and sales of agricultural products; and for the provision of savings, loans, and insurance.⁴⁴ The other was the formation of human capital through a national program of research, extension, and education.⁴⁵ The main emphasis of this so-called OVO triangle (*onderzoek, voorlichting, onderwijs* [research, information, education]) was on new technologies for fertilization, plant breeding, and the processing of farm output but the newly established winter schools also set out to teach basic arithmetic and accounting to help farmers assess the economic effects of farm improvement.⁴⁶ Several school teachers published manuals on bookkeeping which they used in the classes they taught but also in separate evening courses hosted by local sections of farmers' unions.⁴⁷

⁴¹ D. Pilat, *Dutch agricultural export performance (1846–1926)* (Groningen, 1989), pp. 14–18.

⁴² Zanden, *De economische ontwikkeling*; J. Bieleman, *Boeren in Nederland. Geschiedenis van de landbouw 1500–2000* (Amsterdam, 2008), pp. 216–18.

⁴³ G. Minderhoud, *Landbouw-coöperatie in Nederland* (Groningen, 1940), pp. 102, 108; W. J. Sangers, *De ontwikkeling van de Nederlandse tuinbouw (tot het jaar 1930)* (Zwolle, 1952), pp. 237–8; J. Bieleman, *Geschiedenis van de landbouw in Nederland* (Meppel, 1992), 266. R. N. J. Rommes, 'Voor en door boeren? De opkomst van het coöperatiewezen in de Nederlandse landbouw vóór de Tweede Wereldoorlog', *Historische studies naar platteland, landschap en milieu*, 2 (Hilversum, 2013), p. 118.

⁴⁴ *Uitkomsten van het onderzoek naar den toestand van den landbouw in Nederland ingesteld door de Landbouwcommissie, benoemd bij Koninklijk Besluit van 18 September 1886* (4 vols, 's-Gravenhage, 1890); Minderhoud, *Landbouw-coöperatie*, p. 37.

⁴⁵ Bieleman, *Boeren in Nederland*; Smits,

'Technological Change'.

⁴⁶ J. G. M. van der Poel, *Het landbouwonderwijs in Nederland tot 1918* (Wageningen, 1976), pp. 135–9; Goudswaard, *Agrarisch onderwijs*, p. 171; Burg, 'Geen Tweede Boer', pp. 127–30.

⁴⁷ Instruction manuals written by school teachers included: Heidema, *Landbouwboekhouding ontworpen ten behoeve van Onderwijs en Praktijk* (Groningen, 1904); A. Rauwerda, *Handleiding bij de landbouwboekhouding* (Leeuwarden, 1906); F. de Muinck, *Allereerste beginselen van het landbouw-boekhouden* (Assen, 1907); J. Z. ten Rodengate Marissen, *Enkelvoudig landbouw-boekhouden* (Groningen, 1910). For advertisements of separate accounting courses, see *Leeuwarder Courant*, 21 September 1906, p. 6; *Nieuwsblad van het Noorden*, 6 March 1907, p. 10; *Oprechte Steenwijker Courant*, 10 September 1910, p. 5; *Nieuwsblad van Friesland: Hepkema's Courant*, 2 September 1911, p. 10; *Provinciale Drentsche en Asser courant*, 11 May 1911, p. 4; *Nieuwe Veendammer Courant*, 16 September 1913, p. 4.

The courses taught were not enough to enable farmers to keep their own accounts, however. The winter schools crammed accounting, funding strategies, the functioning of co-operatives, and other economic subjects into one hour per week, without any practical exercises.⁴⁸ In the lower agricultural schools, first established in 1921 onwards, children spent only 18 hours in four years on bookkeeping.⁴⁹ And yet, many Dutch farmers adopted new technologies in these years. When a second Agricultural Committee reported on the state of Dutch agriculture in 1912 it noted with satisfaction the widespread use among farmers big and small of improved seeds and fodder crops, artificial fertilizer, and mechanical equipment.⁵⁰ The precise impact of these improvements was still hard to measure, 'because farm accounts were seldom kept, and the few farmers who did, refused to open their books'.⁵¹ At agricultural congresses agronomists still talked about accounting as an important tool to raise productivity but the Committee accepted that the vast majority of farmers cared about land rents and agricultural prices but not the precise recording of inputs and yields.⁵² They did not push for more business training but simply praised the willingness of farmers to adopt new technologies and the support offered by rural co-operatives that allowed even small farmers to take these steps.⁵³

The measures taken to strengthen the agricultural sector did indeed benefit smallholders. Between 1881 and 1921 the total number of farms with less than 5 hectares of land almost doubled from 59,600 to 112,600, while the number of farms with 5 to 10 hectares rose from 28,800 to 48,900. It is unlikely that these small and medium-sized farmers changed their business model without a keen eye on costs and benefits.⁵⁴ Based on what they observed with the introduction of new farming methods, the Agricultural Committee speculated that small farmers simply copied the behavior of bigger farms in their immediate surroundings.⁵⁵ But there was more to it. In 1898 a local observer of farming practices on the sandy soils of Noord-Brabant described a far more intricate system of knowledge transfer. Commenting

⁴⁸ Nationaal Archief, Den Haag, [hereafter: NA], 2.11.35, Directie van de Landbouw: Afdeling Landbouw Onderwijs, 1898–1957 [hereafter: LVV/Landbouwonderwijs], inv. nr. 374.

⁴⁹ NA, 2.11.35, LVV/Landbouwonderwijs, inv. nr 460; Goudswaard, *Agrarisch onderwijs*, pp. 244–5; T. Duffhues, *Voor een betere toekomst. Het werk van de Noord-brabantse Christelijke Boerenbond voor bedrijf en gezin, 1896–1996* (Nijmegen, 1996), p. 404; D. Hendriks, 'The Financial Farmer. Financial education and extension to Dutch farmers, 1890–1940' (unpublished MA thesis, Universiteit Utrecht, 2018), pp. 32–4.

⁵⁰ Staatscommissie voor den Landbouw, *Overzicht van het landbouwbedrijf in Nederland* ('s-Gravenhage, 1912).

⁵¹ Staatscommissie, *Overzicht*, p. 141. One local correspondent observed that tenants lacked scientific knowledge and that only a few individuals had sufficient accounting skills to calculate annual profits or losses: Staatscommissie voor den Landbouw, *Bijlagen behorende bij de rapporten en voorstellen betreffende den oeconomischen toestand der landbouwers in*

Nederland ('s-Gravenhage, 1912), p. 186.

⁵² Technical matters dominated the discussions at the agricultural congresses: J. M. G. van der Poel and R. J. C. Wessels, *De verslagen van het Nederlandsch Landhuishoudkundig Congres, 1846–1953* (Meppel, 1953), pp. 10–24. However, the sustained interest of agronomists in the benefits of bookkeeping is evident from a number of contributions to the *verslagen* by agronomists: Vorsterman van Oyen (1902), pp. 226–7; Montenberg (1905), pp. 35, 152; Boeke (1905), pp. 154–7; Timmers (1910), pp. 81–3; De Vries (1910), p. 237; Bulder (1911), pp. 2, 5–6). At the 1910 congress the Director General of Agriculture, Van Hoek, also emphasized the importance of accounting as he referred to bookkeeping courses taught in various parts of the country: Van Hoek (1910), pp. 239–40.

⁵³ Instead of relying on actual farm accounts, the committee used the reports of local correspondents to produce model calculations for several types of farms: Staatscommissie, *Overzicht*, pp. 317–20, 456–7, 502–8.

⁵⁴ Zanden, *De economische ontwikkeling*, pp. 293–314.

⁵⁵ Staatscommissie, *Overzicht*, p. 22.

on the use of advanced accounting techniques by big farmers in Groningen, he pointed out that petty farmers in his province did not care about bookkeeping because they committed everything to memory:

We know of examples of respectable, old-fashioned farmers, who retain for many years what happened on their farms; what crops were grown; yields produced; the number of cows and sheep they sold at what price; how expensive the butter and wool were; et cetera, et cetera [and because] the farm is all they ever talk about between themselves, sharing their experiences solidifies everyone's personal memory.⁵⁶

This is what behavioural economists today describe as *mental accounting* – in this particular case the establishment of reference outcomes.⁵⁷ Agricultural historians working on the preindustrial period will also recognize this kind of sharing of knowledge as an important means for smallholders to make informed decisions about their farms.⁵⁸ It is impossible to tell how widespread this mental accounting was but at the time reference outcomes were very easy to come by whether through newspapers, visits to markets, or reports from the agents selling farmers' produce.⁵⁹ The sometimes very basic recordings in surviving notebooks also point to their primary function as aids to memory.⁶⁰

Another means by which even the smallest farmers could track their performance was the registration of their transactions by the rural co-operatives founded from the 1870s onwards.⁶¹ Rural banks, purchasing associations for fodder and fertilizer, co-operative auctions, and mutual insurance funds freed farmers from the, sometimes oppressive, financial ties with suppliers and buyers while offering similar administrative support. Obviously, the co-operatives kept track of their members' payments and deliveries to keep their own organization financially healthy, and indeed there was a legal obligation to keep records of all the business that transpired.⁶² But the by-product of this administrative effort was the emergence of an

⁵⁶ 'maar toch zijn ons voorbeelden bekend van degelijke ouderwetsche boeren, die gedurende een reeks van jaren alles kunnen onthouden wat op hunne boerderij gebeurd is, wat op de verschillende perceelen verbouwd is, hoe groot de opbrengst was, hoeveel koeien en schapen zij verkocht hebben en voor welken prijs, hoe duur de boter en de wol was enz. enz. [omdat ze] onder elkander alleen over de boerderij spreken en telkens en telkens weer, nu aan den een, dan aan den ander, van hunne bevindingen mededeeling doen, waardoor het des te vaster in het geheugen komt'; 'het landbouw-boekhouden', *Provinciale Noordbrabantsche en 's Hertogenbosche courant*, 24 April 1898.

⁵⁷ Richard Thaler, 'Mental accounting and consumer choice', *Marketing Science* 4 (1985), p. 204.

⁵⁸ H. K. Roessingh, 'Inlandse Tabak: Expansie en contractie van een handelsgewas in de 17e en 18e eeuw in Nederland', *A. A. G. Bijdragen*, 20 (1976), p. 207; Paul Brussee, *Overleven door ondernemen. De agrarische geschiedenis van de Over-Betuwe 1650–1850*

(Wageningen, 1999), pp. 88–9; Thijs Lambrecht, *Een grote hoeve in een klein dorp: relaties van arbeid en pacht op het Vlaamse platteland tijdens de 18de eeuw* (Gent, 2002), p. 9.

⁵⁹ Algra, *Kroniek*, pp. 219–20, 239, 246–8, 369.

⁶⁰ Cf. for instance the rudimentary notes kept by a carpenter-turned-blacksmith who kept chickens and pigs on the side: KvN, inv. nr. 307.1, 1899–1919 and KvN, inv. nr. 307.2, 1902–1919. Among the farmers with more extensive accounts were also those who had become passive investors renting out their land to others, for instance KvN, inv. nr. 202.1, 1889–1911.

⁶¹ Rommes, 'Voor en door boeren', pp. 49, 57–9.

⁶² According to Article 2 of the 1925 law on co-operative societies 'every co-operative association was a merchant as understood in the commercial code.' This obligated them to keep accounts and these accounts could be used as legal proof in a court of law: O. Gezelle Meerburg, *Practische handleiding bij de wet op coöperatieve vereenigingen* (1925).

extensive system of delegated accounting that went much further than the accounts previously kept by local merchants, shopkeepers and artisans.⁶³

One obvious example were the savings booklets of the rural credit co-operatives. Within a decade after the foundation of the first *boerenleenbank* in 1898 more than 60,000 rural dwellers brought their savings to a rural co-op.⁶⁴ But the recording of transactions went much further than the deposits and withdrawals registered in these saving booklets. Horticulturists, for instance, subscribed to their local co-operative to purchase seeds, fertilizer, and other inputs: 'on the day of delivery the members appeared at the docks or the railway station with their carts, received their share and paid cash, either on the spot or after sampling the merchandise.'⁶⁵ The co-operative auctions for the sales of fruits and vegetables were created with the express purpose of settling accounts quickly – a feature so crucial that some auctions built reserve funds to offer cash payments to producers in case a buyer failed to do so.⁶⁶ Since hardly any accounts survive from this period, it is very difficult to tell exactly how much work this took out of the hands of farmers. However, one producer of tomatoes, cabbage and other vegetables did keep cluttered notes of all the money coming and going out from 1914 onwards, with the single most organized entry the weekly (in January and February bi-weekly) payment of auction revenues.⁶⁷

Similar methods were employed in livestock farming with, for instance, co-operatives collectively purchasing fodder and then receiving farmers' cash payments on delivery.⁶⁸ In dairy-producing regions co-operative milk, cheese, and butter factories made weekly payments of 'milk money' to farmers – members and non-members – creating a regular income stream that stabilized farmers' cash flow.⁶⁹ Indeed, dairy factories obviated the need for what agronomists claimed was the greatest benefit of accounts carefully kept: individual farmers making investment decisions. With the establishment of co-operative cheese and

⁶³ To be sure, the client accounts kept by rural co-operatives did not fully replace the accounts kept by local suppliers of goods and services. The death duty forms (*Memories van Successie*) of a representative sample of 2,321 people who died in 1921 with an estimated wealth of at least 1,000 guilders, reveal that among them were 66 farmers aged under 65. There were 35 with one or more debts outstanding with local suppliers: O. Gelderblom, J. Jonker, R. Peeters and O. Gelderblom, 'Memories van Successie 1921' (unpublished dataset).

⁶⁴ H. van Haastert and G. W. M. Huysmans. *Veertig jaren landbouwcrediet onder leiding der Coöperatieve Centrale Boerenleenbank te Eindhoven 1898–1938* (Roermond, 1939), p. 117; Cornelis Weststrate *et al.*, *Gedenkboek: uitgegeven ter gelegenheid van het vijftigjarig bestaan der Coöperatieve Centrale Raiffeisen-Bank te Utrecht, 1898–1948* (Utrecht, 1948), p. 34.

⁶⁵ Minderhoud, *Landbouw-coöperatie*, p. 38.

⁶⁶ *Ibid.*, p. 63.

⁶⁷ KvN, inv. nr. 104.1, 1914–1928. Cf. also the weekly

reckoning with of the brothers Krul, horticulturalists near The Hague, with the co-operative auction house: Haags Gemeentearchief, 0843-01, BNR., inv. nr. 111.

⁶⁸ Rommes, 'Voor en door boeren', p. 148.

⁶⁹ T. van der Zee, *De Friesche boeren-coöperaties in haar maatschappelijk verband: een studie van gemeenschapsleven* (Sneek, 1933), pp. 98, 241–2; Minderhoud, *Landbouw-coöperatie*, p. 86; Rommes, 'Voor en door boeren', pp. 237, 241. Early examples of milk money paid to farmers in KvN, inv. nr. 372.7, 1919–1920 and KvN, inv. nr. 1027.14C, 1920–1946. For milk factories extending services to non-members: Rommes, 'Voor en door boeren', p. 228; *The Nederlandsche Staatscourant*, 4 April 1897, p. 7, published on the legal obligation of a dairy factory in Friesland to pay weekly milk money. In addition to the ledgers of its milk drivers (*melkrijders*), Friesland's co-operative dairy factory kept a separate account book (*kasboek* 1940–1973) for farmers who delivered their milk directly to the factory: Tresoar, 94-01, Friese coöperatieve zuivelfabrieken, inv. nr. 498.

milk factories these investment decisions and the accounting efforts to inform them, including the daily recording of the amounts of milk delivered to the factory, were delegated to the board of the co-operation.⁷⁰ Eventually even petty farmers on the sandy soils of the inland provinces benefited as the co-operatives, in the words of the Agricultural Committee in 1912, facilitated the transition from an exchange-based *Naturwirtschaft* to a cash-based *Geldwirtschaft* by shortening the time it took for farmers to receive cash in hand.⁷¹ But cash payments obviated the need for a paper trail, and thus it comes as no surprise that this second Agricultural Committee made no recommendations at all about the improvement of farmers' accountings skills.

III

And then, just as policy makers became resigned to the farmers' unwillingness to keep books, the latter started taking an interest. As Figure 1 shows, the number of surviving farm accounts between 1911 and 1920 was double that of the previous decade. At the same time a new type of accounting instructions began to appear: not textbooks, but practical manuals with blank, pre-printed registers of income and expenditure.⁷² One straightforward explanation would be that farmers experimenting with new seeds, fodder, and machinery felt the need to keep better track of their inputs and outputs. But this kind of monitoring was mostly left to farm consultants and co-operative factories.⁷³ There was another, more urgent reason for farmers to keep more detailed accounts: the inclusion of farmers in the national income tax from 1915 onwards.

The taxation of farmers' income had been long in coming. In 1893, after half a century of political struggle, a general income tax was introduced in the Netherlands. It was a carefully designed but nevertheless quite complex fiscal instrument, that required elaborate estimations of income and capital stock for an adequate assessment of taxable incomes. Farmers were exempt from taxation because they already paid a land tax and because it would be impossible to determine their income.⁷⁴ Nicolaas Pierson, responsible for the introduction of the income

⁷⁰ Smits, 'Technological change'; Knibbe and Molema, 'Institutionalisation', pp. 222–5, 229. Cf. Lampe and Sharp, *Land of milk and butter* and S. Henriques, E. McLaughlin, P. Sharp, X. Tsoukli, and C. Vedel, 'Opening the black box of the Danish dairy cooperatives: A productivity analysis', *EHES Working Paper* 203 (2020), for the delegation of both investment decisions and related accounting efforts to creameries in Danish dairy farming.

⁷¹ Staatscommissie, *Overzicht*, pp. 303, 313.

⁷² Practicus, *Eenvoudig Landbouw-Boekhouden voor greid- en bouwboeren* (Leeuwarden, 1909); F. Tuinstra, *Landbouwboekhouding* (Heerenveen, 1909); C. Nobel, *Landbouwboekhouding* (Schagen, 1912); P. H. Dijksterhuis, *Kasboek Landbouw-boekhouding met toelichting* (Groningen, 1915); J. F. H. Deckers, *Handleiding bij de enkelvoudige landbouwboekhouding* (1916); E. P. W. van Schaik, *Leerboek van het landbouwboekhouden* (1917);

R. Reindersma, *Eenvoudige Landbouwboekhouding* (Appingedam, 1917). In 1917 W. Vermeulen published *Uitgewerkt voorbeeld voor een eenvoudige landbouwboekhouding* (Deventer, 1917), with no explicit reference to the income tax but a direct pointer to the 1st of May (that is, the start of the fiscal year) as the right time to begin one's accounts.

⁷³ Knibbe and Molema, 'Institutionalisation', *passim*.

⁷⁴ In 1881 the Minister of Finance, Simon Vissering, told Parliament that a farmer could not tell how much he earned because he and his family consumed most produce themselves. This did not mean they were unaware of their financial situation: '(...) a peasant knows very well, when he has put out money on a mortgage, who his debtor is, and how much he is owed when the day comes he must receive his interest': *Handelingen der Staten-Generaal, 1880–1881*, p. 1051 (22 Mar. 1881).

tax in 1893, knew from his own experience as a member of the Agricultural Committee of 1886 that farmers would be unable to produce accurate estimates of their income: 'a farmer ... as a rule does not know how much he earns. Much of his income is consumed in kind, the exact amount of which can hardly be calculated. However extensive his farm may be, he seldom keeps accounts, let alone properly kept ones'.⁷⁵

With the recent agricultural crisis in mind, the government had decided in 1893 to exempt farmers from paying the income tax.⁷⁶ But then the sector began to thrive again, with international markets opening up and farmers benefiting from state-sponsored research, education, and extension. It was not for long that members of parliament revisited the tax exemption for farmers, arguing as early as 1907 that farmers who had previously benefited from public expenditure should now contribute more to the state's revenues.⁷⁷ Six years later, in 1914, parliament voted for the inclusion of farmers in the income tax, with the first levy set for 1915.

The response of farmers varied with the size of their operations. For very small farmers the new tax did not change anything, as their annual income easily fell below the 650 guilders threshold.⁷⁸ This was also true for the agricultural labourers who combined working on somebody else's farm with subsistence farming on a tiny plot of land of one hectare or less. A government committee reviewing their living conditions in 1906, pointed to the low and very irregular income of rural workers arguing that it was so difficult to sustain their livelihood that at some point the state might need to step in.⁷⁹ Well aware of the negligible share of low-income earners in fiscal revenue, the government raised the threshold for assessment to 800 guilders in 1919.⁸⁰ At the other end of the spectrum, big farmers were obviously not happy about the new levy but filing their taxes did not pose a problem. They were used to paying land taxes and the scale and scope of their business was such that the everyday management of their farm required them to keep track of income and expenditure. Indeed, the savviest farmers were able to take advantage of the administrative small print, reporting their income and expenditure in such a way as to minimize their assessment.⁸¹

⁷⁵ 'Verslag van parlementair debat over inkomstenbelasting', *Provinciale Drentsche en Asser Courant*, 22 May 1907.

⁷⁶ On Pierson's desire to protect farmers with low incomes, see also W. H. Vermeulen, *Den Haag en de landbouw* (Assen, 1966), pp. 76–7.

⁷⁷ C. Smit, *Omwille der Billijkheid. De strijd over de invoering van de inkomstenbelasting in Nederland* (Amsterdam, 2002), p. 268; Cf. the 1907 newspaper report citing Pierson's considerations, and an opinion piece from 1910 describing the strong growth of the income of a 22 hectares farm between 1890 and 1910 to argue for the lifting of the tax exemption for farmers: 'Het betrekken der Landbouwbedrijven in de Bedrijfsbelasting c. q. Inkomstenbelasting', *Algemeen Handelsblad*, 15 Sept. 1910.

⁷⁸ In 1915 the threshold was determined at 650 guilders. This was raised to 800 guilders in 1919; W. A. Bongers, 'Vermogen en inkomen gedurende den

oorlogstijd. Een statistische studie, Deel II. Inkomen', *De Socialistische Gids. Maandschrift der Sociaal-Democratische Arbeiderspartij*, 8.3 (1923), p. 342n.

⁷⁹ Staatscommissie voor den landbouw, *Verslagen betreffende den oeconomischen toestand der landarbeiders in Nederland* (2 vols, 's-Gravenhage, 1908), pp. 10, 15, 24–33, 49.

⁸⁰ W. A. Bongers, 'Vermogen en inkomen', p. 342n. While the Dutch government taxed excess profits made during World War I with a targeted War Profit Tax (*oorlogswinstbelasting*), raising the threshold for the income tax was unrelated to this effort. Indeed, Bongers, the leading expert on income and wealth taxation at the time, explicitly stated that people with incomes below 800 were unlikely to save any money at all: Bongers, 'Vermogen en inkomen', p. 191.

⁸¹ See for instance several newspaper reports on farmers' tax evasion: 'Belastingontduiking', *Leeuwarder Courant*, 6 June 1917, p. 2; 't Scheelt nogal wat',

The bigger challenge was the taxation of more than 50,000 medium-sized, family-owned farms.⁸² Tax inspectors had no way of knowing how much income individual farmers actually earned, and the same was true for the farmers themselves: some of them may have kept detailed books but the vast majority did not have the accounts necessary to make such calculations. To solve this problem the fiscal authorities applied an income source system (*bronnenstelsel*), with standard values for the average profit per cow, chicken, hectare of potatoes, hectare of cereals, and so forth.⁸³ Starting in 1915, tax inspectors used these numbers to estimate every farm's annual income and taxed them accordingly. In theory, their calculations should produce equitable tax assessments for all farms, big and small, and thus save farmers the effort of keeping detailed accounts. But soon enough it became clear that many individual assessments were inaccurate. On the one hand, the standard norms did not account for the location of the farm, the quality of the soil, the sort of livestock, etc. On the other, farmers often incurred idiosyncratic costs unobservable by the tax inspector.⁸⁴

Like any other taxpayer, farmers were free to lodge an appeal against their assessment but to be successful required the kind of paper proof that could only be obtained through careful accounting. Take, for instance, a mixed farm near Eindhoven in Noord-Brabant. With an annual turnover of 7,000 guilders. This was already quite a big farm, and the owner a respectable member of the local community who served as an alderman. In February 1921 he filed an official complaint with the tax inspector in Eindhoven about his assessment for the previous year: 'Last year we moved to a different farm, which necessarily entails considerable costs, notably more fertilizer, and because of the foot-and-mouth disease among our cattle we needed much more fodder and our livestock was in poor condition.'⁸⁵ This particular farmer was well prepared for his confrontation with the fiscal authorities. Since 1918 he had registered all amounts received and spent, plus the farm products consumed by the household. These overviews allowed him to substantiate his appeal to the tax inspector: 'if you wish, please come and review my accounts'.⁸⁶ But his energetic reaction to the new fiscal challenge was exceptional. Through the *Kasboekje van Nederland* project we retrieved the accounts of only five other middle-sized farmers who immediately stepped up their administrative efforts in the first years after the introduction of the income tax.⁸⁷ The actual number of farmers doing

Note 81 continued

Dagblad van Noord-Brabant, 24 Nov. 1919, p. 5; 'Nieuw systeem van belastingontduiking', *Algemeen Handelsblad*, 17 Dec. 1919, p. 8. Cf. also the published minutes of a village council meeting in Smilde: *Provinciale Drentsche en Asser courant*, 13 Mar. 1924, p. 6.

⁸² The estimated number is taken from Bongers, 'Ver-mogen en inkomen', p. 348.

⁸³ The so-called *bronnenstelsel* distinguished between 'old assets' and 'new assets' acquired over the course of the fiscal year. Income from the old assets was estimated – and taxed – on the basis of the revenues they had generated in previous years while standard tables were applied to estimate income from the new assets: *Geschiedenis van het Accountants- en Boekhoudadvies-bureau*, pp. 27–8.

⁸⁴ One specific problem emerged when the War Profit Tax was levied for the first time over the *calendar year* 1916. The income farmers had earned in the *fiscal year* running from 1 May 1915 to 30 Apr. 1916, was also taxed as war profit for 1916: V. S. Ohmstede, *Practijk der oorlogswinstbelasting 1916. Supplement II (Augustus 1917)* (Gouda, 1917), p. 17.

⁸⁵ KvN, inv. nr. 1172.1: 'Wij zijn verleden jaar naar een andere boerderij getrokken, en dat brengt noodzakelijk vele kosten mede, 't is meer kunstmest, en dan hebben wij veel meer veevoeder nodig gehad vanwege 't mond en klauwzeer, dat wij in 19 onder 't vee gehad hebben en 't vee wegens die ziek te in een slechte conditie was.'

⁸⁶ KvN, inv. nr. 1172.1 (letter) and KvN, inv. nr. 1172.2.

⁸⁷ KvN, inv. nrs. 236.1, 253.2, 372.7, 1027.1-3, 1172.1.

so must have been higher, of course, but there is no doubt that the vast majority of farmers could not make the transition all by themselves. Hence there followed a spate of private and public initiatives to help farmers with their tax returns.

Starting in 1915 several tax inspectors published instruction manuals for farmers, as often as not accompanied by public lectures and newspaper articles on the administrative requirements of the income tax.⁸⁸ School teachers published new editions of their existing manuals to address fiscal requirements, they taught special evening courses about the drafting of tax returns, and some even offered their accounting services to individual farmers.⁸⁹ At the same time, private accounting firms across the country advertised their administrative services to local farmers.⁹⁰ But soon enough it became clear that the interpretation of the *bronnenstelsel* differed between individual tax inspectors and more and more farmers took issue with their tax assessment.⁹¹ It was at that point that farmers' unions in Friesland and Groningen, provinces with large numbers of medium-sized farms, decided to take action.

IV

In 1917 dairy farmers in Friesland established a co-operative accounting agency (*boekhoud-bureau*) to help their members draft their tax returns.⁹² The next year the *Groninger Landbouwmaatschappij* (Groningen Agricultural Society) advertised the creation of a similar agency taking over the business of a local accounting firm.⁹³ It was not too long until accounting agencies were established in other parts of the country as well.⁹⁴ In 1926, the first year for which national statistics are available, a total of eight accounting agencies serviced some 1,450 farmers. Half of this membership was from Friesland and another 400 came from

⁸⁸ Several manuals explicitly referred to this fiscal imperative. In 1915 P. van der Meulen, a tax inspector in Leeuwarden, published *Eenvoudig kasboek voor landbouwers en veehouders*. It reappeared in 1918 under the title *Eenvoudige handleiding voor het voeren van een landbouwboekhouding, in aansluiting met de Wet op de Rijksinkomstenbelasting*. In 1918, J. C. Laterveer, director of the Central Bureau of Accounting in The Hague published *Landbouwboekhouden*. Three years later he advertised the lectures he could give on 'Farm accounting and fiscal matters', *Dagblad van Noord-Brabant*, 27 Aug. 1921. On 20 Jan. 1917 the *Leeuwarder courant* (pp. 9–10) published an extensive instruction as to how farmers should calculate their income. Cf. for advertisements of public lectures on farm accounting and the income tax: *De Graafschap-bode*, 18 februari 1916, *Oprechte Steenwijker Courant*, 3 Feb. 1917.

⁸⁹ In 1917 one farmer from Delft used the pre-printed inventory and cash-books of J. Kok, *Bedrijfscontrole*, a private operator, and probably the same J. Kok who established the agricultural winter school of Veendam in 1908: KvN, inv. nrs. 1027.1, 1027.2. Cf. on this farm Jacques Moerman, 'Klapwijk, boer op 't Woudt van

1937 tot 1939', *Historisch Jaarboek Schipluiden* (2016), pp. 28–43.

⁹⁰ See for instance: *Dagblad van Noord-Brabant*, 1 Jan. 1920, *De Grondwet*, 27 Aug. 1921, *Onze courant*, 22 Nov. 1922, and *Nieuwsblad van Friesland: Hepkema's courant*, 16 June 1922.

⁹¹ One problem was the effect the attribution of farm income to one year or another could have on the total amount of taxes due: W. J. de Langen, 'Progressieve inkomstenbelasting en wisselende inkomens', *De Economist* 70 (1921), pp. 393–406. Fifteen years after the introduction of the new income tax, farmers still complained about the arbitrary decision-making of local tax inspectors – concerns that even reached parliament: *Handelingen Tweede Kamer, 1929–1930*, 29 Nov. 1929, pp. 759–61; Cf. also: J. C. Mollerus 1932, *Officieele vertegenwoordiging van landbouw, nijverheid en handel* (Amsterdam, 1932): 249; *Geschiedenis van het Accountants- en Boekhoudadviesbureau*, p. 27.

⁹² Zee, *De Friesche boeren-coöperaties*, p. 123.

⁹³ Botke, *Boer en Heer*, p. 494; *Nieuwsblad van het Noorden*, 31 May 1918.

⁹⁴ Coenemans, *Vijf en twintig jaar*, p. 25.

Groningen. However, five years later, in 1931, the total number of agencies had grown to 14, and in Overijssel, Gelderland, Noord-Brabant, and Holland each of them had more than 500 members.⁹⁵

The basic arrangement offered by the agencies was a simple one. They provided farmers with blank, standardized accounting forms to record their income and expenditure, both in money and in kind.⁹⁶ Some agencies offered separate books for business and household expenses, others combined the two, sometimes with a separate cash register. The standard accounts always included a farm inventory, with on the one hand the farms assets: buildings, land, animals, vehicles, large agricultural equipment, tools, goods in stock, crops on the field and debtors, and on the other hand the farm's liabilities: outstanding debt, unpaid supplies and unpaid wages. The farmers were supposed to record transactions themselves but they could always ask the agency for advice to prevent 'inconvenient difficulties' with the tax authorities.⁹⁷ Upon the completion of the fiscal year the agency produced full accounts plus a statement to submit to the tax authorities. Still, the outcome depended on the farmers' diligence: 'without accurate information, many appeals [will be] consigned to the waste-paper basket'.⁹⁸

The strength of the fiscal imperative for bookkeeping is evident from the growth of the agencies' membership, reaching 10,000 in 1940.⁹⁹ The number of farmers keeping accounts was higher still as some chose to work with commercial accountants, while others educated themselves, went to their local stationer's for standard cash-books, and set up their own forms of administration.¹⁰⁰ But still, these farmers with far more elaborate accounts remained a minority. The total number of farms in the Netherlands was close to 200,000 in 1930, which meant that the accounting bureaus attracted only one out of 20 farmers.¹⁰¹ Even if some farmers turned to a private accountant instead, it is clear that many farms remained without a any detailed administration of their accounts. As Figure 3 shows, the annual turnover in the first year for which accounts survive was seldom below 5,000 guilders – a size at which farmers could expect to be assessed in the income tax. Hence, it comes as no surprise that almost without exception, their accounts were aligned with the fiscal year running from 1 May to 30 April.

⁹⁵ NA, 2.19.042.49, Vereniging Landbouwboekhouden; Landelijke Vereniging van Accountants- en Belastingadviesbureaus (VLB), (1922) 1926–1983 [hereafter, VLB], inv. nrs. 8–11; For Friesland: 'Uitkomsten van landbouwbedrijven in Friesland', *Nieuwe Rotterdamsche Courant*, 28 Sept. 1926.

⁹⁶ *Geschiedenis van het Accountants- en Boekhoudadviesbureau*, pp. 17–18.

⁹⁷ Brabants Historisch Informatie Centrum [hereafter BHIC], 761, F. J. M. Smits van Oijen, privé, 1895–1984, inv. nr. 621.

⁹⁸ P. J. van Haaren, *Landbouwboekhouden en Inkomstenbelasting* (Tilburg, 1934), p. iii.

⁹⁹ NA, 2.19.042.49, VLB, inv. nr. 12; The Vereniging Landbouwboekhouden counted 9,500 members in 1940, not including Friesland's accounting agency. The latter was reported to have 1,452 members by the

Leeuwarder Courant, 'De uitkomsten in het Friesche landbouwbedrijf over 1939/1940', 20 Sept. 1940.

¹⁰⁰ From 1917 onwards private accounting firms advertised their services setting up accounts for farmers or helping them with their filing of taxes. See, for instance: *Dagblad van Noord-Brabant*, 27 Aug. 1921; *Nieuwe Vlaardingsche courant*, 1 Aug. 1924, *Leeuwarder courant*, 8 Oct. 1927: Farm accounts without visible traces of the involvement of an accounting agency: KvN, inv. nrs. 236, 251, 295, 298, 334, 338, 341, 372, 380, 396, 437, 448, 451, 477, 1027, 1063, 1102. One farmer used the *Zakboekje ter bijhouding van het kasboek van den Nederlandschen landbouwer*, first published in 1928 by the *Inlichtingenbureau voor Chilispeter*, the public relations office of the N.V. Chilispeter Handelsmaatschappij: KvN, inv. nr. 104.1.

¹⁰¹ *Commissie van Advies, Rapport*, p. 356.

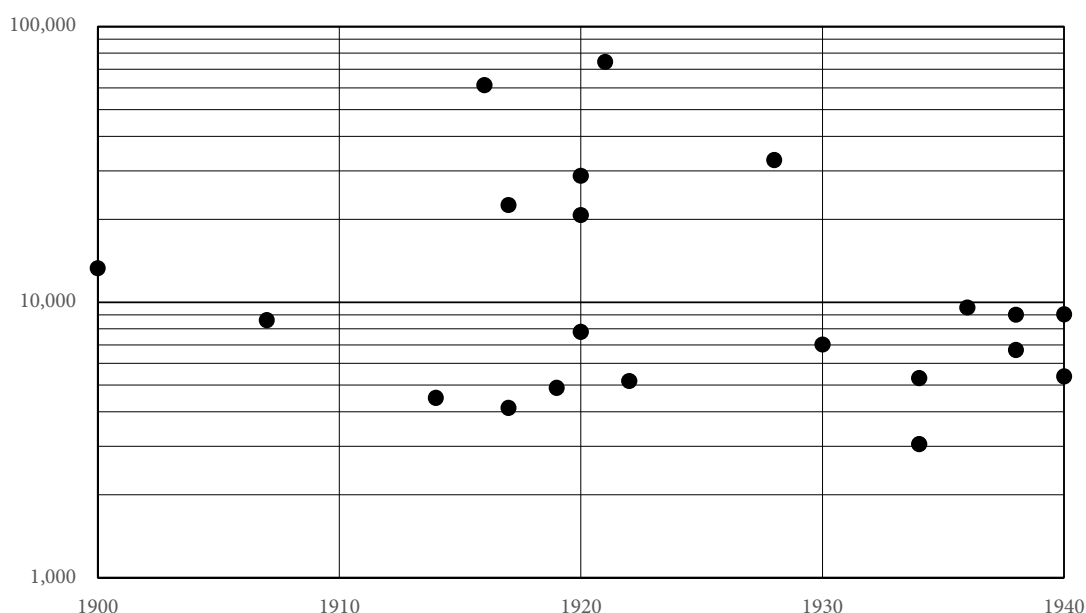


FIGURE 3. Annual turnover of 29 Dutch farms in the first year for which their accounts survive (1900–40, logarithmic scale)

Source: KvN, inv. nrs. 104, 193, 202, 231, 236, 251, 253, 295, 298, 334, 338, 372, 378, 380, 381, 386, 396, 437, 448, 451, 1027 (2 farms), 1054, 1070, 1102, 1115, 1172, 1192

Further evidence for this direct link between farm size and active accounting comes from the province of Noord-Brabant where two accounting agencies worked in very different circumstances. The Christian Farmer's Union of Noord-Brabant (*Noordbrabantsche Christelijke Boerenbond*, NCB), headquartered in Tilburg, united 32,500 predominantly small farmers working the sandy soils in the eastern part of the province.¹⁰² By 1935 the NCB accounting agency had 1,000 members, i.e. one out of 30.¹⁰³ The North-Brabant Agricultural Society (*Noord-Brabantsche Maatschappij van Landbouw*, NBML) was a much smaller union of medium-sized and large farmers on the clay soils of western Brabant.¹⁰⁴ Their membership did not exceed 1,100 in the 1930s but one out of seven members relied on the accounting agency for their financial administration.¹⁰⁵

We find the same pattern in other parts of the country. Accounting agencies came early in Friesland and Groningen, provinces with a relatively large number of medium-sized and big farmers, and late in places like Limburg and Drenthe with many small farmers.¹⁰⁶ The

¹⁰² Duffhues, *Voor een betere toekomst*.

¹⁰³ *Geschiedenis van het Accountants- en Boekhoudadviesbureau*, pp. 3–7, 13.

¹⁰⁴ P. J. van Loon, *Honderd jaren Maatschappij van Landbouw in Noord-Brabant 1851–1951* (Amsterdam, 1951).

¹⁰⁵ BHIC, 213, *Noordbrabantse Maatschappij van Landbouw* [hereafter, NBML], inv. nr. 6; BHIC, 213,

NBML, inv. nr. 119.

¹⁰⁶ Cf. also a contemporary study of dairy farmers in the vicinity of Amsterdam. The 17 farmers who were members of the accounting agency in 1934 worked on 12.8 hectares on average: B. G. L. M. Tosseram, *Het melkwinningsgebied van amsterdam: een sociografische studie over consumptiemelkers* (Purmerend, 1936).

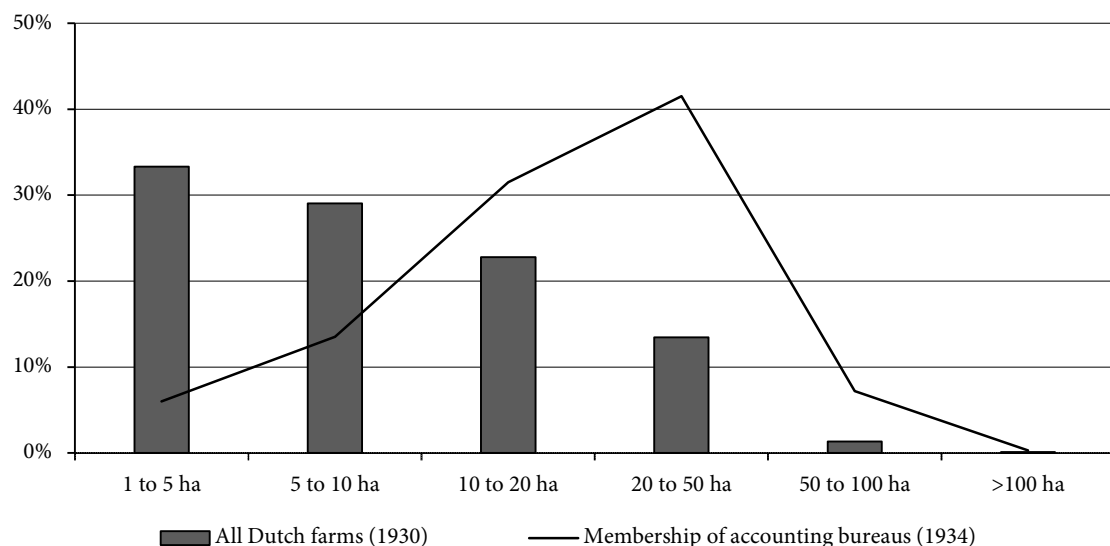


FIGURE 4. The distribution of farm size (1930) and the membership of accounting bureaus (1934) in the Netherlands

Sources: *Verslag der Staatscommissie, ingesteld bij Koninklijk Besluit van 15 december 1927, No. 34, tot het onderzoeken van de vraag of en, zoo ja, in hoeverre en door welke oorzaken in den land- en tuinbouw eene wanverhouding bestaat tusschen de bodemprijzen en productiekosten eenerzijds en de opbrengst der producten anderzijds* ('s-Gravenhage, 1933), p. 290; C. G. P. Stevens, *De Dienst der Bedrijfsconsulenten voor den Landbouw* (Amsterdam, 1935), pp. 8–9.

relationship between farm size and accounting effort is also borne out by contemporary reports comparing the size distribution in the agricultural sector as a whole with the composition of the agencies' membership. Figure 4 shows that farms between one and ten hectares made up 60 per cent of all farms in 1930 but only 20 per cent of the membership of all 14 accounting agencies. Conversely, farms between 10 and 50 hectares, a third of all farms in 1930, made up three quarters of the agencies' membership. Truly big farms of 50 hectares or more made up a tiny part of both the agencies' membership and the agricultural sector as whole.

The choice of small farmers not to use the accounting agencies was based on a sound cost-benefit calculus, which can be reconstructed from the records of the accounting agency of the NBML. Like any other agency, this *boekhoudbureau* provided its members with their own model notebook, accompanied by 30 envelopes to send in their records every two weeks.¹⁰⁷ Regardless of the size of their farm, each member paid a basic fee of 10 guilders per year, 65 cents for their pre-printed accounts, and 65 cent per hectare with a minimum of 6 guilders and 50 cents (the equivalent of 10 hectares). This put the minimum contribution of any member slightly over 17 guilders.¹⁰⁸ In return they received every year in May an overview of their financial results, followed by a possible refund if the taxable income fell below the estimate of

¹⁰⁷ *Noordbabantsch landbouwblad*, 23 April 1924; *Landbouwblad voor Zeeland en Noord-Brabant*, 22 Mar. 1930.

¹⁰⁸ *Noordbrabantsch landbouwblad*, 27 Feb. 1924.

the fiscal authorities. In the fiscal year 1936/37, for instance, the NBML reported to its members that it had reclaimed an amount of 3,150.56 guilders from the tax administration, i.e. an average 19.20 guilders per member.¹⁰⁹ This reimbursement confirmed that farmers were right to challenge the assessments made by the tax inspector, and that accounting bureaus played a valuable role in making these claims. But comparing the fees paid with the average amount reclaimed also shows that the fiscal imperative kicked in at a certain farm size only: for small farmers it was unlikely that the refund they might be able to claim exceeded the contribution they had to pay to the accounting agency.¹¹⁰

V

The establishment of the accounting agencies made it clear that Dutch farmers did not take to the careful recording of income and expenditure to raise the productivity of their land or labour but simply to pay as little tax as possible. Even the ones who had already acquired some accounting knowledge in school only began to keep more detailed accounts when the government subjected them to the national income tax in 1914.¹¹¹ This would have put an end to the nineteenth-century idea of farm accounting as a development tool if it had not been for the Great Depression. In 1930 Dutch agriculture entered a deep crisis that lasted almost a decade. After some hesitation the government intervened with production quotas and price controls to support arable and livestock farmers in the coastal provinces but for several years showed very little concern for small farmers.¹¹² While family-owned mixed farms in the coastal provinces benefited from lower fodder prices, tens of thousands of smallholders on the sandy soils of the interior provinces suffered. The same was true for the agricultural consultants, whose technological and business advice was directed to larger, more productive farms only.¹¹³

The predominantly Catholic spokesmen of the small farmers kept pressuring the government to do more and eventually, in 1935, a Small Farmers Service (*Dienst Kleine Boerenbedrijven*) was created to offer assistance through a combination of business training, emergency loans, social benefits, and financial advice to the farmers' wives.¹¹⁴ The purpose of the Dutch aid program closely resembled that of the rural rehabilitation pursued by the Farm Security Administration in the US: a wish to alleviate the immediate hardship of small farmers, combined with the desire to improve their situation in the long run.¹¹⁵ But there was one crucial difference.

¹⁰⁹ BHIC, 213, NBML, inv. nr. 6, Jaarverslagen van de NBML 1938–1939.

¹¹⁰ The income tax tariff list of 1915 stipulated a levy of 17 guilders for incomes between 1,450 and 1,550 guilders. 'Wet op de Inkomstenbelasting 1914, zooals die is gewijzigd bij de wet van 16 April 1915', *Staatsblad*, nr. 197.

¹¹¹ A farmer appointed treasurer of his local section of the *Groninger Maatschappij van Landbouw* in 1921 recalled: 'farm accounting only became common in 1914 because of the introduction of the income tax and the further development and diffusion of agricultural education': Buringh, *Afdeling Blijham*, p. 129.

¹¹² Bieleman, *Five centuries of farming*, p. 167.

¹¹³ M. Knibbe, *Agriculture in the Netherlands 1851–1950. Production and institutional change* (Amsterdam, 1993); Smits, 'Technological change', pp. 111–12.

¹¹⁴ P. M. M. Klep, 'De Nederlandse katholieke boerenbonden en de agrarische gezinsproblematiek', in Th. H. J. Clemens, P. M. M. Klep and L. Winkeler (eds), *Moeizame moderniteit. Katholieke cultuur in transitie. Opstellen voor Jan Roes (1939–2003)* (Nijmegen, 2005), pp. 316–41.

¹¹⁵ Fitzgerald, *Every farm a factory*; Walker, 'Accounting and rural rehabilitation'.

American farmers were eligible for emergency loans only if they agreed to record all their payments and receipts in standardized, preprinted accounts. The government needed this information to monitor the loans, as the shopkeepers and merchants who previously provided credit had gone – and with them the financial track record of the farmers who borrowed.¹¹⁶ In the Netherlands no such administrative problem existed. Here local co-operatives recorded the sales and purchases of their members, while at the same time Dutch farmers had a strong preference for savings over loans. Those who did borrow from non-relatives typically opted for a short-term loan or current accounts with their local credit co-operative. The bank recorded the loan in small booklets (*voorschotboekjes*) similar to the more than 500,000 savings booklets in circulation in the 1930s.¹¹⁷

This particular organization of the rural economy deeply affected the views of Dutch agronomists on the benefits of bookkeeping as a development tool. The first person to publicly consider farm accounting as a means to support small farmers in the Great Depression was Willem Droesen, a farmer's son from Limburg who graduated from the Wageningen agricultural college. Droesen started his professional career in 1926 as an advisor to young farmers in northern Limburg and then moved on to become agricultural consultant for the entire province in 1932.¹¹⁸ On the eve of this appointment he argued before the National Agricultural Congress that emergency loans should be extended to small farmers in distress.¹¹⁹ He was very explicit about the way this should be implemented. Building on his own PhD research on the exploitation of wasteland in Brabant and Limburg since the beginning of the nineteenth century, he argued that a combination of technical advice and loans provided by local credit co-operatives would allow farmers to survive the crisis.¹²⁰ The vetting of potential borrowers should be in the hands of the directors of the co-operative banks and other local community leaders, while accounting agencies might play a role in the subsequent monitoring of debtors.¹²¹

Droesen's suggestion to extend emergency loans to small farmers was discussed in parliament in December 1931 but dismissed out of hand by a Cabinet that was not even ready to support the economically much more important medium-sized and large farms.¹²² The only step it was willing to take was to pay accounting agencies to keep the books of a limited number of small farms – not to help them manage their finances but to find out how they were holding up. This was nothing new. Already in 1924 the accounting agencies had been co-opted by the Directorate of Agriculture to supply data for its annual agricultural report, and starting in

¹¹⁶ Walker, 'Accounting and rural rehabilitation'.

¹¹⁷ In 1935 the central office of the Catholic credit co-operatives in Eindhoven recorded a total of 39,988 advances (*voorschotboekjes*), 9,594 current accounts (*lopende rekeningen*) and 162,609 savings accounts (*spaarboekjes*): Haastert and Huysmans, *Veertig jaren landbouwcrediet*, p. 117. The Protestant credit co-operatives, headquartered in Utrecht, counted 366,712 savings booklets.

¹¹⁸ On Willem Droesen: https://www.parlement.com/id/vgogll02pzu1/w_j_droesen.

¹¹⁹ Van der Poel and Wessels, *De verslagen van*

het Nederlandsch Landhuishoudkundig Congres, W. Droesen (1931).

¹²⁰ Willem Jozef Droesen, *De gemeentegronden in Noord-Brabant en Limburg en hunne ontginning: eene geschied- en landhuishoudkundige studie* (Roermond, 1927), pp. 90, 93, 156–65, 170–81.

¹²¹ Van der Poel and Wessels, *De verslagen van het Nederlandsch Landhuishoudkundig Congres*, W. Droesen (1931), p. 11

¹²² *Handelingen Tweede Kamer, 1930–1931*, pp. 1137, 1141–2.

1928 this information became a key input in the government's deliberations on the best way to respond to the crisis.¹²³ For 1932 the government reserved 3,000 guilders for the accounting agencies, raising its subsidy to 10,000 guilders in 1933 in order to obtain information about some 1,000 small farms. But soon enough it became clear that many smallholders produced for subsistence only, making quantitative data simply unavailable.¹²⁴

In the meantime the central government chose to come to the rescue of bigger, more commercial farms only, with price guarantees, subsidies, and production limits.¹²⁵ It was at that point that Willem Drosen placed his candidature for Parliament for the Catholic Party. He did so on a rural ticket, promising support to the full range of farms, including smallholders and their families.¹²⁶ Upon his election in July 1933 very little changed at first, as the Protestant parties in the new government were primarily concerned with the bigger, more commercial farmers. Therefore the Catholic Farmers Union decided to put some more pressure on the government by announcing its own inquiry into the living conditions of small farmers. In September 1934 the Union's study committee reported that 300,000 to 400,000 people lived in very dire circumstances on farms cultivating 5 hectares or less. The committee recognized that these farms could not be transformed into commercially viable enterprises overnight but there was no alternative employment for these families either. Hence the best course of action would be for the government to support them on their farms, not with loans but with subsidies.¹²⁷

Then finally, in the summer of 1935, things started to move. Growing discontent about the government's response to the crisis led to a reshuffling of the Cabinet, with the Catholic Minister of Defence, Laurentius Deckers, now appointed to a separate Ministry of Agriculture. Deckers had graduated from Leuven University, with a PhD thesis on the agricultural situation in Brabant, and he had been very active in the promotion of Brabant's *boerenleenbanken*.¹²⁸ In July 1936 the new Minister of Agriculture appointed a committee to investigate what kind of extension and financial aid would benefit smallholders.¹²⁹ The committee members included Willem Drosen and Petrus van Haaren, one of the founders of the NCB accounting agency and author of their instruction manual on bookkeeping and income taxation.¹³⁰ This then was a group of experts deeply familiar with, and favorably disposed towards farm accounting, but they had no illusions about the value of accounting for small farmers in the face of poverty.

¹²³ *Handelingen Tweede Kamer, 1928–1929*, p. 330; J. de Hoogh, *Pachtprijsbeheersing en landbouwprijsbeleid in Nederland* (Wageningen, 1959), pp. 64–5. From 1928 provincial summaries were also discussed in parliament: *Handelingen Tweede Kamer, 1928–1929*, 13 Nov. 1928, p. 330.

¹²⁴ *Verslag der Staatscommissie*, p. 294; Commissie van Advies, *Rapport*, p. 314.

¹²⁵ Bieleman, *Geschiedenis*, pp. 224–5.

¹²⁶ 'R. K. Staatspartij vóór den boer', *Limburger koerier: provinciaal dagblad*, 18 Apr. 1933, p. 2.

¹²⁷ M. G. M. Smits, *Boeren met beleid. Honderd jaar Katholieke Nederlandse Boeren en Tuindersbond, 1896–1996* (Nijmegen, 1996), p. 110; Commissie van Advies,

Rapport, p. 356.

¹²⁸ Laurent Deckers, *De landbouwers van den Noord-brabantschen zandgrond: eene bijdrage tot de kennis der maatschappelijke en oeconomische ontwikkeling van den Nederlandschen boerenstand in de negentiende en twintigste eeuw* (Leuven, 1912).

¹²⁹ J. W. A. Korsten, *Standhouden door veranderingen. De Limburgse Landen Tuinbouwbond als behartiger van agrarische belangen, 1896–1996* (Nijmegen, 1996), pp. 49–50.

¹³⁰ Haaren, *Landbouwboekhouden; Geschiedenis van het Accountants- en Boekhoudadviesbureau*, pp. 6, 17–19; Smits, *Boeren met beleid*, p. 112.

To substantiate their view, the committee members initiated a new survey among 650 small farms around the country. Since none of these smallholders had any accounts to speak of the committee received 643 written reports from local correspondents.¹³¹ Combining this information with government statistics, the commission estimated that at up to half a million people were living in dire circumstances.¹³² They did not own or lease enough land to benefit from the government's grain subsidies, and not all farms were suited for horticulture or keeping pigs and poultry.¹³³ Farm accounting, the committee believed, would have no effect whatsoever on the productivity of these farms and neither would emergency loans. Instead they opted for a two-pronged approach: social benefits to sustain the livelihood of very poorly performing peasants – simply to keep them on their farms as long as the crisis lasted – and small, targeted subsidies to purchase seeds, fertilizer, and equipment for smallholders who would be able to turn a profit under normal circumstances.¹³⁴

Parliament approved the new approach in December 1936 and the Small Farmers Service spent the next year preparing its implementation.¹³⁵ After careful vetting it admitted 33,400 small farmers to the programme, two thirds of whom worked on the sandy soils of the eastern and southern provinces.¹³⁶ Agricultural consultants across the country were tasked with the extension to the small farmers: help them design crop plans, choose seeds and fertilizers, and strategic advice on the best way to proceed with their farm.¹³⁷ The program built on traditional forms of knowledge sharing: every consultant designated a well-functioning small farm in his district as a model farm. Accounting played no role in the training offered.¹³⁸ Money obviously mattered a great deal for small farmers and their families, but policy makers realized that better record keeping would not make their farms more productive, or their living conditions less precarious. And that was when they turned their attention to the smallholders' wives.

It was well known at the time that farmers' wives played an important role in the farm's finances. In the agricultural schools for girls that were established from 1907 onwards, accounting was already part of the core curriculum, and policy makers believed financial advice might also help the small farmers and their families.¹³⁹ In 1937 the Small Farmers Service appointed its first female budget consultant. At first she accompanied the agricultural

¹³¹ Commissie van Advies, *Rapport*, pp. 33, 41, 314; A. Maris, *Enkele aspecten van het kleine-boerenvraagstuk op de zandgronden* (Assen, 1951), pp. 12–13.

¹³² Commissie van Advies, *Rapport*, pp. 51–4, 71.

¹³³ *Ibid.*, pp. 440–1.

¹³⁴ *Ibid.*; C. Stevens and Th. J. Platenburg, *Hulpverlening aan kleine grondgebruikers* (Alphen aan den Rijn, 1938), pp. 14, 101.

¹³⁵ 'Begroting van Landbouw goedgekeurd. De kleine boeren worden geholpen', *De Tijd: godsdienstig-staatkundig dagblad*, 17 Dec. 1936, p. 10.

¹³⁶ Zeeuws Archief, 18.1, Rijkslandbouwconsulent voor Zeeland, 1893–1958, inv. nr. 223, Notulen der vergadering der Bedrijfsconsulenten, 10 augustus 1936; Stevens and Platenburg, *Hulpverlening*, pp. 41–3.

¹³⁷ Stevens and Platenburg, *Hulpverlening*, pp. 41–4.

¹³⁸ Farmers eligible for a subsidy to improve their farm would obtain the financial aid from the municipal authorities – a procedure identical to the granting of subsidies for wasteland exploitation analyzed by Willem Drogen in his PhD dissertation 15 years earlier.

¹³⁹ Van der Poel and Wessels, *De verslagen van het Nederlandsch Landhuishoudkundig Congres* (1905), pp. 152, 154–5; (1911), pp. 2, 5; (1921), pp. 23–4, 61; Burg, 'Geen Tweede Boer', pp. 166–7, 364–7; Cf. also: M. van der Burg and T. Duffhues, *Laat ze maar leren. 100 jaar onderwijs van de Noordbrabantse Christelijke Boerenbond* (Tilburg, 1996), p. 22.

consultants on their visits to farmers, but she realized soon enough that, in order to gain the necessary trust to talk about money and other personal matters she had to go by herself.¹⁴⁰ As the small farmers program was continued in 1938 and 1939, so was the budget coaching, now with a dozen female advisors working in close co-operation with the agricultural consultants but with a separate responsibility.¹⁴¹ By now, small farms were recognized for what they really were: households as much as businesses, with home production making up an important part of total output.¹⁴² The government's attempts to improve the financial skills of families living on small farms continued but the idea that better accounting would raise the productivity of their land or labour was done away with.

VI

The history of Dutch agriculture shows that keeping detailed accounts was not necessary for small and medium-sized, family-owned farms to modernize and commercialize their operations. In the first phase of export-led agricultural growth in the 1860s and 1870s there were some farmers with detailed accounts of inputs and yields but the common way to keep track of performance was through memory, simple notebooks, and the accounts kept by local suppliers. During the agricultural crisis that followed policy makers pointed to more systematic bookkeeping as a possible means to make farms more productive but their encouragement fell on deaf ears. Farmers did adopt new technologies including new seeds, fertilizer, tools, and machinery, but they relied on rural co-operatives for the registration of sales and purchases, and for coordinated investments in productive facilities. When Dutch agriculture began to thrive again after 1895 hardly any farmer kept the kind of detailed accounts still championed by some agronomists.

Their interest in bookkeeping increased when parliament voted to subject farmers earning 600 guilders or more to the national income tax in 1914. It was a logical step after the strong growth of the sector in the previous two decades but the government soon discovered that it was very difficult to properly assess the income of individual farms. And so did the farmers. Dissatisfied with the assessments made by local tax inspectors, farmers' associations across the country established accounting agencies to help their members filing their tax returns. Such was the success of these agencies that by 1930 they had become an important source of information on economic conditions in the countryside.

For a brief moment during the Great Depression the agencies were even considered as supervisory bodies for the extension of emergency loans to small farmers in distress, but after careful consideration the government decided against it. Instead, the Small Farmers Service created a relief program that combined technological advice with small, direct investment subsidies for farmers whom they thought might survive the crisis, practical household advice to their wives, and relief payments to allow a larger group of poorly performing small farmers to simply stay put as long as the crisis lasted.

¹⁴⁰ Burg, 'Geen Tweede Boer', p. 273; *25 jaar Stichting voor Huishoudelijke voorlichting ten plattelande* ('s Gravenhage, 1960), pp. 73-6.

¹⁴¹ Burg, 'Geen Tweede Boer', pp. 273-4.

¹⁴² Commissie van Advies, *Rapport*, pp. 41, 314; Korsten, *Standhouden door veranderingen*, p. 99.

The Dutch pattern fits very well what we know from other countries. Farmers were well aware of market conditions, they made conscious decisions about their production, and they kept track of money spent and received. But they left more detailed accounting to others, whether accounting agencies, co-operative factories, or individual financial advisors. This then is a sobering story about the role of accounting in agricultural development. Surely, our historical case study is no match for the sophisticated methods social scientists can apply to evaluate business training programs in the world today. However, it does reveal three structural elements that must be considered before offering business training to small farmers. The first is the ability of farmers to evaluate their performance through mental accounting: committing sales and purchases to memory and comparing their own operations to that of others may suffice to run a farm. Second, the choice of farmers to spend more or less time and effort on the recording of their income and expenditure is determined by the organization of the rural economy as a whole. In the Netherlands from the 1880s onwards the owners of small and medium-sized farms benefited from the collective organization of purchases, sales, and processing of their products. The widespread provision of these services came with an accurate administration by the co-ops at no additional cost. Hence the lukewarm response of Dutch farmers to repeated efforts to strengthen their financial capabilities: they could simply do without, at least until they were subjected to income taxation in 1914.

That is the final lesson we can draw from the Dutch case. Even if the adoption of more advanced accounting methods coincided with a much broader movement to apply science and technology to the exploitation of farms, the underlying rationale was a different one. Farmers, especially the bigger ones, simply wanted to minimize their tax bill and for that they needed accurate information on their total income. Their efforts to obtain this information show that better farm accounting followed from the growth of agricultural productivity, not the other way round.