How to measure farm income in the era of complex farms?

Hans Vrolijk and Krijn Poppe

Wageningen Economic Research

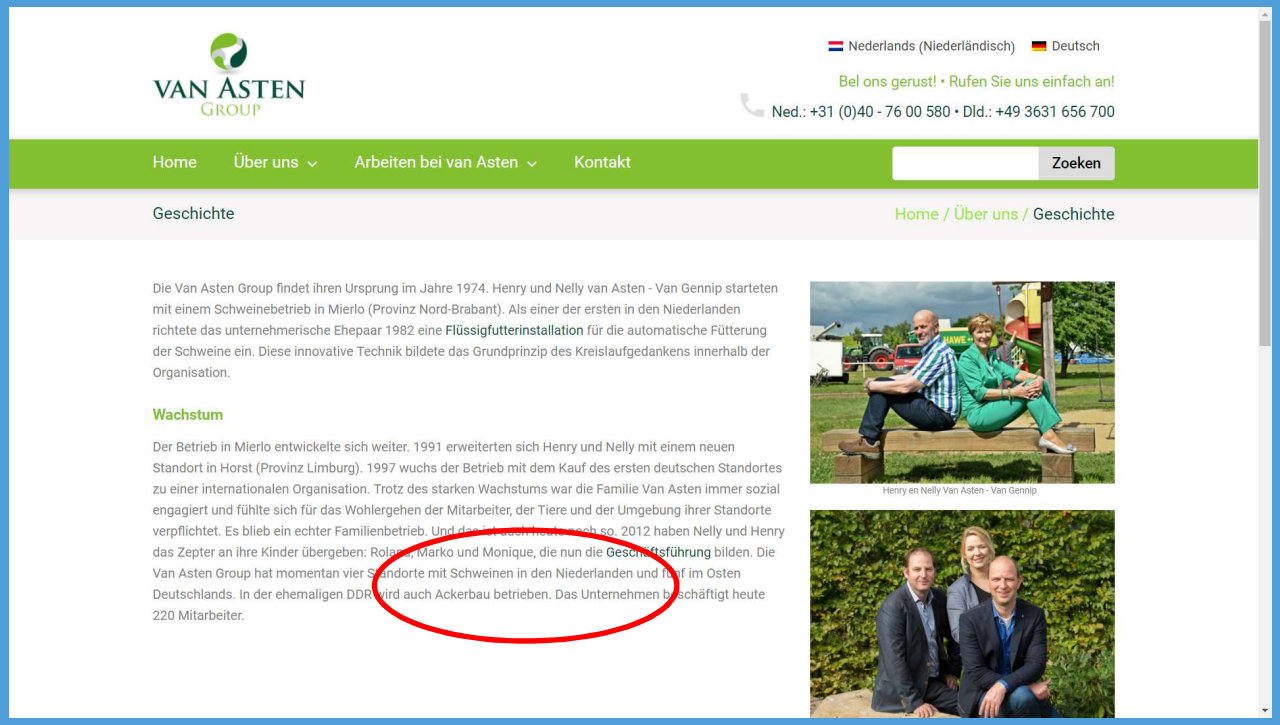
OECD, 25th FLA webinar, June 5, 2020

WAGENINGEN UNIVERSITY & RESEARCH

Family farms can be quite complex

- 1 farm has 1 location, 1 farmer that supports 1 household: this is an out of date concept
- Income data per farm, entrepreneur and per household differ as a result of the complexity and it depends very much on the research question which one is the most appropriate.
- National academy of sciences developed theoretical framework for farming, farm establishment, farm business, farmer and farm household.
- Do complex farms exist in the Netherlands?
- Effects on measurement of farm income: is there a problem, especially in policy analysis?

Complex holdings: anecdotal evidence



VAN ASTEN GROUP

Nederlands (Niederländisch) Deutsch

Bel ons gerust! • Rufen Sie uns einfach an!

Ned.: +31 (0)40 - 76 00 580 • Dld.: +49 3631 656 700

Home Über uns Arbeiten bei van Asten Kontakt Zoeken

Geschichte

Home / Über uns / Geschichte

Die Van Asten Group findet ihren Ursprung im Jahre 1974. Henry und Nelly van Asten - Van Gennip starteten mit einem Schweinebetrieb in Mierlo (Provinz Nord-Brabant). Als einer der ersten in den Niederlanden richtete das unternehmerische Ehepaar 1982 eine Flüssigfutterinstallation für die automatische Fütterung der Schweine ein. Diese innovative Technik bildete das Grundprinzip des Kreislaufgedankens innerhalb der Organisation.

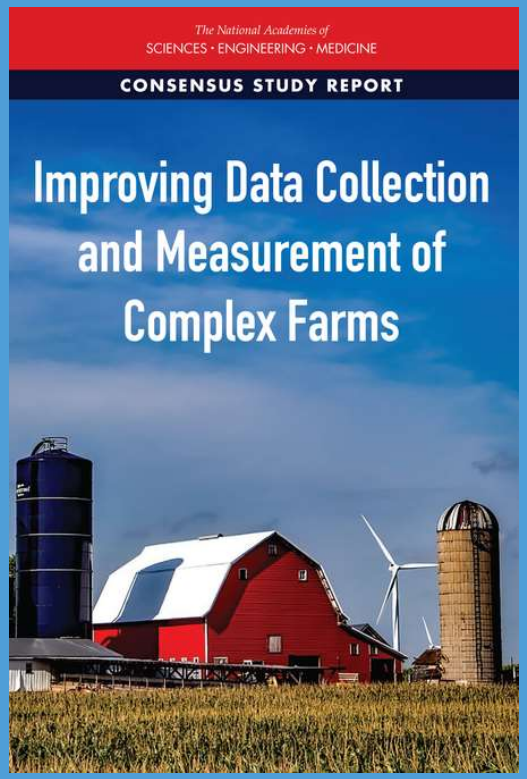
Wachstum

Der Betrieb in Mierlo entwickelte sich weiter. 1991 erweiterten sich Henry und Nelly mit einem neuen Standort in Horst (Provinz Limburg). 1997 wuchs der Betrieb mit dem Kauf des ersten deutschen Standortes zu einer internationalen Organisation. Trotz des starken Wachstums war die Familie Van Asten immer sozial engagiert und fühlte sich für das Wohlergehen der Mitarbeiter, der Tiere und der Umgebung ihrer Standorte verpflichtet. Es blieb ein echter Familienbetrieb. Und das ist auch heute noch so. 2012 haben Nelly und Henry das Zepter an ihre Kinder übergeben: Rolaf, Marko und Monique, die nun die Geschäftsführung bilden. Die Van Asten Group hat momentan vier Standorte mit Schweinen in den Niederlanden und fünf im Osten Deutschlands. In der ehemaligen DDR wird auch Ackerbau betrieben. Das Unternehmen beschäftigt heute 220 Mitarbeiter.

Henry en Nelly Van Asten - Van Gennip

- Van Asten Group (2 brothers, 1 sister):
  - 4 pig farms Netherlands
  - 5 pig farms Germany
  - Including arable farming
  - 220 persons

Background

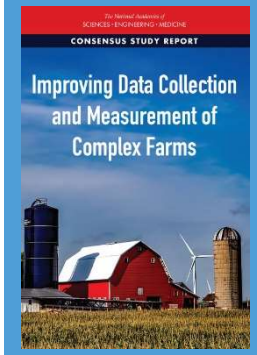


- US National Academies of Sciences, 2019:
  - recommendations on how to deal with farm complexity in collecting data on farm structure and farm income.
  - Based on international statistic guidelines.

WAGENINGEN UNIVERSITY & RESEARCH

Relevant concepts: Farming

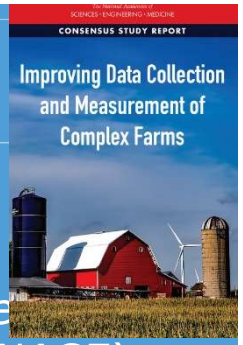
- *the management by an entity of the **biological transformation and harvest of biological assets for sale** or for conversion into agricultural produce or into additional biological assets* (IFRS, 2017)



  - *the **exploitation of vegetal and animal natural resources**, comprising the activities of growing of crops, raising and breeding of animals, harvesting of timber and other plants, animals or animal products from a farm or their natural habitats* (EC Statistics, incl. forestry, hunting, farm support work like contract work and vets)

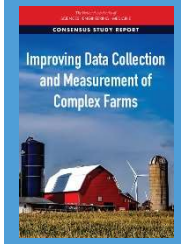
- In the end a list is needed to rule activities in (e.g. farming fish, algae, tree farming) or out (forestry (although forests are pruned), cheese and wine making (both a biological process) or offering yoga with goats).

Relevant concepts: Farm



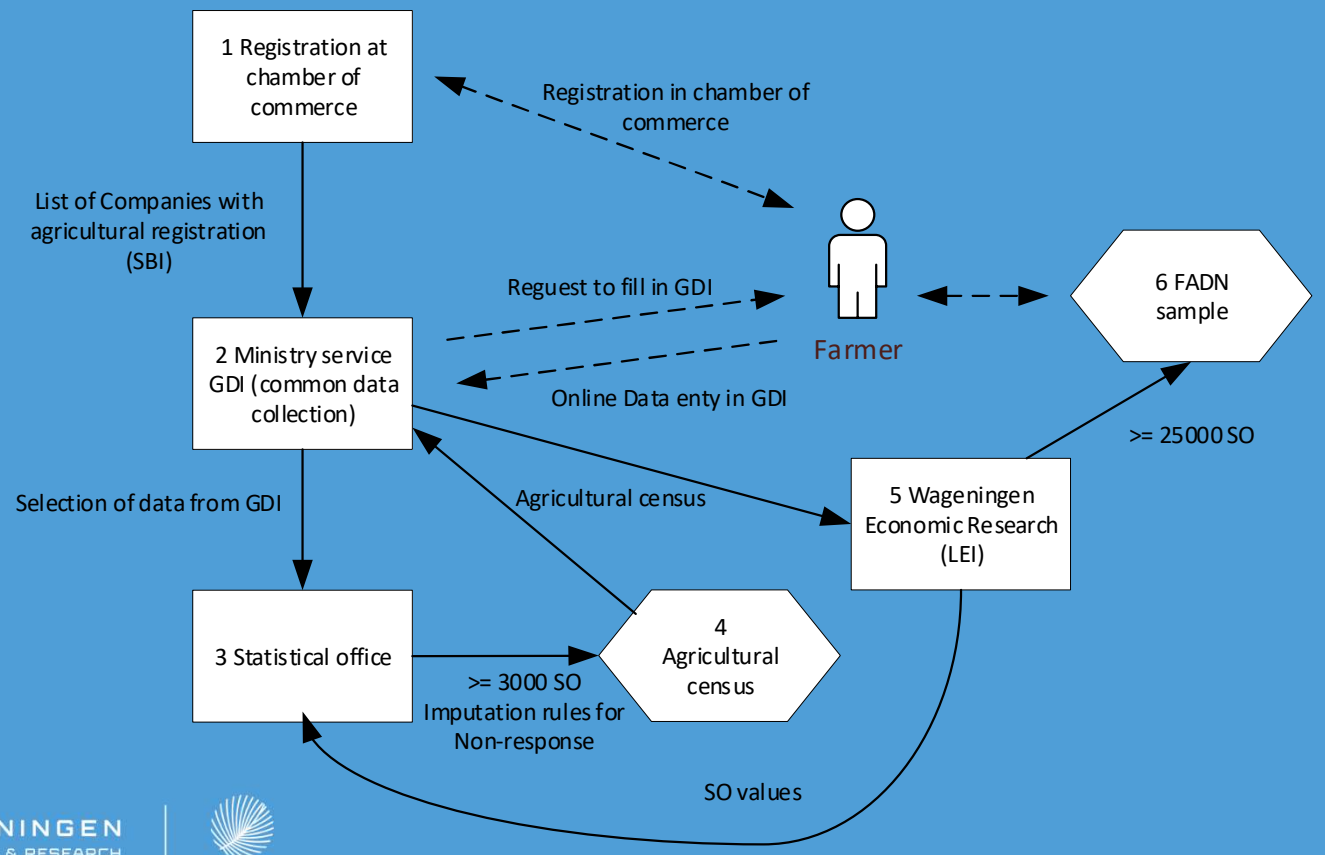
- We often have to classify holdings, not activities.
    - *the principal activity of a statistical unit is the activity which contributes most to the total value added of that unit. Identifie top-down method: not necessarily account for 50% or more (NACE)*
- Entity: is a supermarket chain counted as one or as hundreds of entities?
- A **firm** is "an organization conducting a business . . . . A firm may operate in one place of business or more." An **establishment** is "a single physical location where a firm's business is conducted"
- A farm is defined as an establishment (Eurostat)
- **NAS: Farm Business** for the level of the firm. A Farm Business describes situations with entities that have several establishments and situations where the firm and the establishment are equivalent.

Relevant concepts: Farmer, Family F., Household



- What classifies a person as a farmer? Ownership or Management (= strategic and investment management or day-to-day operational management) ?
    - *US NAS: collect data and describe situation. Depends on use.*
- A family: a group of two or more people related by birth, marriage, or adoption and residing together.
- A household: all the people who occupy a housing unit.
- Complexity in the calculation of farm income: many farms / farm businesses are owned and operated by more than 1 person which sometimes have their own household.

Process of agricultural census and FADN



WAGENINGEN UNIVERSITY & RESEARCH

Number of id's in agricultural census per FADN Farm Business in the Netherlands

Number of id's	2005	2010	2015	2017
0	9	20	52	70
1	1424	1413	1413	1380
2	21	65	47	48
3	3	6	4	10
5	0	0	1	1

Farm businesses in the Dutch FADN classified to the number of entrepreneurs per farm business

- Farms with only one entrepreneur are a stable minority (38%).
- The number of farm businesses with 3, 4 or even 5 entrepreneurs is increasing.
- Some cases there are 3 to 5 households associated with one farm business in the FADN

	Percentage of farms			
Number of entrepreneurs	2005	2010	2015	2017
1	38%	39%	38%	38%
2	49%	45%	45%	43%
3	10%	12%	11%	14%
4	3%	4%	5%	5%
>= 5	0%	1%	1%	1%

WAGENINGEN UNIVERSITY & RESEARCH

Farm businesses in the Dutch FADN classified to their juridical form

- Classic one man business decreasing
- Fiscal partnership most popular
- Forms that limit liability of owners (limited company or limited partnership) gaining importance

	Percentage of farms			
Juridical form	2005	2010	2015	2017
One man business	30%	30%	26%	25%
Partnership	48%	42%	37%	37%
Limited partnership	16%	19%	24%	24%
Limited company	6%	8%	12%	14%

WAGENINGEN UNIVERSITY & RESEARCH

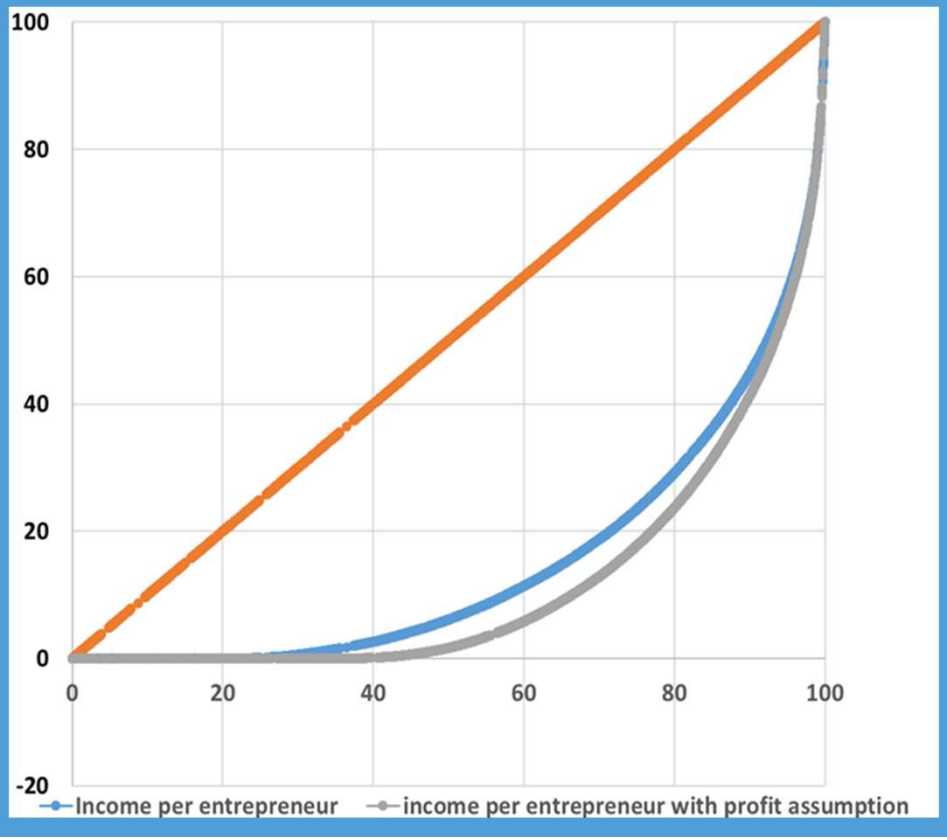
Effects of complexity on choice of indicator:

Number of establishments (id's in agricultural census) per FADN Farm business	Family farm income per....	2005	2010	2015	2017
1	Farm (establishment)	45653	59089	61950	93804
	Farm business	45653	59089	61950	93804
2	Farm (establishment)	28488	42679	52205	97722
	Farm business	56975	85359	104409	195445
3	Farm (establishment)	97822	72741	46160	151383
	Farm business	293466	218222	138480	454150
5	Farm (establishment)			1141253	1209744
	Farm business			5706264	6048720
Total	**Farm (establishment)**	**45496**	**58624**	**61895**	**94262**
	Farm business	**45843**	**61561**	**68022**	**99319**

WAGENINGEN UNIVERSITY & RESEARCH

Lorenz curves for the 3-year income per entrepreneur

- Blue line: equal sharing of the income of the farm business
- Grey line: assumption that the net worth is owned by one of the entrepreneurs that gets a 3% reward for this input, the rest is divided equally for the labour input.
- Real distribution of income more skewed



WAGENINGEN UNIVERSITY & RESEARCH

In conclusion

- Dutch farms are becoming more complex in their organisational arrangements. The traditional situation of a farm with one entrepreneur and one household is in the Netherlands a minority
- The complexity in farm organisation has consequences for financial indicators; if users assume a classical situation of one-farm/one-farmer/one-household, data per farm can be interpreted wrongly
- Urgent need to look into the links between the Farm Business concept in the FADN and the Farm (establishment) concept in the agricultural census.
- Conceptual framework developed by the US National Academy of Science on complex holdings, is relevant for the Netherlands.

In conclusion

- The linkages between farms that have the same owner(s) and the linkages between farms and farmers (owners / managers) and households should be explicitly modelled and data on these relations should be collected to understand the farm structure.
- The same understanding is crucial for a proper monitoring of farm incomes and micro-economic evaluations of policy measures
- Policy relevance
    - CAP Pillar 1: basic income payments, eco-schemes and capping
    - Young farmer schemes (which are typically co-owner together with a farmer > 40 years).

Thanks for your attention

https://www.researchgate.net/publication/335700556

Hans.vrolijk@wur.nl

Krijn.poppe@wur.nl

WAGENINGEN UNIVERSITY & RESEARCH