



A critical review of global vegetable benchmarking*

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Introduction

- ABARES (2019):
 - Australian vegetable production: \$3,904 million (2016-17)
 - Australian vegetable exports: \$354 million (2016-17)
 - Australian vegetable imports: \$1,002 million (2016-17)
 - Carrots & potatoes are Western Australia's major export
 - Approximately 260 vegetable growers in Western Australia
- DPIRD (2019):
 - The farm gate value of vegetable production in Western Australia was \$336 million in 2012
- But a lot more is known about arable and livestock farm performance

Research aim

The aim of this research was to conduct a critical investigation of global vegetables benchmarking initiatives for the development of a new benchmarking system for vegetable production in Western Australia.

Background knowledge

- Farm performance benchmarking is a mature area of knowledge
- The latest literature still encompasses benchmarking around strategic and operational effectiveness in a broad range of industries
- Knowledge has expanded to include assessments of more socially-responsible factors:
 - Environmental consciousness (e.g. Green et al., 2017; Prakash and Mohanty, 2017)
 - Corporate wellness (e.g. Smith, Damron and Melton, 2017)
 - Benchmarking performance of service organisations (e.g. Tasopoulou and Tsiotras, 2017; Wanke, Barsos and Azad, 2017).

Materials & methods

- A structured search strategy to scholarly and industry databases from Curtin University's Library (such as ProQuest, Scopus, Web of Science and IBISWorld). Searches were performed using terms such as: vegetable* production benchmark*, vegetable* production benchmark* (not oil), vegetable* benchmark*, horticulture* production benchmark*, horticulture* benchmark* and farm* benchmark* data
- Snowballing search strategy was then adopted which proved to be a great deal more effective in targeting the purpose of the present project.

Results

Financial performance, vegetable-growing farms, Western Australia, 2015–16 to 2017–18
average per farm

Financial estimates	Units	2015–16	2016–17p	2017–18y
Vegetable receipts	\$	1,550,200	1,355,900	1,291,000
Total cash receipts	\$	1,734,370	1,574,800	1,508,000
% cash receipts from vegetables	%	89	86	86
Total cash costs	\$	1,338,950	1,176,600	1,223,000
Farm cash income	\$	395,410	398,300	285,000
Farm business profit	\$	233,040	252,700	137,000
Rate of return				
– excluding capital appreciation	%	4.4	7.5	4.7
– including capital appreciation	%	3.9	7.9	na

p Preliminary estimate. y Provisional estimate. na Not available.

Source: ABARES Australian vegetable-growing farms survey

Results



International initiatives:

- Agribenchmark
- FAOSTAT
- Farm Accountancy Data Network (FDAN)
- The UNIVEG Group

Findings

- Data sets are relatively standard:
 - Similarly structured
 - Principally based on gross margin analyses with additional information provided on fixed costs
 - Income/receipts from sales
 - Various fixed and variable costs
- Most benchmarking reports also provide details of yields in different formats.

Findings

- Farm Business Survey (UK)
- Zentrum für Betriebswirtschaft im Gartenbau e.V. (Germany)
- AACREA (Argentina)
- Farm Sustainability Assessment (USA based but collects global data)
- Innovative data sharing platforms
 - The EU's Farm Accountancy Data Network (FDAN)
 - Farm Digital (The Netherlands)

Conclusions

- There are many farm benchmarking databases with robust data collection methodologies
- Limitations of the research
 - Internet searches limited to English web sites
 - Are the best data locked away in farm consultancies or behind pay walls?
- Consider accessing data from “mega producers”
 - Monterey Mushrooms Inc. (USA): 1.1 million tonnes of mushrooms annually
 - Dole (USA): US\$4.5 Billion (2016), 74,300 full-time and seasonal employees, 300 products in 90 countries.



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