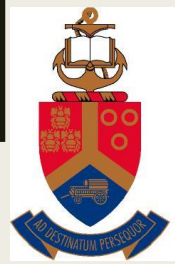
Facebook and the farmer:

Connecting with small-scale farmers via social media for improved irrigation management



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R. Hay; M. van der Laan
Department of Plant and Soil Sciences

Global monthly active users


Pinterest: 200 million


LinkedIn: 200 million

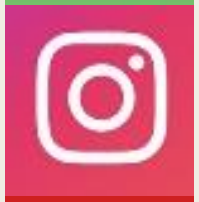

Reddit: 274 million


Snapchat: 301 million


Twitter: 330 million


Google+: 395 million


WhatsApp: 700 million

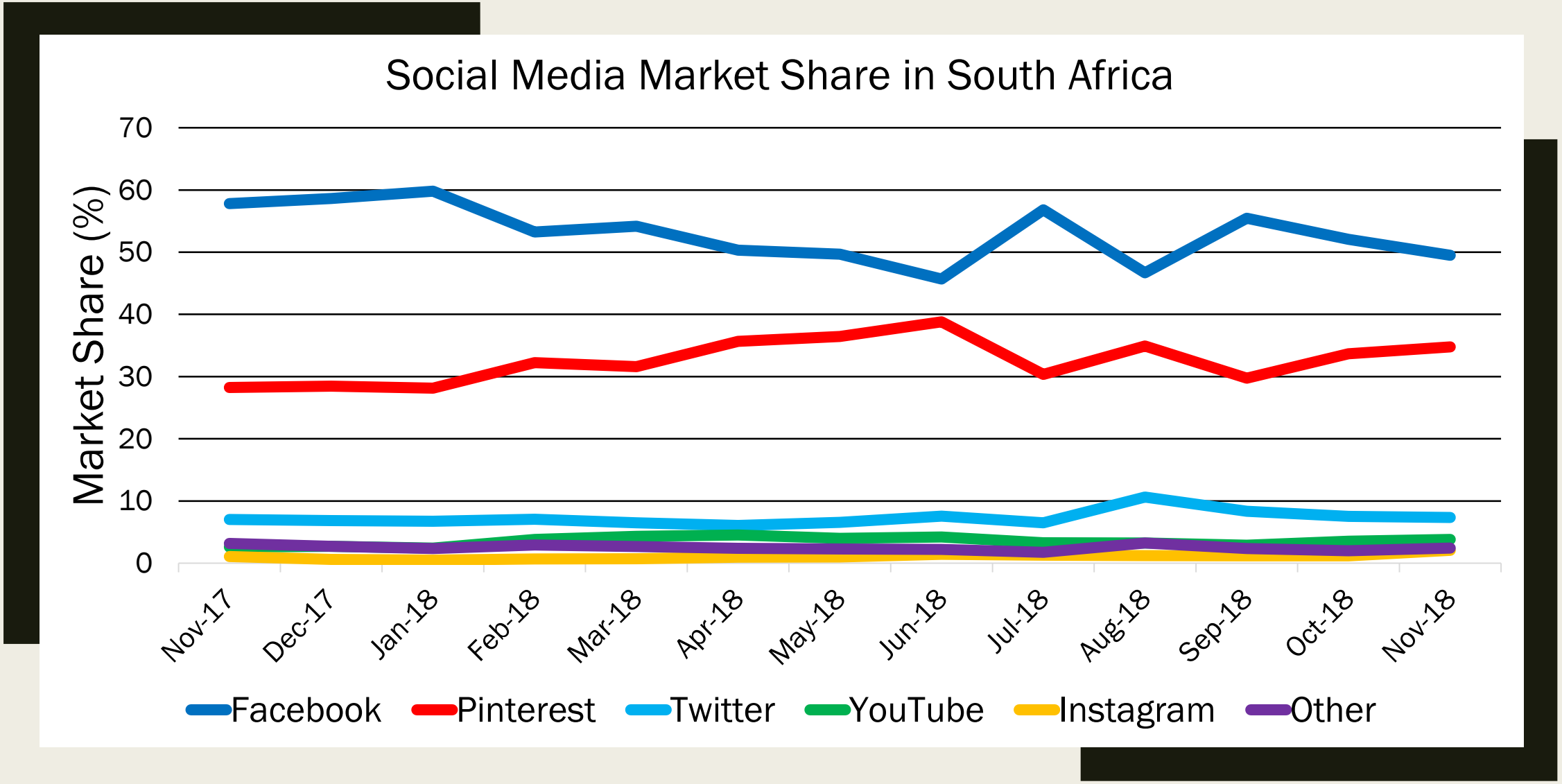

Instagram: 800 million


YouTube: 1.5 billion


Facebook: 2.2 billion

Why social media?

- Freely available platforms
  - *Economic barrier of entry*
- Increasingly important part of society
  - *Prioritised social spending*
- Accessed from multiple device types
  - *Limited technology required*
- Connect remotely over large geographic area to diverse audience


Social Media Market Share in South Africa
Market Share (%)
70
60
50
40
30
20
10
0
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Facebook
Pinterest
Twitter
YouTube
Instagram
Other

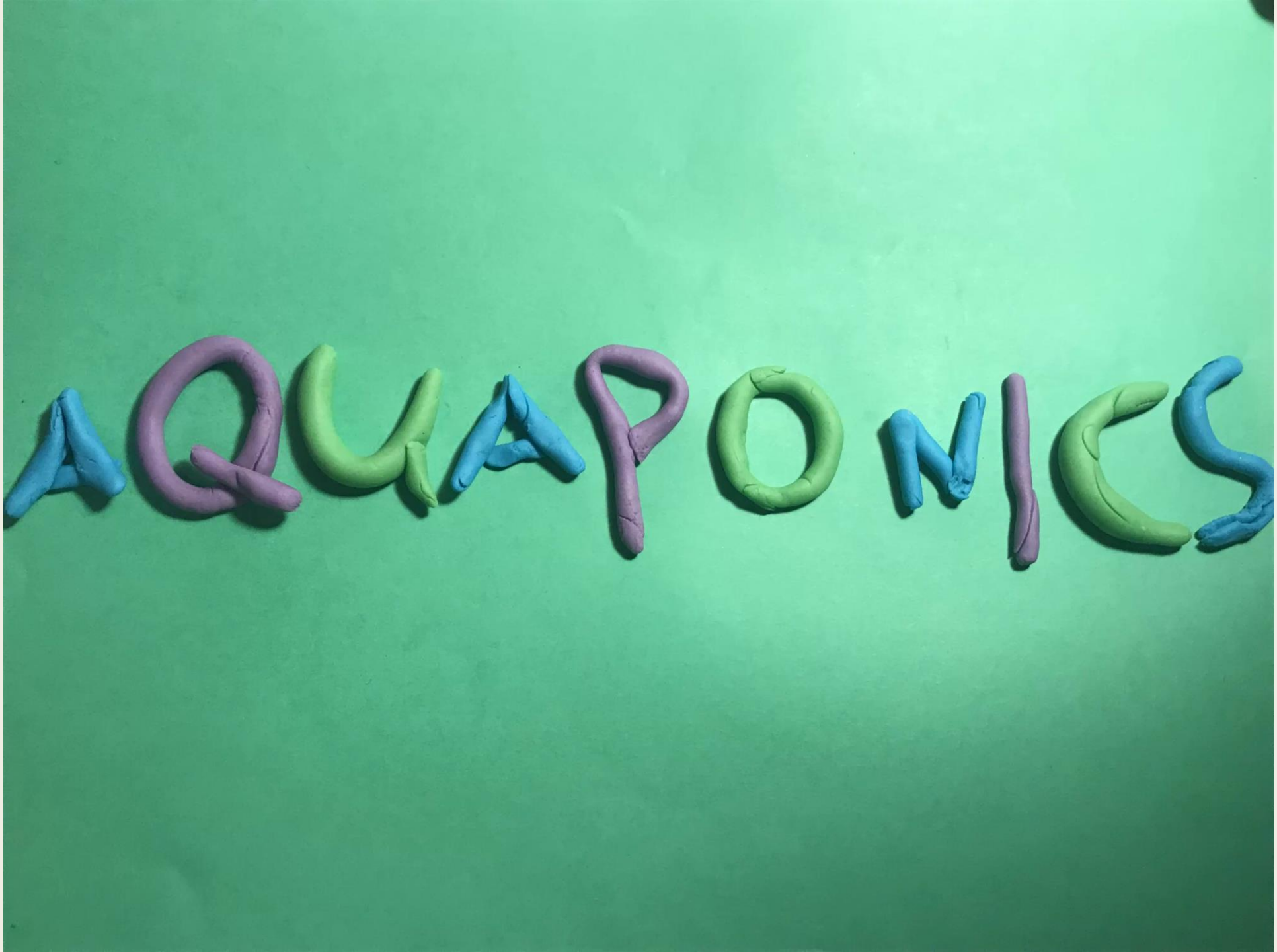
Facebook

- Share information resources in multiple formats
  - *Statuses*
  - *Pictures*
  - *Videos*
  - *Links*
- Less data-intensive versions:
  - *Facebook Lite*
  - *5th most downloaded app in 2017 (Android)*
- Groups

PPK251: Sustainable Crop Production Systems

- Second Year Students
- Mix of disciplines
  - *Crop Production and Soil Sciences*
  - *Animal Sciences*
  - *Environmental Sciences*
- Project brief:

"Create a multimedia item that explains a basic agricultural concept, that can be distributed to small scale farmers via social media"


AQUAPONICS


Ingesta
Farming for the Future

- 882 Likes
- 915 Followers
- Last week:
  - *Reach: 8 831 unique profiles*
  - *Post Engagements: 832*
- Last month:
  - *Reach: 19 136 unique profiles*
  - *Post Engagements: 1 870*

Small Scale Tomato Farmers (Tomato Farming As A Lucrative Business)

Closed group · 49k Members

+ADD

Small Scale Farming As A Business

Public group · 13k Members

+ADD

Young Farmers in South Africa

Public group · 786 Members

+ADD

Farmers South Africa

Public group · 50k Members

+ADD

Zimbabwe Small Scale Farmers

Closed group · 67k Members

+ADD

Group by **Rose Green Lines**

Small Scale Farmers(Farming As Business).

Closed group · 450k Members

+ADD

Facebook groups

- Established online communities
  - *Created and run by SSFs*
- Exchange of:
  - *Knowledge*
  - *Products*
  - *Information resources*
  - *Ideas/Inspiration*
- New features
  - *Market place*
  - *Mentorship*

Post Details

Ingesta: Farming for the Future
Published by Richard Hay [?] · 30 May ·

"An earth observation approach towards mapping irrigated area and quantifying water use by irrigated crops in South Africa"

This Water Research Commission technical report provides an indication of the status quo of irrigated agriculture water use 2014/2015 💧

The study found that 1 334 562 ha (1.1%) of SA's land surface was actively irrigated during 2014/15. This made up 10% of the total area under cultivation in 2014/15. The total consumptive water use from irrigated agriculture in SA was 10221 million m3/year. This figure was marginally lower than the last estimates done in 2000, despite the country experiencing a 44 430 ha increase under irrigation. This implied either improved water use efficiencies or production of crops with lower water use requirements🌾

The full report can be accessed here:

http://www.wrc.org.za/Pages/DisplayItem.aspx...

Get more likes, comments and shares
Boost this post for $15 to reach up to 4,500 people.

4,869	166	Boost Post
People reached	Engagements	

Elizabeth Van Niekerk, Elma Pollard and Erique Van Der Laan — 18 shares

Like · Comment · Share

Performance for your post

4,869 People Reached

45 Likes, Comments & Shares

24 Likes	**6** On Post	**18** On Shares
3 Comments	**0** On Post	**3** On Shares
18 Shares	**18** On Post	**0** On Shares

123 Post Clicks

0 Photo views	**4** Link clicks	**119** Other Clicks

NEGATIVE FEEDBACK

0 Hide Post	**0** Hide All Posts
0 Report as Spam	**0** Unlike Page

Reported stats may be delayed from what appears on posts

Post Details

Ingesta: Farming for the Future is with Richard Hay.
Published by Michael Van Der Laan [?] · 21 August ·

The first tool that we will be talking about is the Full Stop Wetting Front Detector (WFD). The WFD was developed by Professor Richard Stirzaker in his quest to develop the simplest tools possible to assist irrigators in better understanding their water💦

WFDs are buried in the soil, as shown in the pictures below. WFDs are always installed in pairs, so that measurements can be taken at two different depths. For more information about installing WFDs click on this link to wat... See more

Performance for your post

16,683 People Reached

130 Reactions, comments & shares

71 Like	**15** On post	**56** On shares
3 Love	**0** On post	**3** On shares
3 Wow	**0** On post	**3** On shares
13 Comments	**2** On Post	**11** On Shares
40 Shares	**40** On Post	**0** On Shares

1,366 Post Clicks

526 Photo views	**19** Link clicks	**821** Other Clicks

NEGATIVE FEEDBACK

0 Hide Post	**0** Hide All Posts
0 Report as Spam	**0** Unlike Page

Post Details

Ingesta: Farming for the Future is with Richard Hay.
Published by Richard Hay [?] · 22 August ·

Today's post is dedicated to the Chameleon Sensor

The Chameleon is similar to a tensiometer in that it measures matric potential, essentially how difficult it is for a plant to take up water from the soil. The Chameleon is made up of a sensory array comprising of three sensors and a thermometer.

The sensors are buried at three different depths, one below the root zone, one at the edge of the root zone, and one in the middle of the root zone. The termometer is buried with ei... See more

Performance for your post

23,658 People Reached

135 Reactions, comments & shares

80 Like	**12** On post	**68** On shares
6 Love	**0** On post	**6** On shares
1 Wow	**0** On post	**1** On shares
9 Comments	**5** On Post	**4** On Shares
39 Shares	**39** On Post	**0** On Shares

903 Post Clicks

325 Photo views	**9** Link clicks	**569** Other Clicks

NEGATIVE FEEDBACK

0 Hide Post	**0** Hide All Posts
0 Report as Spam	**0** Unlike Page

Research potential

- Understanding multimedia style popularity
  - *Improve information consumption*
  - *Transfer of knowledge from institutions to SSFs*
  - *Transfer of learned experiences between SSFs*
- Understanding barriers faced by SSFs
- Understanding information consumption within SSF Facebook groups
  - *Scientific validity*
  - *Themes*

Research potential

- Incorporation into the extension model
  - *Provide real-time connectivity*
    - Farmers
    - Extension officers
    - Researchers
  - *Removing geographical boundaries*
- Collaboration with other resources
  - *Apps*
  - *Data bases*
  - *Institutions*

Conclusions

- A wave to ride, not a current to swim against
- An opportunity to increase public communication of science
  - *How do we as agriculturalists direct this narrative?*
- A unique ability for targeting specific communities remotely
- A chance to revolutionise our approach to extension in a digital age

Acknowledgments

- Funding of project K5/2823//4

- Funding for the multimedia item project
- PPK251 students of 2018