

At a Glance

Extensive Review

Precision Farming from Above is the result of an extensive review of books, reports, webinars and websites produced by international leaders, software developers and manufacturers within the drone industry as it relates to *commercial drone* aerial surveys, *precision farming* and agribusiness development, as distinct from *recreational drones* used by the general public.

The term *drone* is inclusive of *unmanned aerial vehicles* (UAVs), *unmanned aerial systems* (UAS), *remotely piloted aircraft* (RPA), *remotely piloted aircraft systems* (RPAS) and *remotely piloted vehicles* (RPV).

The book explores the use of sophisticated pilot-operated, *commercial drone surveying systems* as applied to agriculture.

It includes:

- Drone technology - recreational vs commercial
- Aerial surveys for agribusinesses
- High resolution cameras
- GPS guided flight programming software
- Data analysis
- Application

Importantly, I will include:

- Pilot licensing
- Civil aviation regulations
- Compliance

I especially want farmers – globally - to understand the enormous benefits *commercial drone surveying systems* offer to their businesses as it relates to *precision farming*, productivity gains and more sustainable land and crop management.

Precision Farming from Above explains how this is achieved through the fundamental combination of:

- The versatility and manoeuvrability of the aircraft that carry the cameras;
- The variety and sophistication of cameras carried by the drones;
- The programmable flight planning software for accurate surveying and photography;
- The analytical power of the online software platforms;
- The comparatively rapid conversion of processed information into actions for farmers to apply.

The book also explains the massive advantages in turnaround time for this range of high-quality information to be converted into actionable data for farmers. This can be anything from minutes to 48 hours, and into a variety of compatible formats.

This high-tech, precision farming approach means farmers have a near real-time understanding about the state of their farms and are therefore more able to make more informed, proactive and effective decisions on their current and future activities.

They are also able accurately to operate on a *plant-by-plant* basis because of the resolution of the data, rather than the traditional *field-by-field* basis. This translates into achieving more efficient and sustainable operations, with the many benefits to time, budgets and management strategies this offers.

Who Should Read this Book?

Precision Farming from Above is specifically aimed at progressive farmers who have medium to large-sized operations that they may own or operate as individuals or as part of cooperatives.

In any case, *Precision Farming from Above* is relevant to any farmer anywhere in the world who is looking to improve land management, increase crop yields and operate a more profitable and environmentally sustainable agribusiness.

In this book, the term *farmer* is inclusive of anyone growing crops for commercial reasons.

Three Predictable Problems

While farmers face many problems, their productivity and profitability is consistently disadvantaged by three recurring and predictable factors:

- The quality of information they have about the state of their crops, soils or structures.
- Being tied to mundane time-consuming tasks.
- Inefficient management strategies.

Commercial drone surveying, high grade data and the smarter, precision farming they introduce are providing solutions to these issues.

References and Glossary or Terms

Readers will find an extensive list of references and a glossary of terms used at the back of this book.

About the Author

Louise Jupp has a Master's Degree in Environmental Science.

She has over 26 years' experience in environmental management in the UK, Europe and Western, Central and Southern Africa.

She co-founded *Terreco Aviation (Pty) Ltd* with her business partner in 2016.

Her goal is to help farmers and growers world-wide achieve more profitability and financial security in their agri-business operations, and to do so in an innately more sustainable way.

Louise is a licensed drone pilot with over 300 flying hours. She was one of the first women to obtain her license from the *South African Civil Aviation Authority* in 2016.