

User Feedback



dropsight

spray deposition tracer

SA Patent #2022/02473

find the best
spray calibration
for your crop

www.dropsight.ag

1. Vierfontein, Southern Cape, SA: Large Scale Blueberry producer



**Mr Kobus Du Plessis
General Manager
Vierfontein & Magdala Farms
Napier, Southern Cape
South Africa**

Kobus how do you apply DROPSIGHT technology on your farms?



“We set up and calibrate all our sprayers using a 9 zone grid in the berry bush row, and evaluate the spray deposition levels using DROPSIGHT.

We also check and recalibrate all sprayers every two months, again checking against the DROPSIGHT deposition levels.

If we are unsure of a set up and the responses we are getting, we will do a double check with DROPSIGHT to fault find the reason.”





Has the use of DROPSIGHT had any impact on you approach to spraying?

“We now have confidence in our choices of spray volumes, nozzle types and spray machinery used – because we can MEASURE and KNOW, instead of guessing. This lead us to optimizing droplet sizes, spraying speed and water volumes for the best possible outcomes.”

What value did DROPSIGHT bring to VIERFONTEIN?

“DROPSIGHT now gives us the opportunity to optimize the use of expensive and scarce formulations registered for use on Blueberries by making sure that we can expect the best possible results BEFORE we add the chemical to the spray tank.

This brings “peace of mind” being able to tick the box of sprayers being set up and calibrated properly and yielding MEASURED PERFORMANCE – risk management optimized!

This leaves optimal timing and proper selection of the correct formulation as the only other parameters to control – making life much easier!”

2. ZZ2: Mega producer Tomato, Avocado, Mango, Deciduous fruit.



zz2.co.za



“At ZZ2 our food journey started over 110 years ago. Since then we have grown into a farming conglomerate that does not only provide South Africans with healthy and affordable food every day of the year, but exports high-value produce all over the world”.

DROPSIGHT® user feedback provided by three of the AGRONOMISTS at ZZ2: Chantelle, Franco & Vianca.



How do you apply DROPSIGHT at ZZ2?

We have a strong focus on especially the application of INSECTICIDES and HERBICIDES. Whenever we are unsure on how to proceed, or questions arise around outcomes experienced, we use DROPSIGHT to lead our decision making. We also use DROPSIGHT to compare different spray equipment or spray equipment set up to optimize our choices.

Did DROPSIGHT have any impact on your approach to spray application?

DROPSIGHT plays the most prominent roll in our choices of spray equipment, calibrations and nozzle selections.



What would be the biggest VALUE be of DROPSIGHT for ZZ2?

Data. The fact that we now have reliable data, which can be referenced, compared and used as a scientific tool to base decisions and actions upon regarding our spray application, changes the whole ball game. We now KNOW what we do right or wrong, and have a chance to improve – giving us the confidence in our continuous process of striving to improve on our outcomes and inputs.

What would your response be to the sceptics on DROPSIGHT?

Stop guessing, get out of your comfort zone, measure, know, act accordingly.

3. ORO AGRI: Adjuvant and Additive Supplier



DROPSIGHT User feedback supplied by:

Tertia van Bosch: Customer Agronomist, Sub Saharan Africa



How do you use DROPSIGHT technology in ORO AGRI?

We are currently experimenting with the use of DROPSIGHT to set up protocols on how to ally this technology to find better ways of applying our adjuvants like WETCIT. We are also considering the best way of using DROPSIGHT in demonstrating this to our customers.

We are also using this to prepare ourselves properly and with good data to support the outcomes and results achieved with our adjuvants and additives.

Has DROPSIGHT had any impact on your approach to the use of your products?

The Potter Tower is currently used to form a basis for our DROPSIGHT deposition analysis work, with and without adjuvants. We are now also venturing into some comparative work in Citrus using mist blowers. It is still early days, and we expect very interesting data and a lot to interpret.



What is the biggest value that DROPSIGHT has brought?

The very user friendly and easy way that DROPSIGHT works, makes it a very practical instrument to achieve these above objectives – adding quantitative values to outcomes and reduce subjectivity of qualitative analysis used to date.

What outcomes are you aiming to achieve using DROPSIGHT?

Users of our adjuvants and additives should get the best possible information on how to optimize the use thereof – and DROPSIGHT is used to determine these protocols. It is also used to demonstrate in a controlled and quantitative manner the impact of our products.

What message do you have for potential users of DROPSIGHT?



To MEASURE deposition on NATURAL surfaces is non-negotiable – guessing, water sensitive cards and quantitative techniques are not acceptable any more in 2023 – and DROPSIGHT is the only technology available to achieve this.

Putting out and finding water sensitive cards is both a limiting and skewing impact on data – and does not allow any randomized sampling techniques.

4. Multinational Chemical Company



DROPSIGHT user feedback information supplied by Dr Jeanne, an acknowledged Multinational Research Field Scientist based in South Africa and employed by a Multinational Chemical Company.

- DROPSIGHT is used on a regular basis to quantify spray deposition in field trials and commercial field applications. The direct advantage of this technology is that we can draw valuable conclusions on questions that we could not answer when using biological data. We use DROPSIGHT technology to do research trials, demonstration days and analyzing customer complaints on biological outcomes. Sometimes we are purely just keen to gain more insight – then we use DROPSIGHT to shine a light!
- DROPSIGHT opened our eyes to a new world – opened the curtains to what is actually happening with the formulation whilst spraying. Colleagues and customers are awe struck when witnessing what is actually happening in their spray application program, and the impact of different methods and approaches to sprayer set up on spray deposition efficiency.
- DROPSIGHT allows us to make a better and measured choice on the required spray volumes for more optimized outcomes.
- To MEASURE is to KNOW. A better insight on how to optimize the application of our products, and to make the previously unknown clearly visible and measurable.
- For those who are still second guessing DROPSIGHT technology – if you have something better – show it!

5. UNITED EXPORTS: Multinational agricultural producer



DROPSIGHT User feedback by:

Hannes Laubscher. Global Technical Director. Paarl SA. (H)

Anton du Toit. Agronomist (Gauteng) (A)

Paul Roux. Consultant. (Paarl) (P)



How do you apply DROPSIGHT technology at UNITED EXPORTS?

Paul: We focus on the full canopy plants when setting up our sprayers for especially fungal applications like *botrytis*. The research data pointing towards a 9% FPC% deposition requirement is used as base reference, and sprayers are set up and calibrated to achieve or exceed this value in measurement with DROPSIGHT before approval for spraying.

Hannes: With limited chemical active registrations available in Berry production, we find value in the ability to measure the deposition achieved before spray application commences, thus reducing the risk of poor application and undue poor outcomes, putting even more strain on the available chemistry. In this way we can safely assume that any problems arising are not to be contributed to poor application.

Anton: DROPSIGHT changed everything – especially in the way we think about application and sprayer set up – our complete mindset, opening exciting new doors for us to optimize the use of chemicals – because we can measure and compare.

What would the biggest value be that DROPSIGHT technology brought to UNITED EXPORTS?



A: It is a real eye opener to SEE and MEASURE where and how different set up and calibration parameters influence the efficiency of deposition on the natural surfaces. It completely changed our approach to achieving the best possible outcomes from spray applications.

P: More accuracy in assessing deposition on the natural surfaces leads to more confidence in the data and decision-making process. The DROPSIGHT process of evaluation is very easy to use and produces reports real time.

H: DROPSIGHT has become a management tool that assist us in “ticking the box” that spray calibration and sprayer set up have been optimized, measured and spray deposition efficiency documented. This takes care of one variable that we never had any reliable information on. The information is loaded onto a centralized data base for reference and access by all concerned.

6. VILLA CROP, Supplier of Agrochemicals.



VILLA Crop invested in more than 250 DROPSIGHT start up kits for their own personnel as well as their distributors, and Mr Voltan Senekal, National Marketing Manager, summarizes as follows:

“DROPSIGHT has been a unique and valuable tool for the accurate measurement of the quality of the application of crop protection products. DROPSIGHT is able to quantify *retained* deposition, and this was not possible before with water sensitive papers. Water sensitive papers shows target contact but contact is not always retention. The retention picture that DROPSIGHT captures on a whole leaf, has given new insights on deposition patterns that is not possible with other methods. Run off, concentration patterns and droplet size distribution are but a few of these insights. We are now able to determine where and how to optimise the CPP application. The deposition picture from DROPSIGHT gives clues to where optimisation points are. These points can be equipment adjustment, application volume tweaking or the contribution of adjuvants to the spray mix. An application history for future reference is also possible through the database that DROPSIGHT builds.”

Vivian Butler

Marketing Advisor

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“Dropsight in conjunction with Uview are invaluable tools for farmers and agents alike to firstly evaluate the water volume they are spraying and secondly to compare different nozzles or adjuvants with each other.

Are they getting good deposition and penetration of their crop protection products, in other words are they hitting their target? What does the coverage look like above the leaves vs under the leaves, at the bottom of the tree vs the top of the tree, on the outside of the tree vs the inside of the tree. Are they getting runoff?

All these questions are undoubtedly answered by doing trail sprays, followed by orchard inspections after dark with a UV flashlight. The value of Dropsight comes in to confirm what was seen in the orchard and to put a value to how much better one water volume, nozzle or adjuvant performed compared to the rest. The app is user friendly, and reports are quick to generate and distribute. A must if you want to save money and get good pest control.”

7. RAS CONSULT, specialist in spray technology development



Marius Ras (M.Eng; Pr.Eng)
Director
mariusras49@gmail.com
www.rasconsults.com



Ras Consult has processed more than 11 000 DROPSIGHT photo images to improve spray deposition efficiency. Marius Ras says:

“If you are serious about making every molecule count towards achieving reduced usage and optimized biological outcomes of pesticides used in commercial agriculture, the missing link has been found.

DROPSIGHT® is the only commercially available tool to measure the deposition of the formulation on the natural primary target surface area, completing the long lost link in the responsible use of pesticides triangle:

- Optimal *timing* of applications.
- Correct *choice* of formulation.
- Optimized *deposition efficiency* of the *formulation* on the *natural primary target* surface area.

Up until now, more than 5 Million tons of pesticide has been sprayer out annually to protect Trillions in crop value, but nobody knew which part of this actually reaches and settles on the primary target surface area.”

“DROPSIGHT® has changed it all! A tool to guide you in achieving THE EU GREEN DEAL! Stop guessing, start measuring!”



8. AFGRI



AFGRI Equipment

12 Byls Bridge Boulevard, Highveld Ext 73, Centurion 0157

PO Box 11054, Centurion, 0046 • GPS 25°51'46.13"S • 28°12'24.74"E

www.afgri.co.za

AFGRI Equipment invested in DROPSIGHT technology and training to equip their sales teams in proper presentation, marketing and sales of their AFGRI sprayer range. Mr Rosseau Visser, Sales Manager says:

“Good day Marius*,

I just want to thank you for all your help with DROPSIGHT. It has changed the way we do demonstrations and marketing of our sprayers.

Instead of just promoting our sprayers specifications we can now also show our clients how effective the specific demonstration on the farm was. With the use of the LEAFLAB we are able to show our clients the results of the demo within an hour and if needed we can also load the photos on the DROPSIGHT website for a report.

DROPSIGHT is a game changer for us.”

**Marius Ras is the inventor of DROPSIGHT technology.*



9. Mr. Felix M, GM of an international producer

Hi Marius*, here is my feedback:

- *How do you apply DROPSIGHT technology in your business?*

We use DROPSIGHT in combination with the UV liquid (UVIEW) to measure the total leaf coverage that our spray machines achieve when we configure them to operate the machines for the application of fungicides (higher volume), or insecticide (lower volume). This method is equivalent in scope to the water sensitive paper (same principle of assessment), but DROPSIGHT adds a component of objectivity that is very important. The fact that the application returns a statistical evaluation makes the testing and assessment of results independent from the user. This is very valuable to us, as the technical team is spread all over the world, and we can share results easily.

- *Has the use of DROPSIGHT brought any new insights into spray application?*

Yes, we were able to validate that our spray configurations are in line with what we expect it to be and with what is being achieved in the industry in SA. We continue testing different configurations to be able to reduce volume as much as possible, while keeping good leaf area coverage.

- *What value did DROPSIGHT bring?*

Peace of mind mostly. The utility of objective measurements. The built in statistical evaluation makes it easy for the reader of the report to understand the results, once the instructions have been read and understood. I would recommend it to anyone that wants to see how effective the spray machines are.

Kind regards, Felix

**Marius Ras is the inventor of DROPSIGHT technology.*

10. CURATIVO



TAKING RESEARCH & DEVELOPMENT **TO THE NEXT LEVEL**

Etienne Rousseau, Field Biologist at CURATIVO, a Research Institute specializing in spraying commercial trials on their different research farms, on the use of DROPSIGHT technology:

DROPSIGHT eliminates the historical guess work – how do commercial mechanized sprayer applications compare to the trial applications on small plots using motorized hand sprayers? Depositions achieved in trials can now be closely matched to depositions achieved in commercial spraying – bringing product development and registration labels closer to the reality of commercial use.

Training operators to set up sprayers for trial work as well as commercial spraying benefits greatly by using DROPSIGHT in measuring and demonstrating the outcomes of different calibrations.

Last, but not least, environmental drift and contamination can now be measured and quantified on neighbouring crop rows and other crops.

10. Nexus AG



www.nexusag.net

Mr. Jacques Fouche, Technical Manager at Nexus AG:

- In the Nexus AG Technical Department we specifically use DROPSIGHT when investigating reports of poor crop protection efficacy and onboarding of new clients. In the first case, if a well-crafted crop protection program was successfully executed for a specific pest or disease and poor results are achieved, one of the first factors to investigate is spray deposition. In the second case, before compiling crop protection programs for new clients we need to know if the application equipment and calibration thereof are of a standard that will allow high crop protection efficacy.
- DROPSIGHT has brought new insights by directing focus towards deposition per plant canopy and away from water volume per area. This way spray application can be optimally calibrated to allow for quick and effective deposition, without unnecessary losses.
- DROPSIGHT is a quick, robust, objective, and quantifiable method for evaluating spray deposition.

Regards, Jacques.

11. AECl Plant Health



www.aeciworld.com

good chemistry

Dr STEPHAN VERREYNNE (PhD), Advisory Manager: South, on the role that DROPSIGHT plays in AECl Plant Health:

- *How do you apply DROPSIGHT technology in your business?*
We use it in field to validate spray calibration to ensure good deposition.
We use it in R and D trials to compare deposition of different adjuvants.
We use it in complaints investigations where inadequate coverage/deposition leads to poor efficacy.
- *Has the use of DROPSIGHT brought any new insights into spray application?*
Yes, easier to make comparisons with different nozzles, spray equipment and different products and mixes being applied.
- *What value did DROPSIGHT bring?*
Improved coverage, improved efficacy, fine tuning and adjusting of spray equipment after initial calibration, takes the guessing out of application especially in the top of trees.

12. Strickhof Fachstellen & Dienstleistungen



Das Kompetenzzentrum in Agrar-,
Lebensmittel- und Hauswirtschaft

David Szalatnay

Bereichsleitung

Bereich Spezialkulturen

Riedhofstrasse 62 | 8408 Winterthur-Wülflingen

David has processed more than 2000 DROPSIGHT deposition photos already, and planning much more. His feedback as follows:

- *How do you apply DROPSIGHT technology in your business?*

In my role as a consultant, I use Dropsight to carry out field trials on practical farms to improve the application in orchards. Compared to using water-sensitive paper, Dropsight offers significant improvements and more realistic assessments.

- *Has the use of DROPSIGHT brought any new insights into spray application?*

Basically, the various parameters that can be used to improve the application are well known. Thanks to Dropsight, it is possible to check the effects of adjusted device settings in a way that was previously not possible without a lot of technical effort.

- *What value did DROPSIGHT bring?*

We have just started working with Dropsight and are sure we have now a tool at hand that will help producers further improve the quality of protection sprays on their farm. This is not only beneficial for fruit producers, but also for the environment.

13. DANROC



WWW.DANROC.CO.ZA

Feedback on user experience received from Mr. Duncan Mather, one of the very first users of DROPSIGHT technology:

“Since early 2022 The DropSight Leaflab has become a standard in our arsenal of tools used to improve our spraying efficiencies across all our farms. This could result in an increase or a decrease in sprayer volume both of which will improve our production efficiencies.

The results are consistent with no guesswork or subjectivity which has made our decision making straight forward. The mixing and application procedure is simple leaving minimal room for errors, the UV liquid works well making it easy for a UV light to highlight the coverage. The App shares that user friendly aspect and can be used by anyone who has some patience as it can take a while to process all the leaves. Acquiring new Uview liquid has been effortless with no hassles with the liquid causing no short term negative effects on our machinery or nozzles.”

How to acquire your DROPSIGHT start up kit



1. SADC countries: (South Africa, Botswana, Malawi, Angola, Eswatini, Zimbabwe, Mozambique, Tanzania, Zambia, Comoros, DRC, Madagascar, Mauritius, Namibia, Seychelles)

RAS CONSULT (Pty) Ltd
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2. Other Countries:

METOS by PESSL Instruments GmbH
<https://metos.global/en/>

3. Visit www.dropsight.ag