ucf Undercover farming

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UNDERCOVER FARMING EXPO

Undercover Farming Expo & Conference - Gauteng

25 & 26 March 2026

DAY 1

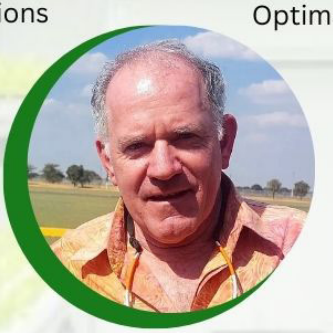
Andrew Ardington -
RegenAg SA

Martin van der holdt -
Greener Solutions

Ockie van Niekerk -
Optima Agri

Hendrik Eksteen -
Grow Freshp Produce Agents

Dumi Mbatha -
Dube Tradeport



Nico Uys -
Ezolimo Organics

Ruan Brand -
Control Union

DAY 2

Elzette Schutte -
Berries ZA

Hans Meiring -
Meiring Strukture

Joel van der Schyff -
Agrilogiq

Dr Martin Maboko -
Hygrotech

Delphy Session -
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Estelle Kempen

Haifa Session -
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SCRIPTURE:

ISAIAH 40:31 - But they that wait upon the Lord shall renew their strength; they shall mount up with wings as eagles, they shall run and not be weary, and they shall walk and not faint.

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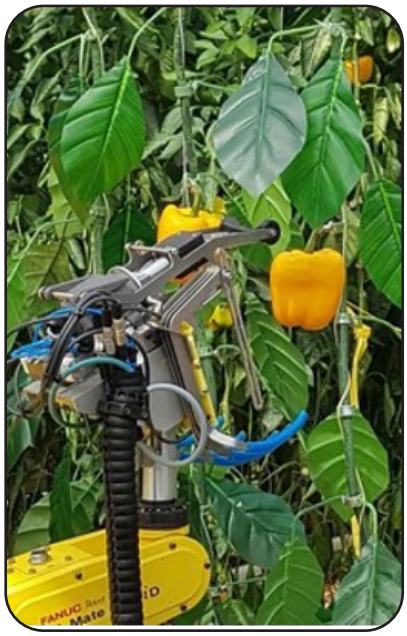

Editors Letter...

These are testing times. Water scarcity persists, the climate continues to challenge, and recent conflicts in the Middle East are pushing up fuel and fertiliser costs while stretching export logistics. The effects are felt across the sector. Even so, protected cultivation continues to prove its worth—offering better control over water use, consistent quality, reliable harvests, and the ability to meet market demands when predictability is in short supply. That resilience is making a real difference right now.

We're proud to mark the 20th anniversary of the Gauteng Undercover Farming Conference & Expo - twenty years of turning tough conditions into steady progress and shared success. Join us 25–26 March 2026 at the CSIR International Convention Centre in Pretoria for this special gathering. Expect practical sessions on advanced irrigation, regenerative methods, effective pest management, profitable small-space production, and market approaches that support long-term viability. It's a chance to connect, pick up fresh tools, and celebrate two decades of innovation and determination in South African undercover farming. See you at the CSIR - let's keep building forward, together. **SO**

HARVEST SYSTEMS EMPLOY COMPUTER VISION FOR REFINING THEIR QUALITY PRODUCE

Automated guided vehicles (AGVs): These robots have become increasingly common in larger greenhouse operations, handling the movement of harvested produce, growing media and other materials throughout the facility.

The integration of AGVs with harvesting systems has proved particularly valuable. Collection robots can automatically follow human harvesters or robotic harvesting systems, reducing the physical burden on workers and improving operational efficiency.

Nature Fresh Farms, based in Leamington, Ontario is one of North America's largest greenhouse farms growing high-quality organics, berries, peppers, tomatoes, and cucumbers.

Established in 1999 by President & CEO Peter Quiring, Nature Fresh is committed to providing safe, healthy, and sustainably grown food through innovation, creativity, and development. Recently, significant expansion, and a lack of available labor prompted Nature Fresh to consider a more innovative method to harvest tomatoes. The harvesting area is particularly humid, labour intensive and tedious, which can lead to repetitive motion injuries. Also, given the current labour market, it's difficult to find people willing to take jobs they consider dull or physically demanding. In 2022, Nature Fresh partnered with Four Growers, a FANUC Authorized System Integrator, to develop a robotic system equipped with AI to harvest tomatoes in the greenhouse environment.

Four Growers designed a smart system for Nature Fresh that includes a FANUC LR Mate 200*i*D/7L robot running HandlingTool software. The FANUC robot was selected based on its performance capabilities and ease of use. Four Grower's proprietary AI provides analytics to detect the ripeness and overall

Cornelius Neufeld, Executive Vice President, Nature Fresh Farms

health of the tomatoes, and the optimal path the robot needs to take for harvesting.

Today, the automated system allows Nature Fresh to expand more rapidly and potentially cover double the acreage with their current staff. Going forward, Nature Fresh plans to add more robots for harvesting other fruits and vegetables. "Our employees sometimes think they will be replaced by the automation, but that's never the case. In agriculture, you still need the human touch. Nature Fresh Farms is growing for a kinder future, This harvester has an attached carrier," Cornelius Neufeld, Executive Vice President, Nature Fresh Farms explained.

Meet Four Growers' FANUC Authorized System Integrator

Four Growers, a FANUC Authorized System Integrator, was founded to provide healthy, affordable, local produce by reducing the production costs of greenhouse growers through robotic technology. Our technology currently optimizes autonomous tomato harvesting and will soon be available for pepper and cucumber crops.

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Harvesting robots

Harvesting remains one of the most economically significant applications for robotics in CEA. As reported by one expert, a majority of robots that have been commercialized today are tomato harvesters. Robots for sweet pepper, strawberry and cucumber are also available. Several mushroom harvesters for CEA operations are available, and greenhouse cut flower rose and gerbera systems are in development. Harvest systems employ computer vision to determine ripeness, reach with robotic arms and pick fruit using end effectors that grasp, cut or vacuum-grip. They collect and store their harvest on the mobile platform, making them autonomous.

Cutting systems

Cutting systems have achieved higher success rates for leafy greens due to the crop's more uniform and accessible nature. These robots typically use vision-guided cutting tools that can harvest entire heads of lettuce or make precise cuts for repeat harvesting of younger greens.

Berry harvesting presents different challenges due to the fruit's delicate nature. Strawberry harvesting robots often use soft grippers with integrated force sensors to handle berries without damage. These systems can achieve picking speeds of 4.6 seconds per berry when operating in optimized conditions.

Robot pepper cutting system.

Harvesting robots still need improvements. A 2024 academic review noted that better performance is needed in all elements, including "... quick location of ripe fruits, a correct separation of fruit and plants and the management of all harvested fruits. Furthermore, the speed of operation of the robot is in general much lower than the human operator speed harvesting a fruit or vegetable."

Another 2024 source reported harvest efficiency rates of 83 to 88% but noted that these figures were derived from simplified conditions, including surrounding leaves being removed, fruits separated manually and plant spacing increased. To their credit, manufacturers will admit that the technology is between a prototype and a completed system.

Sorting and grading systems: While automated sorting has existed for some time, modern robotic systems incorporate advanced computer vision and AI to achieve higher accuracy and consistency.

These systems can grade produce based on size, color, ripeness and quality, often exceeding human consistency in quality assessment. Beyond simple sorting, these systems can help identify quality issues arising from growing conditions or improper harvesting techniques, providing valuable feedback for operational improvement.

Robotic quality assessment.

Greenhouse navigation of advanced robotics

The ability to move safely and precisely through a greenhouse environment is fundamental to robotic operation. Fixed rail systems remain the most reliable solution for many applications, particularly in established greenhouse operations.

One commercial harvesting robot demonstrates the effectiveness of using existing heating pipe rails between rows for movement while maintaining the ability to transition to floor operation when needed. Modern rail systems have evolved to incorporate multiple levels for different operations, automatic switching systems for row changes, and integrated power delivery through the rail infrastructure. For free-moving robots, floor navigation can be aided by painted lines or magnetic strips, conductive wires embedded in the floor, RFID beacons, GPS or computer vision. LiDAR technology is also a very effective navigation tool, creating detailed 3D maps of the environment by measuring distances using laser pulses, helping robots understand their surroundings and avoid obstacles.

Source: Nature Fresh Farms

POTENTIAL OF WATER-SMART AGRICULTURE IN SOUTH AFRICA

In a water-stressed South Africa, conventional agricultural practices such as heavy irrigation, the use of synthetic chemical fertilisers, pesticides and herbicides, intensive tillage and monoculture, continue to exacerbate detrimental environmental effects and water constraints.

Studies have shown that there is an increasing interest in agricultural innovation by investors in response to the state of water in South Africa. Reducing pollution and soil degradation, improved information systems and rolling out of water efficiency technologies for irrigation are emerging as key opportunities for sustainable farming.

Several innovations (processes and technologies) have been developed that could lend to the emergence of a Water Smart Agriculture (WSA) market. However, a consolidated view on the type, readiness, size and potential of WSA innovations for the South African market is still unclear.

This market research was developed to explore WSA innovations that demonstrate a prospective South African market and identify opportunities for industrial and socioeconomic development. The research further assessed and determined the size and potential market for WSA innovations.

The findings of the market analysis are based on insights from stakeholder interviews, a survey sent out to technology providers and an extensive literature review of WSA innovations. WSA innovations have been defined as those technologies and practices that contribute to the principles of climate smart agriculture as defined by the Food and Agriculture Organisation of the United Nations (i.e. increased productivity and incomes, increased resilience and reduced greenhouse gas emissions) but in the context of this study aim to improve water use efficiency and productivity.

The identified WSA innovations are driven by a range of economic, environmental, social and regulatory factors. A few of these highlighted in the report are summarised below. Rising input costs. The rising cost of inputs such as energy and fertilisers drives the need for producers to become more efficient in their agricultural activities.
On irrigated farms, energy costs are high because of the energy used to pump irrigation water. With rising electricity costs in South Africa, investing in water efficient technology is important for the financial sustainability of farms.

Scarce natural resources
Scarce natural resources, particularly productive land and water, limit agricultural production, which drives the need for farmers to increase their water use efficiency. Low and erratic rainfall, as well as limited arable land makes water the most limiting factor in agricultural production in South Africa.

Population growth
The expected population growth will increase the demand for water, food and energy, resulting in increased competition for natural resources. Given the scarcity of natural resources, the increasing demand will drive a need for sustainable and efficient ways to intensively produce food. Additionally, consumer preferences are evolving and include more fo-

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cus on health and wellness. While the traditional drivers for food purchases such as price, convenience, and taste still hold, there is a shift towards a wellness mindset and interest in the transparency of food products. This drives a need for increased monitoring of farm operations and practices to provide access to the relevant information.

Climate change

Variability in the climatic conditions has severe consequences on the production and quality of food resulting in negative economic consequences. The effects of climate change have been felt across the country in the form of drought conditions, severe floods, and wildfires. It is anticipated that these impacts will continue in the long-term.

The changes in the climate will have ramifications on the water demand for crops grown in both irrigated and rain-fed systems. The variations in seasonal rainfall and increased temperatures will increase the demand for water for evapotranspiration on crops and thus driving a need for efficient water systems.

Water metering

All irrigation farmers are now required to accurately meter their water usage and report it to the Department of Human Settlements, Water and Sanitation. This necessitates increased monitoring and measuring of water-use on farms. In addition, this measure has shown to improve the management of water resources due to the increased awareness of water usage.Many WSA innovations have been observed in medium- to largescale commercial farms, mainly due to significant economies of scale. The adoption of WSA technologies is still relatively low among smallholder and emerging farms. This presents an opportunity for WSA innovations to be disseminated to this market segment. However, the innovations would need to be fit for purpose and account for the context in which the farms operate.

High-tech undercover farming

High-tech undercover farming systems and no-till machinery currently present the highest market size estimate. This is mainly due to the high capital costs associated with the technologies which limits their uptake. In addition, most of the equipment and technologies is imported which has associated administrative costs to maintain the technologies. Therefore, there is an opportunity for local manufacturers to tap into this market and develop affordable and accessible equipment.

By: C Pengelly, T Shai & I Kuschke, GreenCape Sector Development Agency

Celebrating 20 Years of the Undercover Farming Expo:

A Journey of Growth, Innovation and Community

In 2026, we celebrate a remarkable milestone: 20 years of the Undercover Farming Conference & Expo. Two decades of bringing together farmers, innovators, sup-pliers, researchers and industry leaders under one roof, united by a shared vision—to advance protected agriculture in South Africa and beyond.

What began as a bold idea to keep an industry connected has grown into one of the most respected platforms for greenhouse, hydroponic, aquaponic and shade-net farming in the country. Rooted in a need to share knowledge and build relationships, the Undercover Farming Conference & Expo was established to ensure that farmers and suppliers could continue to exchange ideas, access new technologies, and stay informed about global trends.

Since the first conference, the growth has been nothing short of extraordinary. Today, the Undercover Farming Conference & Expo is hosted annually in Gauteng and the Western Cape, creating accessible platforms for farmers across regions. From its early days of fully booked venues and overwhelming support, it has evolved into a dynamic event attracting both local and international stakeholders.

But beyond the scale, the technology and the numbers, what truly defines the Undercover Farming Conference & Expo is its people.

To every sponsor who believed in the vision—thank you. Your investment has enabled us to build more than an event; you have helped create a sustainable platform for knowledge-sharing and industry growth. Your continued support ensures that the Undercover Farming Conference & Expo remains relevant, forward-thinking and impactful in a constantly evolving agricultural landscape. To our exhibitors—your innovation is the heartbeat of the Undercover Farming Conference & Expo. Year after year, you bring cutting-edge solutions to the floor, from greenhouse technologies to irrigation systems, fertigation, and seed development. You do more than showcase products—you equip farmers with practical tools to improve productivity, efficiency and sustainability.

And to our delegates - our farmers, producers and decision-makers - you are the reason this platform exists. Your willingness to learn, adapt and engage has turned every Undercover Farming Conference & Expo into a space of meaningful exchange. The conversations shared, the questions asked, and the connections made continue to drive this industry forward. The success of the conference lies in the engagement of its attendees—and over the years, that engage-

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ment has been truly inspiring. A special thank you to our speakers—true industry leaders who so generously share their knowledge and expertise. Your insights and experience have consistently elevated the Undercover Farming Conference & Expo, informing, inspiring and helping to shape the future of protected agriculture in South Africa.

Over the past 20 years, the Undercover Farming Conference & Expo has not only reflected the evolution of undercover farming—it has helped shape it.

From early greenhouse adoption to advanced hydroponic systems, climate-smart agriculture and water-efficient practices, the platform has continuously addressed the real challenges facing modern farmers. In a country where climate variability and water scarcity remain pressing concerns, the role of protected agriculture has never been more critical.

Equally important is the sense of community the Undercover Farming Conference & Expo has fostered. It is a space where

commercial and emerging farmers connect, where global expertise meets local experience, and where partnerships are formed well beyond the conference floor.s we mark this 20-year milestone, we also celebrate our growth in the digital space. From a traditional print publication, Undercover Farming has evolved into a fully integrated multimedia platform, connecting with audiences across multiple channels. Today, we proudly stand at over 1.8 million views on social media—a reflection of the strength, relevance and reach of our community.

This reach is more than a number. It represents farmers seeking solutions, businesses finding opportunities, and a growing network committed to advancing agriculture.

Looking ahead, the future of protected agriculture is filled with opportunity. As technology evolves and the demand for sustainable food production increases, the role of the Undercover Farming Conference & Expo remains essential. We will continue to adapt, innovate and create spaces where knowledge meets practice.

But for now, we pause.

We celebrate the relationships built, the milestones achieved, and the collective effort that has brought us here. Twenty years is not just a measure of time—it reflects trust, commitment and shared purpose. To everyone who has been part of this journey—whether for one year or twenty—thank you. You have helped shape an industry, support a community and build a legacy that will continue to grow. Here's to the next chapter of the Undercover Farming Conference & Expo. **SO**

AI MODEL DEVELOPED THAT DETERMINES TOMATOES TO BE RIPE FOR PICKING

An AI model using hyperspectral imaging to assess pre-harvest tomato quality, which can ultimately be used in a low-cost, portable device, has been developed by Hebrew University of Jerusalem researchers.

According to the study in Computers and Electronics in Agriculture, a cost-effective, non-destructive method to predict key quality parameters, including weight, firmness, and lycopene (a natural antioxidant) content, enables farmers to monitor fruit development in real-time, optimizing harvest timing and improving crop quality. The research demonstrates a significant leap forward in precision agriculture and sustainable food production.

"Our research aims to bridge the gap between advanced imaging technology, AI, and practical agricultural applications," said Dr. David Helman from the Hebrew University Robert H. Smith Faculty of Agriculture, Food, and Environment.

"This work has the potential to revolutionize quality monitoring not only in tomatoes but also in other crops. Our next step is to build a low-cost device (To-MAI-SENS) based on our model that will be used across the fruit value chain, from farms to consumers."

Hyperspectral images of light wavelengths, known as spectral bands, are used to study objects' properties based on how they reflect light. This approach focused on fruit addresses challenges associated with traditional methods, offering a faster, non-destructive, and cost-effective alternative.

The study, conducted in collaboration with researchers from Bar-Ilan University and the Volcani Center, used a handheld hyperspectral camera to collect data from 567 tomato fruits across five cultivars.

Machine learning algorithms, including Random Forest and Artificial Neural Networks, were employed to predict seven critical quality parameters: weight, firmness, total soluble solids (TSS), citric acid, ascorbic acid, lycopene, and pH. The models demonstrated high accuracy.

Key findings of the study
Efficiency in Band Selection: The model effectively predicts quality parameters using only five spectral bands, paving the way for the development of affordable, portable devices.

Broader Applicability: Tested across diverse cultivars and growing conditions, the model exhibits robustness and scalability.

Pre-Harvest Benefits: Farmers can now monitor fruit quality during ripening stages, optimizing harvest timing and improving produce quality.

The study highlights the potential integration of this technology into agricultural practices, from smart harvesting systems to consumer tools for evaluating produce quality in supermarkets.

Researchers: Eitan Fass1, Eldar Shlomi2, Carmit Ziv3, Oren Glikman2, David Helman1,4

Institutions: 1) Department of Soil and Water Sciences, Institute of Environmental Sciences, The Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem 2) Department of Computer Science, Bar-Ilan University

The research paper is titled "Machine learning models based on hyperspectral imaging for pre-harvest tomato fruit quality monitoring" is available in Computers and Electronics in Agriculture.

GROLITE AS A GROWING MEDIUM IN HYDROPONIC PRODUCTION

GROLITE is a naturally occurring,w processed mineral widely used as a growing medium in hydroponic systems. Its physical and chemical properties are designed to support controlled root-zone conditions, making it suitable for a range of hydroponic growing applications.

A key characteristic of GROLITE is its ability to optimise water and nutrient availability. Each particle contains microscopic surface pores that capture water and dissolved nutrients, improving fertiliser efficiency and ensuring these inputs remain accessible to plant roots. This contributes to steady plant growth and improved crop uniformity. Capillary action between particles allows for even distribution of both water and nutrients throughout the growing medium, supporting consistency across plants within the same system. GROLITE promotes effective drainage while retaining sufficient moisture in the root zone. This balance helps prevent waterlogging while main-taining optimal growing conditions, particularly important in recirculating hydroponic systems.

In addition, the structure of GROLITE maintains air-filled spaces around roots, improving oxygen availability and reducing problems associated with poor aeration or overwatering. Sterility is a critical requirement in hydroponic production, and GROLITE meets this standard through its processing method. The material is heated in a specially designed furnace at temperatures exceeding 950°C, rendering it completely sterile. This process eliminates weeds and pathogenic microbes, reducing the risk of disease introduction and supporting clean production environments.

Compared to standard horticultural perlites, GROLITE has a stronger surface structure. This makes it resistant to degradation and attrition during handling, mixing and transport. Its durability allows hydroponic growers to reuse GROLITE for more than one growing season, offering practical cost and labour efficiencies. Available in various grades to suit different system requirements, GROLITE provides a stable, reusable and hygienic growing medium for hydroponic crop production. **SO**

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NATIONAL WATER WEEK 2026: SOUTH AFRICA'S WATER TEST FOR FARMS AND FAMILIES

National Water Week, observed from 16 to 20 March 2026, promotes responsible water use and the protection of South Africa's limited resources. This year, the message carries added urgency. For farmers, municipalities and households, the issue is no longer only conservation. It is whether the country can secure enough clean, reliable water to sustain food production, public health and economic stability in a water-scarce environment.

South Africa's water challenge is driven by multiple pressures. Ageing infrastructure, poor maintenance, declining water quality, pollution, uneven access and climate variability are all straining the same system. National Water Week serves as a reminder that the country's water position is under real pressure.

Access has improved, but gaps remain

For households, the central concern is simple: is there enough water coming through the tap? While access has improved, the national picture remains uneven. Urban areas perform better than rural communities, where households often face unreliable supply, long collection times or limited service. Water access depends not only on infrastructure, but on consistent performance, proximity and the capacity of local institutions. In many areas, access remains closely tied to municipal management and infrastructure condition.

Quality is now as critical as quantity

South Africa's water story is no longer only about availability, but also safety. While confidence in tap water exists in some regions, concerns about clarity, smell and safety are increasing as treatment systems come under pressure.

Water quality is no longer secondary. When treatment works underperform or wastewater systems fail, the impact spreads into rivers, dams and supply networks, creating risks for households, agriculture and industry.

Agriculture at the centre

For agriculture, water underpins crop production, livestock, irrigation and rural resilience. In a dry country, farming is inseparable from water security. When the system weakens, agriculture feels it quickly.

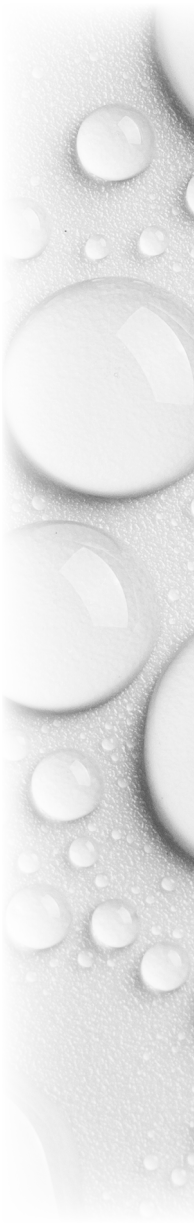
Farm-level stewardship is critical. Dams and on-farm storage remain essential, yet many lose water through seepage, ageing structures and poor maintenance. These losses affect irrigation planning, planting options and resilience during dry periods.

Efficiency as a new source of supply

For many producers, the future lies less in securing new water and more in using existing supplies better. Improved irrigation scheduling, stronger maintenance, better monitoring and disciplined use are key. The focus is shifting from accessing more water to making every litre work harder. Farms that reduce wastage and monitor usage closely will be better positioned to withstand dry periods and rising competition.

System losses remain a major concern

Nationally, large volumes of treated water are lost before reaching users due to leaks, ageing pipes, poor metering, illegal connections and weak maintenance. In a water-scarce country, this is a strategic and economic failure. These losses reduce municipal revenue, increase costs and strain supply systems. For households, this means unreliable service. For agriculture, it weakens regional resilience.



The upstream dimension and action

South Africa's water challenges begin in catchments, wetlands and source areas. When these are degraded, downstream users face lower quality, weaker flows and higher costs.

National Water Week 2026 should be seen as more than symbolic. The country's water future depends on better maintenance, stronger institutions, improved efficiency and faster action.

Water stewardship must move beyond awareness. In a country where every drop counts, water remains the foundation of food security, public health and economic resilience.

Source: MO

REGENERATION UNDER COVER - WHY LIVING SOILS STILL MATTER

The growth of greenhouse, tunnel, and shade-net agriculture across the world has been nothing short of remarkable. From high-value vegetables to entire orchards under netting, under cover production is widely seen as the future of horticulture: more control, greater efficiency, and reduced risk. Yet underlying all these solutions is a greater truth. While technology increasingly manages temperature, moisture, and nutrients aboveground, the success of these systems still rests on an ancient foundation below - living soil.

Under cover agriculture is best described as a semi-controlled environment, buffering climate extremes and modifying environments to optimise production. However none of this replaces the biological processes that make plants healthy. Underpinning that health is soil and understanding what we need from it, and what it needs from us. We have for decades prioritised the chemical and physical and ignored the biological aspect of soil. We believe with technology we can distance ourselves from this reality but ultimately it can't. When we do we do so at our peril for we live on a biologically moderated planet.

Soil Is More Than a Growing Medium

In many production systems, soil is still treated primarily as a physical substrate - something to hold up our plants, to hold water and fertilizer. Rather than soil we should in fact talk of the soil-plant ecosystem, as you can't have one without the other.

This seldom thought of and much brutalised ecosystem runs our planet. Many of the planetary cycles that make out planet habitable - the carbon cycle, the water cycle, the nutrient cycle to mention but three - pass through the soil-plant ecosystem. All of it being powered by photosynthesis.

We have developed agricultural systems around food production and ignored that the soil they are built on also needs to give us other services - water, oxygen and a stable climate. These larger ecosystem services that benefit all also benefit the farmer.

Healthy soils cycle nutrients, infiltrate, store and release water, buffer pH, facilitate communication between plant roots and microbes, and provide nutrients. Healthy soils make make healthy plants that suppress disease, and deter pests. When these services are absent or weakened, like when we treat soil as a structural medium rather than as a living partner, we attempt to compensate with technology.

More fertilizers, more amendments, more sterilization, more CO2, more crop protection products. The result is a system that becomes increasingly complex, increasingly fragile, and increasingly expensive. In tomorrow's world, with rising input costs, these ecosystem services for the farmer are not going to be optional extras.

Nutrient Density: From Buzzword to Biology

Consumer demand is rising for food that is healthier - grown with fewer chemicals and has greater nutritional value. For decades different production systems have made "nutrient density" claims. While in reality nutrient density was not even defined and was nothing more than a marketing claim.

Our analysis of nutrient density was restricted to the same chemicals we test our soils for. Like with soils the world of biology was not understood and left out of the analysis. The Bi-

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RegenAg SA

Soil, Human, Planet Health

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onutrient Food Association began tackling this challenge over a decade ago, first setting out to define "nutrient density" and then a system for evaluating it. Their work goes far beyond basic nitrogen, phosphorus, and potassium.

They analyse products for minerals, phytonutrients, and secondary metabolites that influence flavour, shelf life, and human health.

They then compare these with the analysis of the soil in which the product was produced. The strongest correlation with nutrient density that has emerged from their study is with soil respiration - a measure of biological activity of a soil. In simple terms, the more biologically alive the soil, the more nutritionally complex and dense the food.

This does not only apply to plants but also the animals that eat them. Beef raised on diverse veld is more nutrient dense than beef produced in a feedlot.

Bigger Plants, Poorer Nutrition?
Rising atmospheric carbon dioxide concentrations have revealed another layer of complexity for plant production, especially in under cover systems that use increased CO2 levels to increase production. Higher CO levels mean more biomass, but the plants have the same quantity of nutrients they had when they were smaller. Additional carbon, hydrogen and oxygen can dilute nutrient concentrations.

For under cover producers chasing both yield and quality, this matters. Without biologically functional soil, future production risks becoming visually impressive but nutritionally hollow. Healthy soil is the solution to this problem.

What Regenerative Agriculture Means
At its core, regenerative agriculture is guided by the five soil health principles all of which are focused on improving the living conditions of soil microbiology, the partner we didn't know we needed.

1. Minimize soil disturbance,

2. Keep the soil covered,

3. Maintain living roots in the soil,

4. Maximize plant diversity,

5. Integrate animals (or a proxy like their manure, worm products, etc)

By taking these principles and applying them within the context in which you operate you are moving to a regenerative system. Context is climate, soil type, human capital, economic situation, market features - in short the things that make Farm A different from its neighbour and a farm on the other side of the country.

The Economics No One Escapes
Building and maintaining structures to farm under is capital intensive. While these systems can improve efficiency, they do not shield farmers from the same economic realities facing all of agriculture: rising input costs and narrowing margins. This is a classical cost-price squeeze. When costs consistently rise faster than product prices, something has to change. Farmers can only beat this by increasing economies of scale or reducing input costs. To do the latter you have to partner with your soil and benefit from its ecological processes. Regenerative agriculture focuses on this, on getting more of what crops need from nature and buying less from outside the farm gate. The future of under cover agriculture is not just about control but also about how well we collaborate with life. Life in our soil and life in our value chain.

Source: Andrew Ardington - RegenAg SA

IMPORTANCE OF MAGNESIUM IN TOMATOES

Magnesium is the central constituent of the chlorophyll molecule – the green pigment necessary for photosynthesis. Plants do not need a lot of magnesium and it is relatively mobile in the tomato plant, meaning that it can move independently within the plant.

Magnesium deficiency is a common nutritional disorder in tomatoes. A mild deficiency has little effect on fruiting but a severe deficiency may cause smaller fruit and yield loss. The symptoms generally appear first on the middle leaves when plants are carrying a heavy fruit load.
The middle and bottom leaves begin yellowing between the veins, which remain green (intervenal chlorosis). The deficiency can progress rapidly from older to younger leaves. The older leaves can become entirely yellow or orange, and brown spots may develop between the veins. Shoot growth, leaf size and fruit production are not usually reduced unless the deficiency is very severe.

Causes: Several factors influence magnesium deficiency.
1.The season: Deficiencies are more common in autumn and winter when soil temperatures are low (<17°C).

2. Fruit load: Just before the first harvest, when the fruit load on the plants is at a maximum, root growth stops and older roots can die off. This hinders magnesium absorption.

3. Poor soil structure and drainage, which inhibit root development.
4. Low levels of magnesium in the irrigation water.

5. Excess calcium and/or potassium in the soil.

6. High EC (electrical conductivity) levels in the soil, caused by high-potassium feed.

7. The variety of tomato: Some varieties may be more sensitive than others, especially when there is a heavy fruit load.

Advice:
1. The total magnesium level in the irrigation water should be 40–70 ppm. Calcium levels should be maintained at 80–150 ppm. Potassium levels in the irrigation water should be between 150 and 300 ppm, depending on the stage of the crop.

2. Foliar spray: Magnesium can be supplied by foliar spray, usin 2% magnesium nitrate (Magnisal). However, there is a risk of burning the leaves, especially in hot weather.

3. Maintain reasonable EC levels in the soil.

4. Ensure that the soil has good drainage and that roots can develop properly.

To ensure your tomato crop retains its splendour and quality for the market, it is advisable to take note of the above advice and train greenhouse attendants accordingly.

By: Howard Wener

EMBRACING THE PLANTING SEASON: A GUIDE TO SUCCESSFUL STRAWBERRY CULTIVATION IN SOUTH AFRICA

As the autumn planting season commences in March 2026, South African strawberry growers face a window to establish crops for the upcoming production cycle. Strawberry (Fragaria × ananassa) cultivation remains a high-value intensive operation, with production concentrated in regions offering suitable chilling and mild conditions. Recent data indicate South Africa's strawberry output reached approximately 13,300 metric tons in 2023, with earlier estimates around 40,000 tons in some reports, though area planted has historically hovered near 300 hectares, predominantly using locally adapted cultivars. Yields typically range from 20–30 t/ha under improved management, a significant advance from pre- breeding program levels of under 6 t/ha.

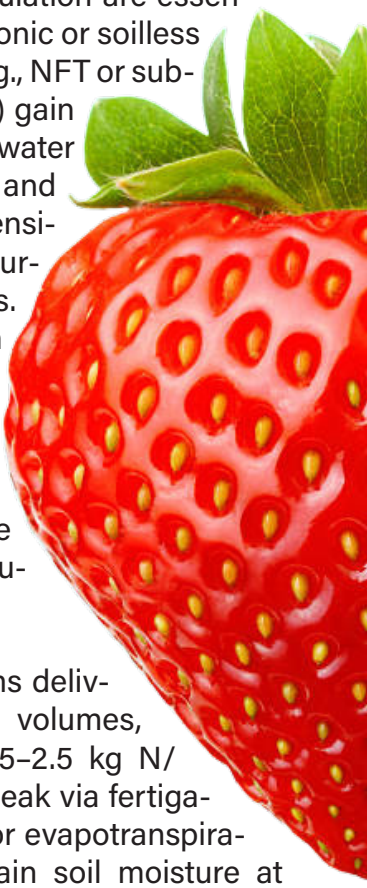
Regional climatic variation dictates planting timing. In the Western Cape and Southern Cape (e.g., George area), planting occurs from March to May for optimal establishment, with trials showing April–May plantings of day-neutral varieties delivering the highest margins above variable costs due to earliness and yield distribution. In higher-altitude or cooler Transvaal/North West areas, similar autumn windows apply, while KwaZulu-Natal and warmer zones may extend into later periods but require heat mitigation.

Everbearing/day-neutral cultivars enable extended harvests from spring through autumn, contrasting with short-day types that peak in a narrower window (September–December in open fields).

Cultivar selection prioritizes adaptation to local stresses. Locally bred varieties such as Selekta (large-fruited, strong disease resistance) and Tiobelle (high-yielding) dominate 80% of plantings, performing well against Botrytis, nematodes, Verticillium wilt, and foliar diseases. Day-neutral introductions like Monterey, San Andreas, and Albion have shown promise in Southern Cape trials.

Monterey consistently outperforms others in crown number, flower count, and gross income when planted April–May, with fewer runners than Albion but comparable TSS to San Andreas. Albion excels in total soluble solids (TSS) but lags in overall productivity. Certified plug plants or frigo seedlings minimize virus introduction; source from reputable nurseries to ensure clean stock.

Soil requirements emphasize drainage and acidity. Target pH 5.5–6.5 in sandy loam to loamy soils with >2% organic matter. Heavy clays promote root rot; amend with compost or manure pre-planting. Conduct soil analysis to correct deficiencies, particularly in phosphorus, potassium, and micronutrients like iron (deficient at high pH). Raised beds (15–20 cm high) covered with black plastic mulch reduce weeds, conserve moisture, and warm soil. Plant spacing: 30–45 cm in-row, 90–120 cm between rows, with crowns at soil level to avoid rot or desiccation. Full sun and air circulation are essential; hydroponic or soilless systems (e.g., NFT or substrate bags) gain traction for water efficiency and higher densities in peri-urban areas. Irrigation management focuses on consistent moisture without saturation.



Drip systems deliver precise volumes, targeting 1.5–2.5 kg N/ha/day at peak via fertigation. Monitor evapotranspiration; maintain soil moisture at 60–80% field capacity using tensiometers or probes. Over-irrigation leaches nutrients in sands; under-irrigation stresses fruit sizing in heat. In drought-prone Western Cape, deficit strategies during establishment can harden plants, but avoid during flowering/fruiting.

Fertilization follows staged needs: pre-plant incorporate balanced N-P-K (e.g., based on soil test); post-establishment emphasize nitrogen for vegetative growth, then shift to K for

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fruit quality. Typical regime: 100–150 kg N/ha total, split applications; monitor leaf analysis for adjustments. Organic amendments enhance microbial activity and structure.

Integrated pest and disease management (IPM) is critical given prevalent threats. Fungal pathogens include Botrytis cinerea (gray mold), powdery mildew (Podosphaera aphanis), Phytophthora crown rot, and Verticillium wilt.

Rotate modes of action; use protectants like captan/thiram for Botrytis, systemic options judiciously to delay resistance. Pre-plant soil fumigation or bio-fumigation (e.g., brassica cover crops) controls nematodes and soil-borne fungi.

Pests: aphids, spider mites, thrips, root weevils, and spotted wing drosophila (SWD). Employ biologicals (predatory mites, parasitoids) and cultural controls (sanitation, harvest frequency every 1–2 days to remove infested fruit). Scout regularly; warmer conditions exacerbate mite and armyworm pressure. Harvest at full color for flavor, as strawberries are non-climacteric. Twist berries with calyx and short stem to minimize bruising. Rapid cooling to 0–5°C at 90–95% RH extends shelf life 3–5 days; controlled atmosphere (10–40% CO^2) aids transport. Every-other-day picking maintains quality for fresh markets or export.

Challenges persist into 2026: climate variability (rising minima 2–4°C, heat waves reducing fruit si-e), elevated input costs (fertilizer, energy), water constraints, and logistics issues. Oversupply risks in Gauteng from rapid ripening persist, though prices recover seasonally.

Opportunities include export growth to Middle East, protected cultivation for season extension, and sustainable practices (e.g., drip fertigation, IPM) to counter costs and emissions.

Optimizing planting this season - through precise cultivar/site matching, soil prep, and IPM - positions growers for resilient yields in a demanding environment.

Source: SO

UNDERCOVER FARMING CONFERENCE & EXPO 2026 - GAUTENG

FINAL CONFERENCE PROGRAMME

Undercover Farming Conference and Expo – Gauteng

Conference Program 25 & 26 March 2026

CSIR International Convention Centre, Pretoria

Wednesday 25 March 2026	
08:00 – 09:15	**Registration: ALL DELEGATES & EXHIBITORS – Network on Expo Floor** **Coffee/Tea & Network Session**
09:15 - 09:30	**Welcome: Programme Director: Undercover Farming Conference and Expo**
09:30 - 10:15	**Andrew Ardington – RegenAgSA** **"Regenerative Agriculture - Where Soil Health, Nutrient Density & Sustainable Economics Intersect"**
10:15 - 11:00	**Martin von Holdt – Greener Solutions** **"Reducing greenhouse operating cost via automation"**
11:00 – 11:30	**Coffee/Tea & Network Session**
11:30 - 12:15	**Ockie van Niekerk – Optima Agrik** **"The importance of salinity in irrigation water for Undercover Farming Operations"**
12:15 - 13:00	**Hendrik Eksteen – Grow Fresh Produce Agents** **"Fresh Produce Markets – Yesterday, Today, Tomorrow"**
13:00 - 13:45	**Dumisile Mbatha – Dube TradePort** **"The Dube AgriZone Model: Driving Growth, Innovation, and Inclusive Farming"**
13:45 - 14:45	**LUNCH (Registered Delegates, Speakers & Exhibitors Only)**
14:45 - 15:30	**Nico Uys – Ezolimo Organics** **"Biostimulants, biofertilisers & biocontrols – understanding modes of action"**
15:30 - 15:45	**Exhibitors Introduction Session**
15:45 - 16:30	**Ruan Brand – Control Union** **"G.A.P, Environment, Food safety, Social Certifications for Undercover Farming – Why and how to get certified"**
16:30 - 17:00	**Coffee/Tea - Network Session**
Thursday 26 March 2026	
08:00 – 09:15	**Registration: ALL DELEGATES & EXHIBITORS – Network on Expo Floor** **Coffee/Tea & Network Session**
09:15 - 09:30	**Welcome: Programme Director: Undercover Farming Conference and Expo**
09:30 - 10:15	**Elzette Schutte – Berries ZA** **"The South African Blueberry Industry: Growth, Global Positioning and the Road Ahead."**
10:15 - 11:00	**Hans Meiring – Meiring Strukture** **"Netting Structures – Information session"**
11:00 – 11:45	**Joel van der Schyff – Agrilogiq** **"Climate Automation in Practice: Managing VPD Across Different Cooling Systems"**
11:45 – 12:00	**Coffee/Tea & Network Session**
12:00 - 12:45	**Dr. Martin Maboko – Hygrotech** **"Urban Farming under shade nets"**
12:45 - 13:30	**Delphy SA Session:** **"Plants Under Cover: The Hidden Physiology Driving Performance"– Estelle Kempen** **"Delphy services included Data driven Cultivation" - Herbert Stolker**
13:30 - 14:15	**LUNCH (Registered Delegates, Speakers & Exhibitors Only)**
14:15 - 15:30	**Haifa South Africa Session:** ***What you can expect of a REAL orthosilic acid Silica application - Werner van der Nest*** ***Innovation in water soluble nutrition - Gerrit Burger***
15:30 - 15:45	**Exhibitors Introduction Session**
15:45 - 16:30	**Marc Slabber – Talborne Organics** **"Regenerative Principles in Undercover Farming"**
16:30 - 17:00	**Coffee/Tea - Network Session**
17:00 - 18:00	**Breakdown of Info Tables/Exhibition Area**

SQM - SPECIALITY PLANT NUTRITION

SQM (Sociedad Química y Minera de Chile) is a global leader in premium plant nutrition, providing balanced nutritional solutions and expert agronomic support to improve crop performance while addressing the growing challenges of efficiency and sustainability in modern agriculture.

The company develops specialized nutritional solutions for fertigation, soil, and foliar applications. These solutions supply essential macro- and micronutrients that help agricultural businesses maximize yield, improve crop quality, and increase profitability. SQM's innovative products are designed to be highly soluble and efficient, ensuring optimal nutrient uptake by plants and consistent performance under diverse growing conditions.

SQM focuses on producing solutions that support the development of high-quality crops with measurable benefits for growers. These benefits include increased fruit weight, a higher number of fruits per plant, earlier harvests, extended post-harvest life, and improved resistance to diseases and environmental stress. Through continuous innovation, SQM helps farmers achieve both productivity and sustainability goals.

The company's flagship brands — Ultrasol, Qrop, and Ultrasol Micro Rexene — represent leading solutions in the specialty plant nutrition sector.

The Ultrasol range offers a comprehensive selection of water-soluble fertilizers developed specifically for fertigation systems. These formulations are designed according to the nutritional requirements of crops during different phenological stages. Ultrasol products are chloride-free and fully water soluble, supplying essential macronutrients such as nitrogen, phosphate, potassium, calcium, magnesium, and sulphur, as well as micronutrients including copper, iron, manganese, and zinc. This balanced approach ensures efficient nutrient absorption and improved plant development.

The Qrop product range consists of granular or prilled fertilizers formulated for direct soil application. These products provide specialized nutrient blends tailored to specific crop and soil conditions. By delivering nutrients such as potassium and nitrate nitrogen directly to the root zone, Qrop products ensure immediate nutrient availability and support optimal crop growth and yield. The Ultrasol Micro Rexene range provides high-quality micronutrient solutions in stable, water-soluble chelated forms. These products supply essential micronutrients including copper, iron, manganese, and zinc.

The nutrients are fully chelated with EDTA to ensure stability and plant availability. Iron solutions are also available with DTPA, EDDHA, or HBED chelation, depending on the pH of irrigation water, soil, or nutrient solutions, ensuring effective nutrient uptake under varying conditions.
SQM products are designed to deliver maximum yield while optimizing resource use and reducing environmental impact. The company carefully monitors emissions from potassium nitrate production to maintain one of the industry's lowest carbon footprints.

Supported by a highly skilled agronomic technical team, SQM provides growers with tailored plant nutrition solutions and expert guidance. This integrated approach ensures that farmers receive the right nutrients, at the right time, to improve productivity, profitability, and long-term agricultural sustainability.

SQM Solutions for human progress

Maximizing Crop Performance with SQM's Premium Plant Nutrition Solutions

Enhancing Yield, Quality, and Sustainability with Specialized Fertigation, Soil, and Foliar Applications

Ultrasol® | Qrop® | Ultrasol micro® Rexene®

Hydroponics

Open field fertigation

Granulars

Foliar

- Water-soluble
- Yield
- Environmental care
- Quality
- Homogeneous granulometry
- Return on investment

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WHY YOUR FERTIGATION RECIPE MATTERS

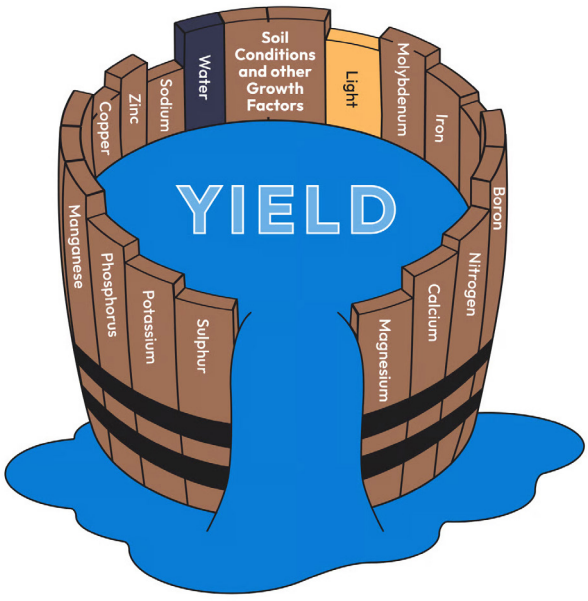
When it comes to water-soluble fertiliser (fertiliser concentrate that dissolves in water) and fertigation, we'll often talk about the importance of "getting the recipe right." After all, it's the ingredients and their interactions that determine success or failure.

We might even get into the weeds with specific chemistry and hardware terms, like NPK ratios, concentrate tanks and dosing rates. But we prefer to break down the science in a way that actually helps you understand why your fertigation recipe matters to your yield. By the end of this read, you'll have insight into your fertigation recipe, how the ingredients interact or clash, and why your fertigation system is designed the way it is.

No chemistry degree required!

Liebig's Law of the Minimum

Liebig's Law states that "Your yield is not determined by the total amount of nutrients you put in. Instead, it's limited by whichever nutrient is in shortest supply." Think of this like a wooden barrel with planks of different heights. The water only rises to the level of the shortest plank. Add more water? Doesn't matter. It'll leak out the shortest plank. This is the limiting factor that controls everything. The same concept applies to fertigation water.



Every nutrient your plants receive comes from your fertigation recipe. And even getting the amounts of one ingredient wrong can make everything else less effective, and lower your yield.

The Importance of Water Analysis

Think about making soup. You wouldn't add salt without tasting your broth first. You need to know what's already there.

Your irrigation water is not a neutral blank slate. It already contains substantial minerals: calcium, magnesium, sodium, bicarbonates, and trace elements.

A borehole in Limpopo might already be rich in calcium and magnesium. River water in the Western Cape might carry high sodium. And municipal water? Its nutrients can vary by season and treatment changes. So, you're not adding nutrients to pure water. You're adding to what's already there. You might think you have a balanced recipe, but without knowing what nutrients you're starting with, you can never be sure if you're adding the right amounts.

But in knowing what's in your water, you can concoct the recipe that leads to stable EC (electrical conductivity) and pH levels (critical for nutrient uptake) - the first step towards precise irrigation.

The Role of Each Nutrient

The Six Essential Macronutrients These are your big players and heavy lifters, needed in relatively large amounts:

Nitrogen (N): Builds proteins and drives vegetative growth. Without it, plants stay small and pale.

Phosphorus (P): Powers cell division, root development, and flowering. Phosphorus deficiency means weak roots and poor fruit set.

Potassium (K): Regulates water movement, controls stomata, and strengthens disease resistance. Low potassium means weak, disease-prone plants.

Calcium (Ca): Forms cell walls. Important to prevent cellular disorders like blossom end rot in tomatoes and tip burn in lettuce. Magnesium (Mg): Sits at

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the centre of every chlorophyll molecule—without it, photosynthesis stalls and leaves yellow between the veins.

Sulphur (S): Essential for building amino acids and protein quality. Sulphur deficiency looks similar to nitrogen shortage and can be hard to diagnose without analysis.

The Micronutrients (Trace Elements): Iron, manganese, zinc, copper, boron, and molybdenum are needed in tiny doses. They work as catalysts and cofactors that enable the macronutrients to do their work.

Think of them as spices. A pinch transforms the dish; too much ruins it. The difference between deficiency and toxicity can be measured in parts per million.

Helpful Interactions (synergism)

Some nutrients work as partners. For example, high nitrogen increases magnesium demand. Here's what that looks like in practice:

You're pushing vegetative growth. Nitrogen levels are perfect. Your magnesium concentration looks good on paper. Then your plants start showing magnesium deficiency (yellowing between leaf veins). What happened? That nitrogen boost increased your plants' magnesium appetite beyond what you're supplying. The magnesium is there; the plants just need more of it. This is synergism—when supplying one nutrient increases demand for another.

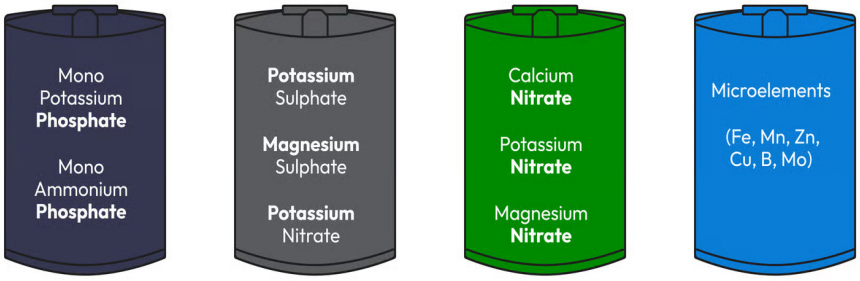
The Competitive Interactions (Antagonism)

Then there's competition. Some nutrients block the absorption of others, even when both are present. Iron and manganese compete at high concentrations. Copper interferes with iron. Large amounts of calcium block potassium.

Excess potassium can block magnesium uptake. These are easy to miss because a soil test might show you have the right amounts of a certain nutrient. But because of too much of another nutrient, absorption rates are low.

This is why agronomists will never just "add more fertiliser". They know this doesn't guarantee better growth. Sometimes it makes things worse.

Chemical Incompatibility: When Ingredients Can't Share Space



Fertilisers are delivered as concentrated stock solutions (like cordial before you add water). In these high concentrations, certain nutrients react chemically and form precipitates. Solids that fall out of solution.

The classic example: calcium nitrate and mono-potassium phosphate. Both essential. Mix them in concentrate form, and they chemically bond into calcium phosphate—a white, chalky sludge. This sludge clogs your drippers, coats your sensors, and delivers zero nutrition to plants. Your expensive fertiliser becomes expensive pipe-blocking paste.

Agronomists use compatibility charts showing which fertilisers can share tanks, which are risky, and which are absolutely forbidden. This isn't a way to sell more storage tanks; it's fundamental chemistry.

Delivering the Recipe to Your Crops

Fertigation systems use stock tanks of compatible ingredients, keeping incompatible ingredients apart until they're diluted enough that they're safe to co-exist. These tanks each contain specific concentrated (still needing to be mixed with water) or premixed (already diluted) recipes, depending on the size of your operation and your crop's needs.

There are two ways to deliver your recipe to your crops:

1. Inline Dosing

Inline is the standard approach for 90% of agricultural operations. It's simple and efficient, cost-effective for scale, and handles high-volume operations without needing massive solution storage.

How does it work?

A good analogy for inline dos-

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ing is the soda dispenser at the movies and some fast-food restaurant. If you thought your soda was premixed, think again. The syrup sits in the machine, and when the person behind the counter presses the button, a little bit of syrup releases, and soda water flows through it, landing in your cup.

Inline dosing works the same way. When you open the tank's valve, the recipe mixes with water and heads to the field. The water flow starts by creating a suction which pulls the right amount of concentrate into the irrigation line before it reaches your crops. To ensure you're always getting what you need, sensors will measure EC and pH before and after dosing, and automated systems adjust in real-time.

What's it best for:

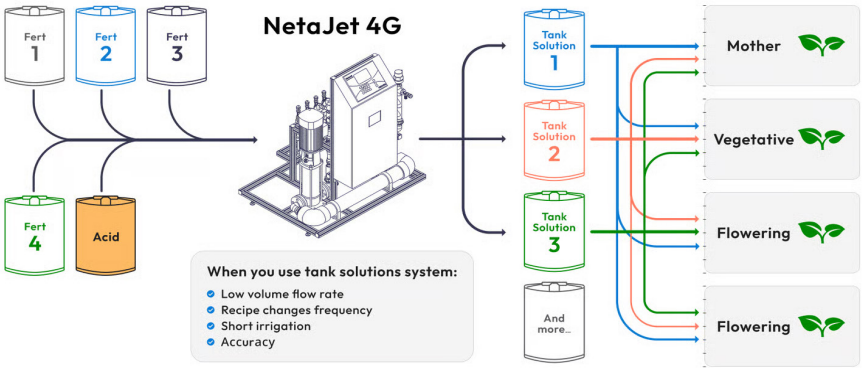
Inline works well for large operations where crops are at the same growth stage, wanting the same recipe at the same time. This is likely the case when you're growing one thing (or variations of one thing). Like large-scale tomato production, apple orchards, or commercial lettuce. Inline also makes sense when each watering cycle is longer than five minutes and all areas get watered for the same amount of time.

2. Pre-Mix Tanks

Where inline gives you scalability, pre-mix gives you flexibility. It's a specialised fertigation solution offering high accuracy for more complicated operations.

How does it work?

Picture a party with multiple punch bowls. You've pre-made each recipe: one is fruity, one is fizzy. Guests pour however much of whatever they want, whenever they want. Pre-mix systems work the same way. The tanks are filled with premixed solutions, just like your punch bowls. These pre-mixed batches sit ready, and you pump different volumes to specific zones as needed.w



What is it best for?:

Pre-mix is best for complex growing operations with a variety of crops or crops at different growth stages. It also works particularly well for small, specialised zones that need different recipes running at the same time. Pre-mix tanks are perfect for frequent recipe changes and shorter irrigation cycles (less than five minutes). For example, Cannabis operations where one room needs vegetative nutrition while another needs flowering nutrition, or R&D nurseries testing multiple varieties.

Which Option Is Right For You?

If you're running a large-scale operation with uniform crops and straightforward irrigation schedules, inline delivers efficiency and simplicity.

If you're managing complexity (multiple varieties, staggered planting schedules, or crops with very different nutritional needs) pre-mix gives you the control to fine-tune each zone without compromise.

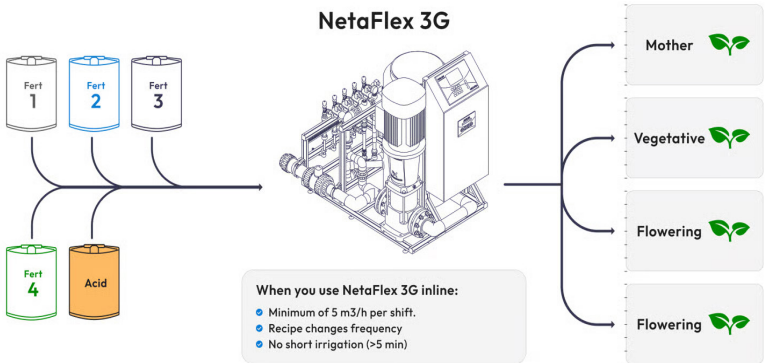
Now You Know. So Let's Grow!

Understanding the chemistry behind your fertigation recipe changes how you farm.

And we're on hand to help every step of the way.

We start every fertigation design with your water analysis, then build the recipe and system around your crops and your operation. The chemistry becomes our challenge. You focus on what matters: growing.

Reach out on +27 21 987 6980 or info@vegtech.co.za.



2026 Seasonal Outlook:
What African Farmers Can Expect

Weather may never be 100% predictable, but understanding the bigger patterns can help farmers make smarter decisions. Looking ahead to 2026, forecasts suggest a season filled with both opportunity and risk – especially when it comes to rainfall. At Grow, we believe that better information leads to better planning. Here's what the 2026 weather outlook could mean for Africa's farms.

Understanding the Big Weather Picture

One of the biggest drivers of weather across Africa is something called ENSO. In simple terms, it's a system that shifts between wetter and drier periods. El Niño usually brings drier conditions to southern Africa, while La Niña is linked to higher rainfall. When conditions are neutral, weather tends to be closer to average. For the 2025/2026 season, weather experts are seeing signs of La Niña continuing into early 2026. This suggests that many parts of southern and central Africa could receive more rain than usual during the main growing months. Later in the season, rainfall may ease off and return to more normal levels.

Rainfall Expectations for Early 2026

Rainfall is expected to remain normal to above normal across many key farming regions up until March 2026. This is good news

for crops such as maize, sorghum and groundnuts, especially in areas like South Africa, Zimbabwe, Zambia and Mozambique. Some northern regions may see less rain as the season progresses, which means farmers in those areas should be alert for possible dry spells later in the year.

Warmer Temperatures Still Expected

Even with good rainfall, temperatures are forecast to stay warmer than average in most regions. Warmer conditions can cause moisture to evaporate faster from the soil and plants, meaning crops may grow quicker but also lose water faster. This makes careful water management even more important, especially when rains slow down later in the season.

What This Means on the Ground

Early rains up to December 2025 likely helped build soil moisture and supported planting. Continued rainfall into early 2026 should help crops develop and fill grain properly, which is encouraging for yields. However, more rain doesn't always mean better results. Heavy rainfall can lead to flooding, waterlogged fields, soil erosion and delays in harvesting. Farmers working in low-lying areas or regions with poor drainage should stay especially alert.

Storms and Cyclone Awareness

The cyclone season in the South-West Indian Ocean runs from November 2025 to April 2026 and overlaps with the rainy season. These storms can bring heavy rain and strong winds, particularly to coastal and nearby regions.Farmers in affected areas should stay informed through local weather alerts and be ready to act quickly if warnings are issued.

Planning Ahead for a Smarter Season

Seasonal forecasts provide a useful guide, but they work best when combined with local knowledge. Watching daily and weekly weather updates, monitoring fields closely and adjusting planting or harvesting times can make a big difference. The 2025/2026 season looks cautiously positive for many African farmers, with good rainfall offering strong potential for growth. At the same time, preparation for heavy rain, flooding and changing conditions later in the season will be key. **Source: https://growfreshproduce.co.za**

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