Strawberries

metzer

Life Is Sweet
Growing Strawberries

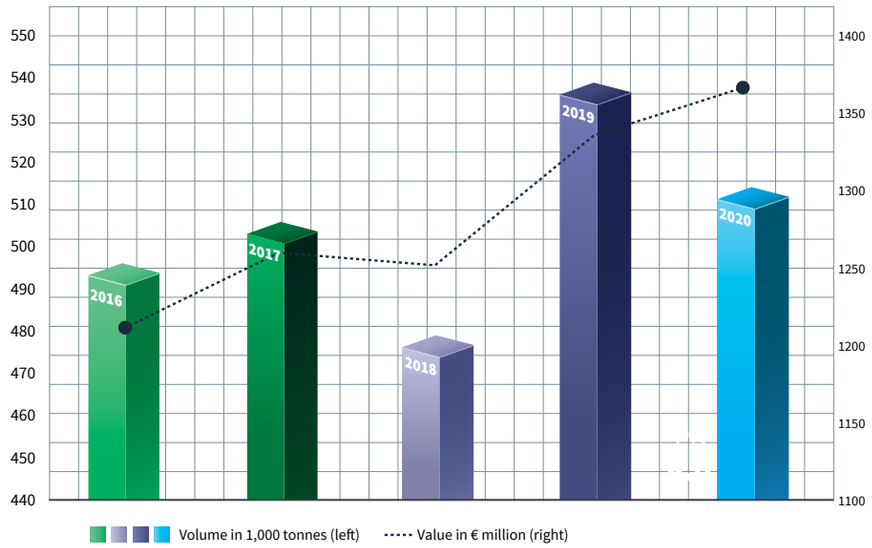
with Drip Irrigation

The garden strawberry (Fragaria × ananassa) is a hybrid species of the genus Fragaria. Cultivated worldwide for its fruit, which is eaten both fresh and processed, this crop is in high demand for its wonderful taste, appearance, and sweetness. Artificial strawberry flavorings and aromas are also widely used.

Strawberry cultivation runs the gamut from traditional open-field methods to state-of-the-art technologies. Open-field cultivation depends on seasons and climate, while advanced methods can include tunnels, protection, and modern cultivation structures with controlled environments, soilless media, irrigation and fertigation systems, and high-resolution controllers and sensors.

The continental way: Strawberries in Europe

In Europe, strawberries are a high-value, popular summer fruit, consumed and produced throughout the continent. According to a report by Roamler, 93% of Europeans consume strawberries, which in season feature regularly in consumers' shopping baskets.
Annual European strawberry consumption is estimated at 1.2M tons, with local production roughly equal in volume. Total trade volume fluctuates around 500M tons. While strawberry availability depends on local climate, overall trade volume shows an upward trend. Like other soft fruit, strawberries offer high value; and a continued focus on quality towards market growth can be expected in years to come.

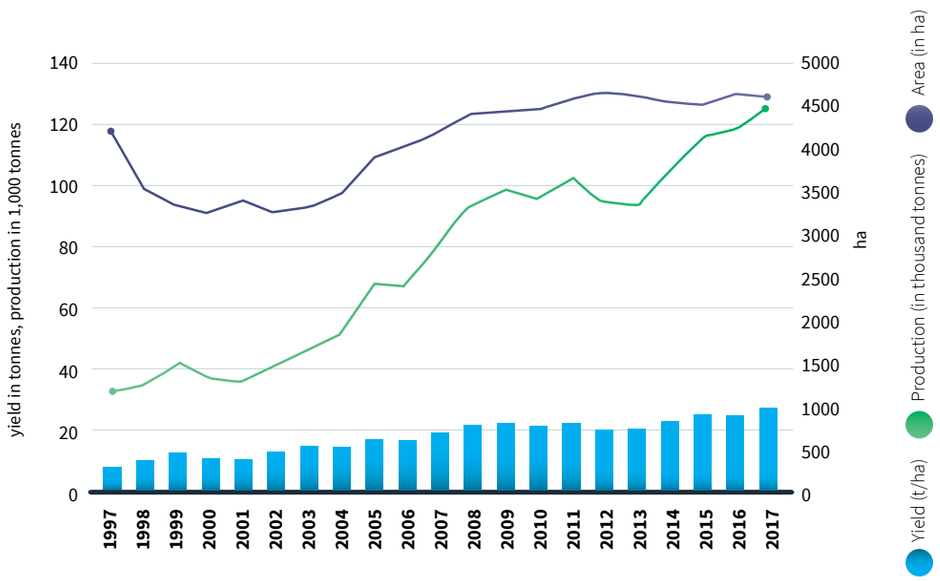


SOURCE: https://www.cbi.eu/market-information/fresh-fruit-vegetables/strawberries/market-potential?gclid=Cj0KCQiAweaNBhDEARIsAJ5hwbeQUk8yuh1rtEOkVDkgntczz6af_ubOAmb4Lo6Apoeq3rui_7Lw4YcaAkN8EALw_wcB (ITC Trademap)

GLOBAL CONSUMPTION OF STRAWBERRIES

Eat, Britannia: Strawberries in the UK

Over the past two decades, soft fruit production in the UK has grown by 131%, with consumption rising by 150% from 67,000 tons in 1996 to 168,000 tons in 2015. Over the same period, strawberry production has increased by 188% from 40,100 tons to 115,500 tons. According to recent research by Kantar, public appetite for fresh strawberries shows no signs of slowing. In the past 12 months (2020-2021), shoppers spent more than £772M on strawberries – over 10% more than the previous year – with 147,300 tons of strawberries purchased.
The UK's dedicated strawberry growers keep the nation's favorite fruit supplied throughout summer (May-October), and roughly 70% of strawberries bought in the UK are now locally grown.



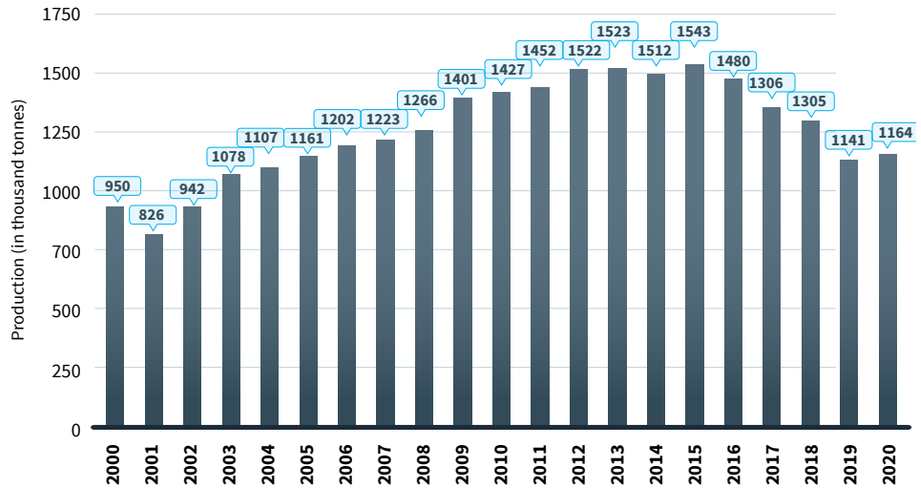
SOURCE: UK strawberry production, yield and area. Source: Defra 2018 and Rabobank estimate for 2017

GLOBAL CONSUMPTION OF STRAWBERRIES

Red, white, and sweet: Strawberries in the US

In the past two decades, the US strawberry industry has seen an upward trend in per-person consumption. Reasons include rising consumer awareness of healthy diet, yield improvements leading to greater domestic supply, and imports that allow for year-round availability.
The states of California and Florida are the US's top two strawberry producers, with California supplying over 91% of the annual crop (NASS, 2021) – but Florida supplying most of the winter crop (Florida Strawberry Growers Association).

US total strawberry production, 2000-2020 (in 1,000 tons)



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https://www.statista.com/statistics/193288/us-total-strawberry-production-since-2000/

GLOBAL CONSUMPTION OF STRAWBERRIES

Off to a good start

The basics of strawberry cultivation

Whether grown in open fields, tunnels, or structures, strawberries pose the usual challenges. Correct crop management will determine yield, quality, and profitability, and both irrigation and fertigation play key roles.

A proper irrigation and fertigation regime allows for continuous control over the strawberry operation, even when conditions fluctuate.

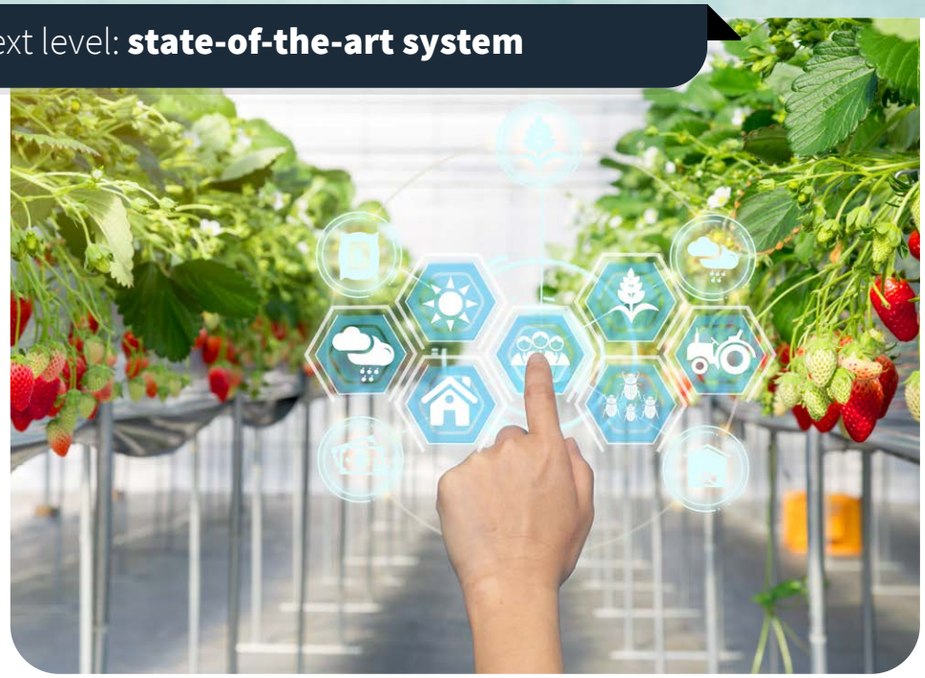
The different
cultivation
methods

Taking the next step

Advanced irrigation techniques

Irrigation techniques have evolved tremendously over the past decades, and companies like Metzer offer invaluable knowledge and experience in delivering superior irrigation.
For strawberry cultivation, there have been major developments in open-field methods, and even greater developments in soilless-media greenhouse methods.

Next level: **state-of-the-art system**



Whether dealing with soil-grown or soilless strawberry cultivation, the timing, volume, and duration of irrigation/fertigation cycles must be carefully controlled.
Only with a modern, state-of-the-art system can a grower determine root-zone moisture levels, nutrient availability, and pH levels. **One way to achieve this is pulse irrigation.**

A finger on the pulse

Using pulse irrigation

Optimum root-zone conditions call for precise moisture levels, air balance, pH levels, nutrient concentration, electrical conductivity, and so on. As an irrigation cycle ends, multiple processes commence in both the root zone and the plant: sedimentation, pH changes, water drainage, transpiration, and more.

Pulse irrigation – i.e., close intervals of irrigation cycles daily – enables to keep all of those factors as close to optimum as possible, and to supply the plant's vital requirements as often as needed.

Pulse irrigation requires specialized equipment, including high-quality, failsafe drippers with CNL and pressure-compensating features.
The irrigation system as a whole must also be designed accordingly, with pump houses with variable frequency drives; a suitable filtration system; a fertigation machine with latency control; an H_2O_2 injection unit; and remote, Web-based monitoring and control – all as part of an holistic approach that makes the most of available technological advancements.

Inbar ClusterDrip RG-X: A failsafe solution

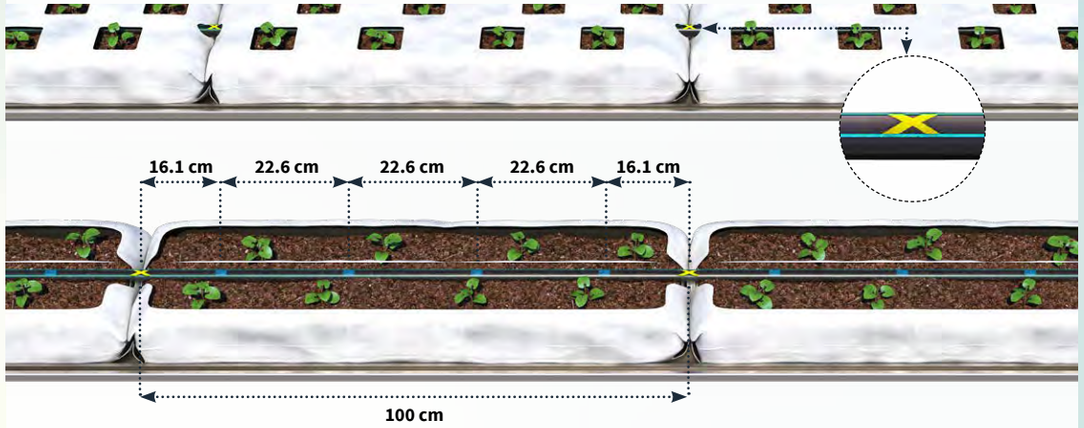
Metzer offers a full range of components and products for pulse irrigation systems, as well as all other drip irrigation methods.

All in one

Inbar ClusterDrip RG-X is the perfect solution for soilless culture, trough, and grow-bag cultivation of strawberries. Custom-made to your specific requirements, it is designed to fit specific grow-bag and trough spacing. The leak-free non-drain integral dripper is suitable for pulse irrigation using precise watering cycles.

INBAR RG-X Installation

INBAR RG-X installation requires minimum accessories and fittings, Since drippers are pre-built into the pipeline. The special marking "X" serves as a guide for the proper laying of the pipe: the "X" sign is to be located right between the growbags. Thus, initial and subsequent laying are less time and labor consuming.



Introducing: The ultra-low flow dripper

Recent technological developments have allowed Metzer to deliver emitters with flow rates as low as 0.85 L/H – making it possible to control water/air ratios in the growing media like never before.

In conjunction with pulse irrigation methods, these low-flow emitters bring the optimization of your cultivation system to a whole new level.

Providing both water and nutrients with extreme accuracy allows growers to control and monitor even capillary moisture movement – as specially designed sensors turn the irrigation system into the ultimate tool for constant, sustainable, season-long results.

RootGuard® Unique Technology

Metzer has developed this cutting-edge solution especially for strawberry cultivation, calibrating it based on actual field requirements, all the way through engineering, irrigation research, and production. That is why Inbar ClusterDrip with Rootguard® technology is one of the finest irrigation solutions available today.

For high-end hydroponic greenhouse production

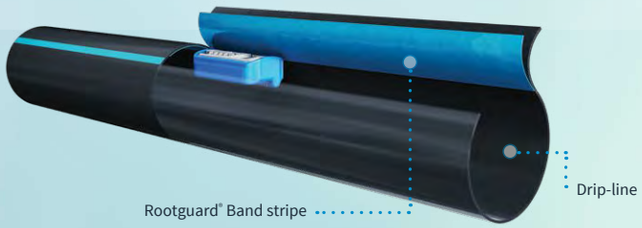
The Rootguard® technology protects the dripper from aggressive root growth and enables irrigation stability, resulting in uniform high-quality yield.

Maximum Results with Minimum Effort

INBAR RG-X is the result of our vast experience with precise fertigation regimes in hydroponic greenhouses. It serves the need for a product that is not only easy to install and maintain, but also compliant with the technological and agronomical demands of cash crops like strawberry, tomato, cucumber, bell pepper and eggplant.

Cylindrical Drippers

Flat PC Drippers



Flat Integral Drippers

The ultimate button dripper: Gali

With new drippers and components constantly being introduced, it's important to remember: if something works, keep it. Metzer's class-A GALI dripper is the longtime solution of choice for growers worldwide, and the finest button dripper we offer.

Now new and improved, the GALI dripper fits right over your existing infrastructure – no need to change anything. Keep doing what you do, but better, with Gali.

1-Outlet Adapter

2-Outlet Adapter

4-Outlet Adapter

Take a deep breath: Aeration & low-flow pulse irrigation

One key factor of plant development is continuous root-zone oxygen supply. Metzer's state-of-the-art solutions for strawberry cultivation enable growers to carefully monitor and apply a flow of oxygen-rich air to the root zone – thus enabling the plant to reach its own optimal balance and conditions, sustaining itself better against root diseases, anoxia, and anaerobic root-zone conditions.

Feed well: Fertigation with Metzer

When properly designed, your irrigation setup acts as a vascular system, supplying all essential nutrients to the plant. Metzer's advanced fertigation solution gives you control over the concentration, amount, ratios, and timing of each and every nutrient that reaches the strawberry's root zone.

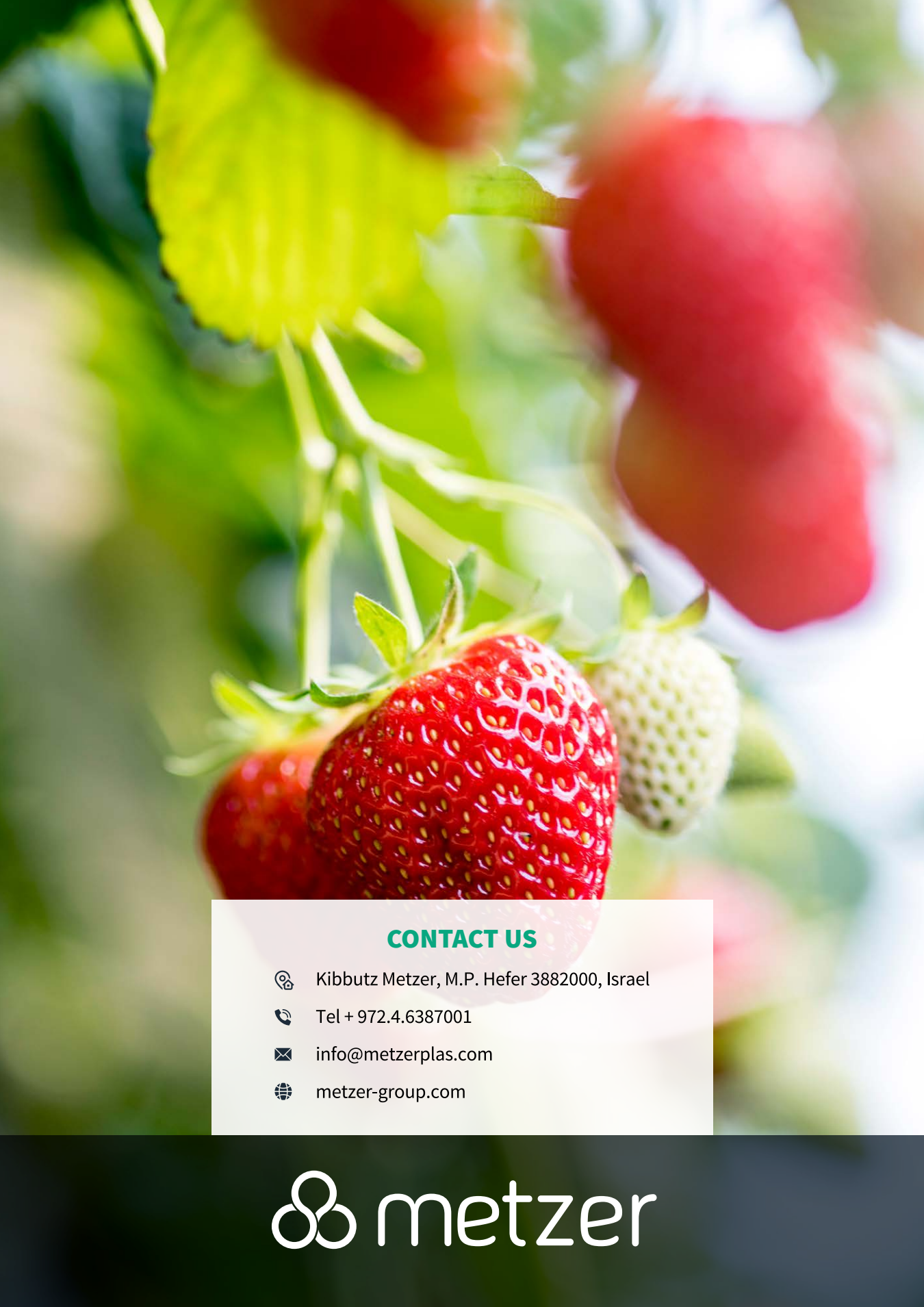
Set for Strawberry Success

optimizing strawberry cultivation

With advanced knowledge and technology at our disposal, we've reached a point where we can determine, control, and monitor a vast array of growing factors, optimizing strawberry cultivation to a level never before possible:

- A well-designed irrigation system with Inbar ClusterDrip (RG-X) and RootGuard to control moisture levels and irrigation regimes
- Advanced fertigation to achieve high-resolution nutrient application
- State-of-the-art sensors and controllers to combine the various inputs and bring strawberry production to new levels

Metzer is delighted to provide all of the above and more, allowing its clients to design the ultimate strawberry cultivation system.
Bon appétit!



CONTACT US

Kibbutz Metzer, M.P. Hefer 3882000, Israel

Tel + 972.4.6387001

info@metzerplas.com

metzer-group.com

metzer