

"THE CONSUMPTION OF MANGOES IN EUROPE IS RISING DESPITE DIFFICULTIES IN SOURCING"



"THE INABILITY TO MEET HIGH DEMAND, FOR A PREMIUM PRODUCT AND A FAIR PRICE, IS AN INDICATOR OF A SUPPLY CHAIN FAILURE."

*The article tackles general problems common to the Agri-sector in the rising economies.

About 37.5 million tons of mangoes are produced annually worldwide. Europe gets to consume just a bit over 1%. Just one percent!

EU MARKET POTENTIAL

From 2013 to 2019, mangoes' import to Europe constantly grew at an average pace of 24 thousand tons a year (reflecting a 7.9% annual market increase), with a total import consumption of 651,000 tons, value nearly € 700 million (2019). [➤](#)

Again, this is just for a bit over 1% of the annual global production!

Is the ~1% the full potential of mango export to Europe?

Not really. You see, the Europeans want and are ready to absorb (pay and consume) much more significant quantities, but they have high restrictions and requirements - "*the mango consumption is mostly supply-driven and mainly influenced by external factors such as available volumes, quality...*" ➤

Europe is craving for more high-quality mangoes and is ready to pay more to fulfill that desire.

As stated at [Fresh Plaza](#) ➤, "*Since the stocks are limited at the moment, and the demand for mangoes is increasing, prices should increase.*"

EUROPEAN MANGO CONSUMPTION LIMITING FACTORS

Why does the European market find it hard to increase mango import even by a fraction of percent?

The 'market failure' results from certain factors that keep mango supply low, while the demand is high, and the potential is much higher. Let's try to analyze those factors.

WHY IS THE SUPPLY TO EUROPE LOW?

To answer the above question, let us use West Africa (as a basis of the analysis), a near-by production source to the EU, with an annual production of 1.5 million tons of mango, potentially worth €2.25 billion.

It is easy to see that West Africa alone holds the ability to supply **four times more** (quantity) than Europe's entire current supply of fresh mangoes.

With such advantages starting point, we should try to learn the reasons why in reality West Africa - out of it's 1.5 million tons - exports less than 6% (~92 tons) of its mangoes, from which only 4.6% (~70K tons) is exported to Europe, although Europe offers premium prices?

The total import of the fresh mangoes to the EU in 2018 was about 415 tons, and as stated above, it is in short supply.

Why, despite the abundance of relative advantages, including half the distance relative to Latin America, West Africa is responsible for only 17% of total (~415 tons) fresh mangoes imported to Europe?

The CBI (Centre for the Promotion of Imports from developing countries) states that the reason is - **limited supply** due to *"Quality issues, phytosanitary checks and unpredictable supplies make the mango business in Europe challenging for both importers and exporters."* ➤

One should ask, *"What exactly are those **quality issues**, why do **phytosanitary checks** have such a large impact on the volume of imports, and why mango **supply is unpredicted**?"*

FACTOR 1 – QUALITY ISSUES

The **quality issues**, which stop imports, resulting from mango growers and exporters' inability to meet the EU's phytosanitary regulatory requirements.

According to *the CBI*, *"Fresh mangoes must comply with the general requirements for fresh fruit and vegetables..."* –


Most African countries and their farmers (as most Asian and Latin American farmers) fail to stand up to the EU regulator's high demands.

Note that major EU supermarket chains have higher standards than those of the EU, making export to those chains an even more challenging task.

FACTOR 2 – PHYTOSANITARY & REGULATIONS

*"**Pesticide residues** are one of the crucial issues for fruit and vegetable suppliers. To avoid health and environmental risks, the European Union has set maximum residue levels (MRLs) for pesticides and other contaminants... Products exceeding the MRLs are withdrawn from the market."*

*"**Mangoes are a high-risk fruit concerning fruit flies** (Tephritidae). Therefore, a phytosanitary document is required for exporting mangoes to Europe and hydrothermal treatments prior to export are the standard." ➤*

Since 1 September 2019, a new European Directive  requires phytosanitary certificates for mangoes to include one of the following statements, which must be communicated by the national plant protection organisation in the country of origin in advance:

1. The fruits originate in a country recognised as free from Tephritidae (non-European);
2. The fruits originate in an area established by the national plant protection organisation in the country of origin as being free from Tephritidae (non-European);
3. No signs of Tephritidae (non-European) have been observed at the place of production and in its immediate surrounding since the beginning of the last complete cycle of vegetation (this includes official inspections at least monthly during the three months prior to harvesting and on the harvested fruit). Information on traceability must be indicated on the certificates;
4. The product has been subjected to an effective treatment to ensure freedom from Tephritidae (non-European). The treatment data should be indicated on the certificates.

This requirement puts more pressure on plant health authorities. Authorities in producing countries have to be able to declare a region pest free or check on specific areas and product treatments. Importing companies are concerned that many supplying countries are not ready for this new regulation and that it will affect the supply of fresh mangoes.

When we dig into the numbers, we see that fruit flies infest 50% to 80% of the mangoes grown in West Africa!

About 1.5 million tons of mangoes are produced in West Africa annually representing about 4 percent of global production.

While this represents a significant source of revenue for countries and exporters, the horticultural sector in the region is adversely affected by the fruit fly. It destroys between 50-80 percent of mango production.

Besides, post-harvest losses range between 50-80 percent, which means that less than 100,000 tons of fresh mangoes are exported and about 50,000 tons are processed each year locally.



FACTOR 3 – UNPREDICTABLE SUPPLY

The high fruit fly infestation leaves out of the starting 1500K tons ONLY 300K to 750K tons as potential export.

At this point, we already get part of the answer for the low and unstable mango availability and limited supply.

More answers we get when we understand that it is nearly impossible to detect all infested fruits before exported. When you have 50% to 80% fruit fly infestation, be sure that some infested fruits will be packed and shipped, undetected, all the way to Europe.

Two to four weeks later, when infested fruits are intercepted in Europe, the entire consignment is destroyed. Hence, the sourcing country may go under **Export Ban**, further limiting the export possibilities.

The first to be harmed and lose their income are the farmers, exporters, and other value chain partners.

The fear of fruit fly infestation pushes farmers to spray more chemicals and harvest prematurely fruits before susceptible to fruit fly attack, but at the expense of a sub-optimal quality for export.

The result of repeated sprays are pesticide residues in the fruits, and the result of the too early harvest is "not so tasty fruits" and an abridged harvest season.

Note that this situation is not a result of careless fruit fly management or inadequate application.

From 2015 to 2019, the EU supported € 23.5 million in an area-wide fruit fly control project, the FFCP/PLMF, in West-Africa.

It is clear; fruit flies are simply 'killing' farmers, exporters, and the entire agri-industry in countries where they are not adequately managed.

The past four years have been challenging and we've incurred huge losses, both financial and emotional due to the quarantine fruit flies menace. My family and I are at a loss on what to do and we're contemplating giving up on mango farming.

Part of an email from an African mango grower (October 2020).

DEAL BREAKER

While fruit flies are the root cause of the low volume of mangoes available in Europe, those are the regulator and market demands that dictate the quality requirements.

*"Food safety and pesticide residues are a deal-breaker for supermarkets, while consumers buy mangoes based on price and appearance. Taste is not always the most direct concern, but consumers will not repeat their purchase after **a bad experience.**" ➤*

THE CHALLENGE

Now we understand the inherent limitations of the mango supply to Europe and other developed markets, "*Mangoes are commonly imported from developing countries. Finding a reliable supply is one of the major issues to maintain stability in the mango market.*" ➤

In other words, finding a reliable supply source is the key to solving the problem presented at the beginning of this article;

"the mango consumption is mostly supply-driven and mainly influenced by external factors such as available volumes, quality..." ➤.

WHAT IF

Imagine, Europe is getting the supply of all of its mango demands. All are high-quality mangoes, free of sprays, and free of phytosanitary hazards, mainly free of fruit flies.

When this happens, we will see European mango annual consumption growing annually by 15%-20%. That translates into an extra of hundreds of million Euros of imported mangoes to the EU in the next five years.

Meaning, hundreds of thousands of extra tons of mangoes exported from emerging markets to Europe. As a result of that process, energizing the economies in the sourcing countries and positively influencing the lives of tens of thousands of farmers and many other people involved in the supply chain.

It only makes sense that a growing volume of mangoes will be sourced from an area close to the EU - from Africa - to fill the gap, resulting from the ever-increasing demand.

For Africa, or even more specifically, West Africa, to become a significant export area of mangoes to Europe, it has to deal with the three factors described above – meaning to solve two quality problems, which to this day have caused all attempts to grow its exports, to fail;

* **Effective Fruit Fly Management** - will enable to reduce infestation to <1%, from its current 50%-80%.

* **Chemical/Spray Free Mangoes** – that means reducing or eliminating insecticide sprays, including those for the control of fruit flies - from its current level (100% of the farms) to a majority free of insecticide sprays, having chemical residue-free fruits.

Well, how do we bridge the gap? How do we manage to pull up this challenge?

To cope with this typical situation to countries exporting mangoes, Biofeed has developed the **Green Valley** concept.

It is based on 30 years of knowledge and experience, including successful fieldwork in Africa and Asia.

As essential for the **Green Valley** success is that it act in light of a long term MISSION -

"To enable consumers to enjoy better and healthier food and life, while growing produce in a safe, eco-friendly environment, and improving farmers' livelihood."

GREEN VALLEY

The *Green Valley* initiative is all about increasing the QUALITY of mangoes to export much higher quantities from emerging markets, such as Africa, to premium markets, such as Europe.

Understanding that FRUIT FLIES are the KEY obstacle in making this dream come true, the *Green Valley* initiative's first (and primary) element is the FFCTZ (*Fruit Fly Certified Trade Zone*).

FFCTZ is a cost-effective *Fruit Fly System Approach Managed Protocol*, enabling fruit fly control without sprays and with a near-zero infestation level; about 99% less infestation than currently, while using sprays, traps, and sanitation.

The FFCTZ implementation outcome is the ability to harvest mangoes year-round, regardless of weather conditions, such as rain, yet, be confident about the results and the ability to reach premium markets standards, every time all the time.

The FFCTZ can be used by a professional farmer having a mango farm larger than 50 hectares.

The FFCTZ is implemented and operated by a team of experts, which follows a strict protocol to ensure standing up to leading premium markets' highest requirements and regulations.

KEY ADVANTAGES OF THE FFCTZ PROTOCOL

- * **Simple and easy to use** - unlike the large, complex, and expensive fruit fly Area Wide Management projects (AWM).
- * **Accessible**- for area/farms larger than 50 hectares, in contrast to the enormous AWM projects applied on thousands of hectares.
- * **Immediate results** –exporters get their ROI within the first season, which is impossible with other AWM project.
- * **Weatherproof** - adaptable to a variety of climate zones.
- * **Simultaneous management of mixed fruit fly populations**(which is an impossible mission for other AWM projects).
- * **Zero Fruit Fly Sprays** - based on a non-spraying technological solution, the *FreeDome*. Unlike other AWM projects, with FFCTZ, chemical residues are no longer an issue.
- * **Effective**– reduce fruit fly infestation by 99.9% (data is based on actual filed results). After all, fruit fly management protocol is made to eliminate the obstacle of fruit fly infestation so that farmers can grow Export Quality fruits, and importers can import free of hassles. Current protocols, resulting in 50% to 80% fruit loss due to fruit fly infestation, and Export Ban.

HOW CAN YOU GET YOUR JOB DONE IN A FAR BETTER WAY?

The FFCTZ has many up-sides benefits, which only a handful are mentioned above. However, let's briefly look at how it can help you, get your job done better, and improve your position and income.

Farmer – FFCTZ enables you to free your mind, workers, and worries from the daily pursuit of fruit fly control, through spraying, trapping, sanitation, etc. With FFCTZ, you focus your efforts on growing the best possible mangoes, harvest them at the optimal time, and getting them in the best shape to the packinghouse. By the way, your harvest season can be as long as you wish, unaffected by rains, time of the year, or fruit flies.

Exporter / Importer – finally, your worries are over, at least those that have to do with phytosanitary standards. When fruit flies are no longer a problem, and the chemical residue is not an issue, you can finally focus on what you want and need to do. You can outreach more professional farmers who can supply you with more export-quality mangoes growing under the FFCTZ protocol.

FFCTZ is your path to moving from the uncertainty involved in purchasing mangoes in emerging markets to the certainty of getting the quality and quantity that you want from the market that you wish to, at the perfect time for you.

Now you can offer your clients the kind of quality that they require, be it Normal, Ready-to-eat, or Tree-ripened mangoes.

Certainty is the most valued thing for businesspersons; with FFCTZ, you have the highest certainty you can dream of.

Regulators / Plan Protection – your life will be easier and joyful without the daily fear and tension that have become part of you during the mango harvest season. There is no need to stop farmers from harvesting, while 30% to 50% of the fruits are still on the trees. No more being afraid of interceptions and lab results. No more need to face angry farmers and explain why there is (still) no effective fruit fly solution. With FFCTZ, you will finally be able to relax and focus on other issues that are waiting forever.

Supermarkets –mangoes are tasty, and high value produce. If only you could sell more mangoes (of really high quality), you would be able to increase your annual income for the tropical (exotic) fruit category. When the farmers from which you source your mangoes are working under the FFCTZ protocol, you can be sure to get a much higher quality, greater volume, and during a more extended period of the year.

When your source producers are under the FFCTZ protocol, you can offer more categories of quality, i.e., Normal, Ready-to-eat, Tree-ripened, and be sure that complaints about quality will be lower than ever. You can have that place on the shelf full of high-quality mangoes year around.

Consumer – FFCTZ will enable you to get the best quality mangoes, in the best condition, year-round, and of course, free of pesticide residues, free of bad smells, free of pests, no need to buy 5 fruits just so that you will have two good to eat, but not to enjoy fully.

When you buy mangoes sourced from an FFCTZ, you will buy exactly the number of fruits you want to eat because you will not throw any fruit. All fruits will be tasty thanks to the perfect timing of harvesting.

You will also know that by doing so, you helped improve the lives and health of farmers in emerging economies while protecting the environment.

If you like to get the above benefits, let's talk and discuss your options to enjoy its results in the coming season. I am sure that together we can define and take a GIANT step forward and bring high-value business and market results.

Please E-mail me to nisraely@biofeed.co.il or text +972-5423425 (WhatsApp).

For web translation and sharing with friends - [press here](#).

*For a greener world
Free of sprays
Full of joy*

See you soon,
Nimrod



P.S.

Biofeed believes in making dreams come true. Our mission is -

"TO ENABLE CONSUMERS TO ENJOY BETTER AND HEALTHIER FOOD AND LIFE, WHILE GROWING PRODUCE IN A SAFE, ECO-FRIENDLY ENVIRONMENT, AND IMPROVING FARMERS' LIVELIHOOD."

And, we love to cooperate with people and companies with whom we share our *Vision* –
"A WORLD WHERE PEOPLE ENJOY LONGER AND HEALTHIER LIVES, CONSUME HEALTHY FOOD GROWN IN A HEALTHY AND SOUND ENVIRONMENT."

P.P.S.

You can learn my *WHY, HOW, WHAT, WHO, WHERE, WHEN* that got me involved in a lifetime mission of #MakingADifference, and how that lead to establishing Biofeed

[><<].

P.P.P.S.

Biofeed long time experience brought us to understand that *a full solution* must include a state-of-the-art crop protection technology combined with suitable protocols.

Therefore, we tailor-made customized per situation a Package solution containing *Technology, Protocol, and Qualified Support*.

The Biofeed *Green Valley* INITIATIVE [>>><] is based on critical Solutions, Methodologies, Protocols, and Models, which are ALL field-tested and results proven. The key elements of *Green Valley* are:

1) *FreeDome* – the core technology for fruit fly control, which enables export quality. It is used as part of the FFCTZ.

2) *Fruit Fly Certified Trade Zone (FFCTZ)* – a concept of a protocol and action to enable regulators, exporters, importers, and farmers to export produce from designated regions.

3) *Green Valley National Export Project* – this protocol is based on an Israeli model. It is designed for governments interested in adapting their country's agriculture to the 21st century.

4) *Green Valley Fruits* – designated fruit certification label of quality assurance protocol usage.

P.P.P.P.S.

Who is qualified to use the FFCTZ? A local partner with a particular focus on mangoes, e.g., fruit growers' organizations, fruit traders, exporters/importers, governments, businesspersons, food chains, etc. [>>><]

IMPORTANT!

Our investment in each project is enormous. Thus, we must carefully select the projects that are most likely to bring about the desired results.

P.P.P.P.S.

Additional (on-line) information –

* Join me on LinkedIn for many more posts and updates. Please press the FOLLOW button (not CONNECT) [>>><].

* Previous articles [>>><].

* The unfinished historical series The Agricultural Gap; discussing the 12,000 years history of agriculture, starting with The Agricultural Revolution, moving to nowadays and the Agri-industry Revolution [>>><].

And lastly – if you have not yet read my personal story and **the nearly fatal accident which changed my life**, then here is the opportunity to do so [>>><].

***Change Begins With A Decision
That The Existing Reality Is A Choice
And Not A Decree Of Fate***