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HOW RESTRUCTURING THE AGRI-EXPORT VALUE CHAIN CAN HELP EMERGING MARKETS TO INCREASE EXPORT

"When your value chain is ineffective, you are losing money"

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

The first lesson I received from my father about marketing agricultural produce was "*We (fruit growers) do what the fruit marketer wants us to do so that he can get us the best deals*."

In a developed market, where there is **trust between a value chain**'s components, each part is focused on satisfying the following component in the value chain, hence, advancing the common goal of the chain.

The fact of the matter is that a **component in the value chain will grow and prosper** as long as the **entire** value chain thrives, and vice versa.

However, TRUST is a scarce commodity in emerging markets, and a **disintegrated value chain** is a common sight.

The state of agriculture in emerging markets is merely a reflection of the value chains in those markets.

A market failure, which leads to African farmers producing only 10% of the mangoes in the EU, is the result of the ineffective value chain.

If we wish to improve the agriculture and the economy in Africa and other emerging markets, we need to enhance their value chains. Unfortunately, that is not an easy task.

MEASURING THE VALUE CHAIN

The value chain top success challenge is realized and measured by export activity operation and value. This is when a nation gets the real feedback, in the form of the amount of foreign currency influx, of how good and effective its value chain is.

The mango industry in sub-Sahara African countries holds a huge potential to become a leading export industry.

To improve the value chain, we need to characterize it, measure its components' performance, and understand its problems. This way, we can introduce and implement the necessary changes to increase the value it creates to its parts and the country.

Hence, the first step is to define the mission and function of **each component in the value chain**. Structural failures, which are the most common, are discovered at this early stage.

Let's start by asking a fundamental question; what are the **value chain's role and purpose** regarding the mango agri-export from Africa (or any other place)?

Answer: To enable the export of as many mangoes as possible, at the highest price per kg, to maximize the income and return on investment (ROI) for parties in the value chain and the state's economy.

In practice, it means; taking from Africa as many mangoes as possible and bringing those to EU consumers that are ready to pay the highest price.

Due to the abundance of mangoes in Africa and proximity to the EU market, we would expect Africa to supply at least 50% of the EU demand for that fruit. In reality, the EU imports only 10% (≈70K tons) of its mango demand from Africa, and African mangoes do not fetch the highest prices.

A markdown gap of 300K tons between expectations to reality indicates that there is much room for improvement in the value chain of mango exports from Africa to the EU, and probably to other markets.

EXAMPLE: AFRICAN MANGO-EXPORT VALUE CHAIN

The process of improvement contains the analysis of the Current State versus the future state, which we inspire to achieve. Hence, bridging between the two states is the main task.

If we wish to increase mango export from Africa, we need to start by analyzing the African value chain's current state.

Here I will analyze three of the main parts of the Africa-EU mango export value chain.

Let's start by asking; *what are our **expectations** from the following parties composing the value chain?*

THE INPUTS SUPPLIERS (including distributors) **–** the ability to supply, at a competitive price, the required technologies, knowledge, finance, services, etc., necessary to grow and export the best agri-produce. That part also includes the services and knowledge provided by the government.

THE FARMERS – the ability to produce the high yield, high quality, right varieties, and harvested at the best time for best quality.

THE EXPORTERS/IMPORTERS – the ability to supply buyers, at the best time, with the required quality and quantity. Hence, fetching the best market prices.

THE OVERALL VALUE CHAIN EFFECTIVENESS AND COMPETITIVENESS can be measured by:
(1) Price per kg (quality) - received at the export markets versus exports from other countries,
(2) Quantity - how many tons were exported (imported to the EU) versus other countries
(3) Income and profit - of each of the chain's elements.

EMERGING MARKETS'AGRI-INDUSTRY IMPAIRMENTS

After analyzing three of the main elements in the value chain, we know and understand what to expect from each of them and what abilities they should have.

The next step is to describe the real *Current State* of those similar elements. By its nature, the description below is general, and hence simultaneously fits all and none. Its purpose is to shed some light on some of the common challenges.

THE INPUTS SUPPLIERS – lack the technology, knowledge, and protocols to effectively fight the main group of pests (fruit flies), which causes tens of percent of yield loss and are quarantine pests. There is also an acute lack of experts in mango growing, a lack of suitable laboratories to inspect chemical residues, and ineffective quality control (including phytosanitary) at the exit ports.

THE FARMERS – Farmers lack proper technologies, knowledge, and services to produce a higher quality yield. Currently, the **y**ield per hectare is low, i.e., 3 to 10 tons per hectare, versus 40 to 80 tons per hectare in the advanced countries.

Please stop and think for a moment of the influence when we improve the yield and quality of mangoes, increasing African export to EU to 50% of EU demand, instead of the current 10%.

Farmers are also missing an effective protocol for fruit fly management, which results in a **very high fruit fly infestation (30% to 80%).**

The high infestation pushes farmers to **spray frequently** and **harvest as early as possible**, often too early.

The outcome is frequent interceptions of fruits infested by fruit flies, containing chemical residues **above** permitted MRL, short export season, and mangoes' taste sub-optimal.

A common practice among big mango growers and packinghouses is to collect and export mangoes from smallholders, which often operate without any quality control. This reflects negatively on the overall mango quality, interceptions, and the reputation of African mangoes.

THE EXPORTERS/IMPORTERS – they get the produce from the mango growers but have low or little ability to run in-depth quality control.

Exporters/Importers receive **low volume and quality** produce, making it impossible for them to create competitive advantages on the international market.

Furthermore, many local exporters do not have access means and required acquaintance with leading premium export markets.

For example, how many African mango exporters export to the lucrative markets of Japan, China, USA, India, etc.?

Furthermore, francophone countries tend to export to France, even when prices are higher in other EU markets. Such an approach dramatically limits the economic potential of mango exports from Africa.

The current African overall value chain effectiveness and competitiveness are low, with a low trust level among parts within the value chain.

Ultimately, it leads to the current state where -
1. Africa provides only 10% (about 70K tons) of the EU mango demands, although its proximity to that market.
2. Most African countries producing mangoes are under export ban or risking one in the coming years. Hence, we may see mango export volume and value coming from Africa to the EU continue dropping.
3. The Farmers manage to “survive” but are incapable of investing and improving their agri-business.

WHAT IS THE SOLUTION?

The problems described above are due to fundamental failures in the value chain. Hence, one can expect a change as a result and after correcting those failures.

The most significant barrier to coping with is the current ineffective protocol for managing fruit flies, followed by the need for improved quality control systems.

THE SOURCE OF TROUBLES

In the example of the African mango industry, we can observe essential characteristics. Every party in the value chain is focused on optimizing its financial results without considering the overall effect on the entire value chain.

In short, *Local Optimization* of individual elements in the value chain is at the expense of *Global Optimization* of the entire value chain.

This is similar to a factory with many workstations, some of which work efficiently, and some of which fail. Workers at the efficient stations will not earn more as long as the less efficient stations' failures are not corrected. Identification of failures, repair, and synchronization of all stations is the workers' responsibility at each station together with the plant management.

"A Chain is As Strong As The Weakest Link"

Sure, no one wants the entire mango value chain to deteriorate and fail, but it happens anyway when there is no one representing the whole value chain's shared interests.

Let's take a look at how the current state of focusing only on the *Local Optimization* damages the value chain's common interest, which produces low results, leading to lower income for all.

In the African mango-export industry, fruit fly control is very critical to its success. Let's look into how the various parties perceive their role and deliver their responsibility regarding this challenge.

INPUT SUPPLIERS - supply ineffective fruit fly control solutions, resulting in 50% to 80% fruit damage! This is a direct result of doing business where the seller cares more about his short-term financial interest and none regarding his client results. Such behavior is not in line with the long-term interest of suppliers and the value chain goals.

FARMERS - similar attitude leads farmers to export fruits known to be of high risk, e.g., when fruit fly infestation increases or produce received from smallholders not under any quality control. This is, too, against the long-term interest of the farmers and the value chain.

EXPORTERS/IMPORTERS – they are ready to export produce, which didn't pass through the necessary quality control process. Even when they know it is not according to required export demands or regulations in the designated country. Just like everybody else, they too focus on short-term financial success. Hence, compromising the long-term interest of the entire value chain.

The above example demonstrates the catastrophic outcome when each party is focused on maximizing its short-term profit.

When this occurs, the disintegration of the system is unavoidable, and the long-term interest and trust are hopelessly jeopardized. In such a situation, there is no winner, but many losers.

The cure for this fundamental value chain problem is balancing the *Local Optimization* activities with the *Global Optimization* activities.

But how the balancing of activities is performed in practice?

We can draw inspiration from how Israel chooses to deal with that challenge and how it managed to balance its agri-export value chain. In the Israeli case, the results were outstanding, leading to long-term economic success for all value chain parties.

ISRAEL – INTEGRATING THE VALUE CHAIN

Agrexco Agricultural Export Company Ltd. (i.e., Carmel Agrexco) is an Israeli company that contributed a lot in turning Israel's agri-industry into a powerhouse, fully export-oriented.

What Agrexco did that enable it to catapult the Israeli fresh agri-export industry?

Although Agrexco was, by definition, an export company, having offices across Europe and elsewhere, they cared most about the quality of the produce which they were exporting.

However, unlike other export companies, they didn't wait for the harvest to see the quantity and quality.

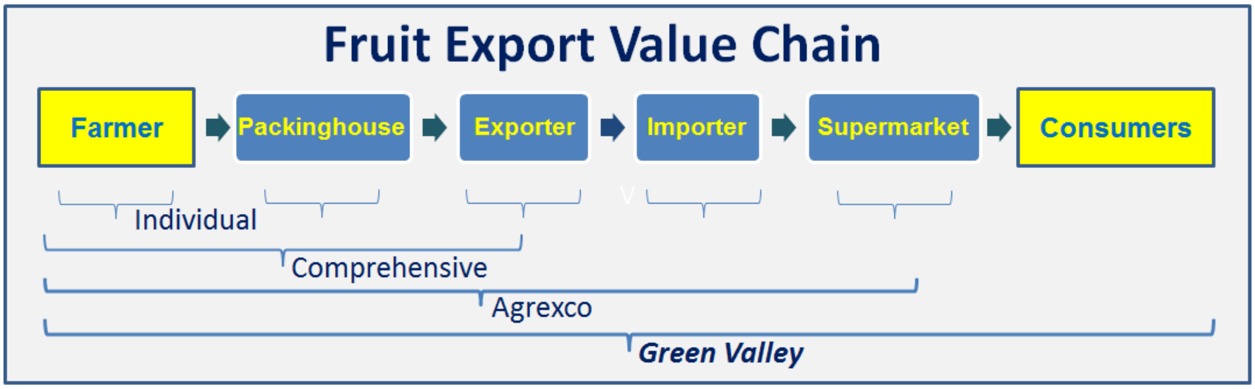
Instead, they worked year-round, closely with the farmers and with the state's extension services to ensure they will get the required quality.

A farmer that wouldn't stand up to the required quality couldn't export!

Agrexco took full control and coordination responsibility, all the way from the farmer to the buyers in Europe and elsewhere.

Quality was the king, and Agrexco was familiar with everybody active in the markets.

As a result, they could fetch the best prices for the best produce! In a short while, Agrexco built a strong brand that buyers associated with Israeli fruits' quality and good taste.



Each component in the value chain in the emerging markets is often active separately from the rest of the chain, and only occasionally contact. *Green Valley* is focused on how it can best serve the end buyer, the consumer.

GREEN VALLEY - BASED ON THE ISRAELI EXPORT MODEL

Green Valley is Biofeed's way to emulate the Agrexco model into the emerging markets' agri-industry.

Surely you can't use the Agrexco model as is. Africa and other emerging markets are not Israel, and today's requirements are different from what they were 65 years ago.

Green Valley is keeping some of Agrexco's principles while adjusting them to the 21st Century and adding some of its own.

1. Full Responsibility - *Green Valley* is following the steps of Agrexco by taking full responsibility for supplying European importers with the best quality mangoes.

2. Work Closely - *Green Valley* is working closely with its farmers, supporting them in getting the desired quality and quantity results.

However, although the above is very intensive in requirements from *Green Valley*, it is insufficient.

3. Fruit Flies - *Green Valley* understands that export will remain challenging and maybe even impossible unless it provides a solution to the most challenging problem for the mango industry – the FRUIT FLIES.

Part of *the Green Valley* protocol is the ***Fruit Fly Certified Trade Zone*** (FFCTZ) package, which, regardless of the fruit fly population, enables to reach export quality fruits free of sprays.

The FFCTZ package includes the *FreeDome* technology, protocol, methods, and services required to export quality fruit fly management.

Furthermore, *Green Valley* offers its farmers a *Package* to enable them continuous increase of yield and quality. That translates immediately to increased income.

4. Consumers - *Green Valley concept* considers the consumer experience and overall satisfaction as its business compass. *Green Valley* wishes to supply consumers with the best physical, mental, and emotional experience when interacting with its mangoes.

I believe that the better *Green Valley* understands the consumers, the better we can transfer that feedback to the *Input Providers*, *Farmers*, *Exporters*, to *Importers*, and *Sales chains*.

This will help all value chain elements to continuously improve, hence maximizing the overall chain efficiency, and each of the single elements' profit.

EVERYBODY WINS BY WORKING TOGETHER

An effective value chain is one where transmissions are moving between its parts fast and uninterruptedly like it is with our body's central nervous system.

This enables the entire value chain to respond fast and effectively to any change signal arriving from the consumers or other chain elements.

Green Valley wishes to maximize the **entire value chain**'s long-term income, including Input Providers, Farmers, Packinghouses, Exporters, Importers, Dealers, Supermarkets, and Consumers.

Thanks to the integration of the value chain, *Green Valley* enables African mango growers to grow more produce, higher quality, and higher income.

At the same time, **EU importers know they can trust the** *Green Valley*'s value chain to take care of their interests of fetching the required quality and quantity over an extended harvest period.

Green Valley and Biofeed have already invested many years and significant resources (not only financial) in opening and enabling export from emerging markets to premium markets.

This is a perfect time and opportunity to join *Green Valley* and take advantage of its endless possibilities for the export of your produce.

Our previous experience showed that farmers **could increase their income per hectare by over 100%, already in the FIRST season**.

I believe that even 40% is perfect for the first season already!

Green Valley should always be part of a national program, as part of it is the *Fruit Fly Certified Trade Zone* protocol.

Note that we are limiting the *Green Valley* to deal only with the export of mangoes at the current business stage.

Don't wait in vain; everything will be the same or even worsen unless you act to change your future. The future belongs to those who decide, prepare, and act.

Now is the last moment to save your 2021 season from being the same as the 2020 season.

*** Note, in last week's article there was a mistake in the figure presented for "*selection criterion for buying mangoes*". Attached is a link with a corrected Figure - https://bit.ly/MakeYourYourCompetitorsNon-Relevant

I care a lot about your opinion and appreciate your advice on making things work even better.

If you find this article interesting, share it with someone who should see it and benefit from it!

Contact me: nisraely@biofeed.co.il or text +972-5423425 (WhatsApp).
Let's talk and see how we can make one plus one much more than two.

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.
COVID-19 changes people's eating habits and is growing the awareness of health, chemicals, and quarantine pests. *Green Valley* is here to support your effort to overcome those challenges and take advantage of the open opportunities for those who seize the

moment [>><<]. Please send me an email and state your challenge and goal. Biofeed team and I will take it from there.

P.P.S.
Green Valley customized Package concept **-** containing Technology, Protocol, Methodologies, Models, and Qualified Support Services.

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 (see below).
2) ***Fruit Fly Certified Trade Zone*** **(FFCTZ)** – is a **model** 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**.
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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 most likely projects to bring about the desired results for all involved.

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