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## Technical Assistance for the Study on Development of Collective Application Models for Small Farmers

### Short Supply Chain



Agamemnon  
Consulting Group



This booklet explains the concept of  
Short Supply Chain, ways to apply it  
and its advantages

# FOREWORD

Agriculture is the practice of all activities associated with the cultivation of the soil and the rearing of animals to produce plant and animal products. The term "Çiftçi," translated as "Farmer"; comes from the Ottoman agricultural regulation. It originated in the early stages of the Ottoman empire through the support of settled families who farmed the land with a pair of oxen. Thus, the Farmer was a person or family who received a couple of oxen to cultivate the land. Over time, the definition of farmer has expanded to include families/individuals engaged in agricultural production apart from the land and in dependence on nature.

"Farmer" is defined as natural and legal persons who are involved in agricultural production permanently or at least during a production or cultivation period as owner, tenant, co-owner, or shareholder in the Agriculture Act No. 5488. The term "small farmer" which this project focuses on refers to family businesses which earn a greater part of their living from agriculture and animal husbandry practices.



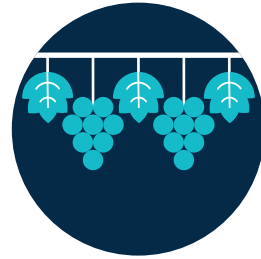
This booklet is prepared to introduce the concept of “short supply chains” because it may be beneficial for the survival, welfare and competitiveness of small farmers. Yet the “supply chain” concept must be well understood before the differences and advantages for small farmers can be pointed out.

# WHAT IS SUPPLY CHAIN

The 'supply chain' represents the flow of materials, information, and finance that moves from supplier to manufacturer, wholesaler, retailer, and consumer. The process of the supply chain may change. The steps in a supply chain may reduce or expand depending on the circumstances like the type of product, location, and market expectation. We tried to exemplify a general flow of the supply chain by defining the steps for vegetable or fruit production:

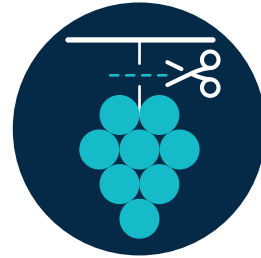
## PRODUCTION

The first step of the supply chain is production.



## HARVESTING

Then the product is harvested.



## SELECTION

In the following step, the product goes through a selection process and is separated into groups depending on quality measures. These measures may differ from product to product.

- Occasionally, the sugar content is tested with a sugar index tool,
- seldom the colour is tested with a colour chart,
- Various phases of the tea (bud, stem, leaf) can be separated.
- Depending on the product type, other variables can also be checked.



## DISTRIBUTION

- The product may be transferred to a different village, district, region, province, or another Country.
- The distribution process is complicated, as sometimes a product goes to a local distributor, then is shipped again to reach a wholesaler or another local seller in the province where it arrived.
- Thus, the product may make many kilometres and pass through different hands before the customer.



# SUPPLY CHAIN

## PRODUCT TRANSFORMATION

As the distribution happens, these are some of the common places a product visits before it is sold to a customer:

- Local trader (collector) in the village or district where it is produced.
- Wholesaler (market chains or supermarkets) or Local seller in different provinces
- Storage or warehouse to be sold to wholesalers later.
- Another producer who uses the product as an ingredient to produce another product; E.g., grape



## PACKAGING

Packaging can occur after the product has been selected, after it has been processed, in the factory or warehouse, or at wholesale. It is, therefore, just one step in the supply chain of goods that adds value to the product. This step includes the following measures:

- Design of the packaging
- Printing of the packaging
- Weighing and packing the products
- Preparing for shipping by preventing damage and leakage.



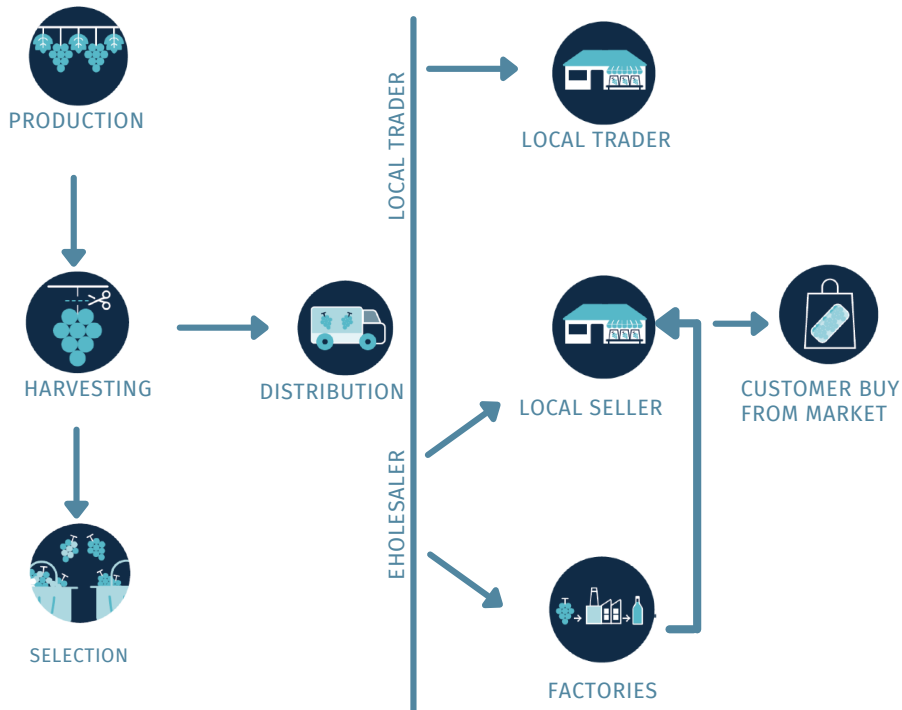
## DISTRIBUTION

After selection, product transformation, packaging takes place in a factory or warehouse, the goods must be handed over to a salesperson to reach the customer



## 2. What is Supply Chain?

Every step in the supply chain process adds value to the product yet also increases the cost and, therefore, the price. As a result, a tomato that costs 2 TL/kg at the farm gate may be sold 8 TL/kg at the market. A simple flow of the supply chain elements is explained below. It must be noted that distribution channels and sales points are utilized more than once in a supply chain until the product meets the customer:



If some of the steps can be reduced or handled in-house, this will result in the supply chain process to be shorter, and this new shortened process will be called a short supply chain.

# WHAT IS SHORT SUPPLY CHAIN

Short supply chain involves as few intermediaries as possible in order to connect the local suppliers with the consumers. It concerns a more direct approach to the customer when compared to a conventional supply chain. When a farmer sells directly to the customer without any other actors getting involved, it is called a zero kilometer supply chain. It is the simplest form that a short supply chain can become.

## 4.Ways to enable Short Supply Chain

A short supply chain can be obtained in many ways. Some of the commonly preferred and efficient short supply chain strategies are explained below:

1.It is common in Turkey that farmers put a bench in front of their farm or on the side of the main road to sell directly to its customers. In other words, farmer's sale at farm gate is an example of short supply chain.

2. Another form of direct customer sales is realised through fruit or vegetable picking events. The customer may visit the farm at certain hours, receive a bucket, pick the products at the farm and pay for the amount (kg or liters) they collected.



3. Farmers or agricultural cooperatives creating online sales channels or utilising their personal relations with the customers to receive purchase orders and deliver directly to the customer is another alternative for direct sales. There are successful examples of this type of short supply chain throughout Turkey.





# WHAT IS SHORT SUPPLY CHAIN

For instance, 26 families in Tahtacıörencik Village of Güdül in Ankara collaborate to produce, learn from each other and sell their products together. They have an online platform and whatsapp group where they list their available products to customers. They receive purchase orders throughout the week, pack them together on Monday and send to customer's door with their van. The products are produced organic and their trustworthy efforts are appreciated by the customers who sustain their orders throughout the years. This example is important because it includes logistics that is handled by the same team that produces the products. Eventually the cost of gas and labour is added as well as the profit and it is the producer who receives the capital

A short supply chain can be obtained by reducing some of the steps from the process or by handling some steps inhouse in order to involve less actors. For example in Tahtacıörencik Village of Güdül, Ankara, logistics is managed by the farmers and as a result, value added of logistics returns to them as earnings.

4. Amesia Working Bees Women's Cooperative created a sales website in collaboration with the Amasya Cattle Breeders Union. As Amesia produces, sales happen online, and the Amasya Cattle Breeders Union uses their vehicles to handle the logistics. The customers access handmade natural products, and the prices only receive logistics costs as no other actor is involved in the process.

There are cases where farmers, cooperatives and/or unions collaborate to complete a supply chain. Where one handles production, the other handles sales and logistics. This prevents the producing party to worry about sales, warehousing, vehicles etc. and focus on farming. As more producers are involved and the production volume increases, this strategy gives debate power to cooperatives and unions for better prices in the market. Amesia Working Bees Women's Cooperative is an example of short supply chain where a cooperative produces and union manages the logistics.

5. Farmers selling directly to customers in a farmers' market is also an example of the short supply chain.

# WHAT IS SHORT SUPPLY CHAIN

6. There are cases where unions or cooperatives receive a permit from the Municipality and rent a marketplace. The farmers bring all their products in bulk. In this version of supply chain, it is not the customer but the local trader who comes with buckets, sacs or trucks to buy products from the farmer's market in bulk. The products are weighed and sold at a certain price directly to the seller and effort for logistics is reduced.



7. The farmers, cooperatives or unions may make agreements with local markets and restaurants, taking the local traders and sellers out of the supply chain.

8. Cooperatives and unions or a group of farmers which work collectively may make agreements with high-volume producers like factories. For instance, tomato producers may agree to produce a certain amount for paste factory. In this case, the intermediaries will be reduced, and the sales price will not receive extra costs.

9. Product transformation is also a concept which can be evaluated as a short supply chain. It refers to a product being transferred into another type of product and changing its form. In other words, it becomes a value-added product. For instance:

Cow milk may be 8 TL in the market.

When you transform it into yogurt, it becomes 11 TL.

When you transform it into butter, it becomes 30 TL.

When you transform it into cheese, it becomes 45 TL.

# WHAT IS SHORT SUPPLY CHAIN

If the farmers produce and sell cheese from the milk they attain, they will be able to sell their product at a higher price (E.g. 45 TL). In a normal supply chain, that milk would be sold to a local trader, then a regional seller, a factory to produce cheese, then to the market and then to the customer. Then 37 TL (45-8) will be distributed between logistics, factory and other actors if any. Farmers selling cheese to a customer or a restaurant, or a market directly would reduce the number of actors in the supply chain flow and allow them to price their product according to their value-adding efforts.

Meanwhile, in the perennial search of efficiency and profit, as farmers converted to organic, they founded trading cooperatives and started selling their organic products in different provinces, regions and Countries where consumers were ready to pay a hefty price. The firm making most of the profit is the trading cooperative since they handle sales and logistics. Yet if the cooperative is owned by the farmers, it may still be considered a short supply chain since there are not many operators and traders in between. With good logistics management, a modern short value chain can flourish.



The concept of organic production was born among small farmers. The process of producing organic adds value to the product, causing its worth to be higher and the farmers increasing their revenue.



# BEST SHORT SUPPLY CHAIN PRACTICES FROM EU

## 5.1 COVALPA and AMPP Cooperatives in Italy

Fucino is a highland in central Italy which is about 80 kilometers east of Rome. It is one of Italy's most fertile plains. The vegetables that are grown here are highly appreciated across Italy for their distinguishing quality and taste. Particularly popular is the Fucino potato which was awarded with the "Protected Geographical Indication" in 2014, a quality label awarded by the European Union to agricultural products of excellence closely tied to a particular territory.

It used to be a lake with no natural outlet and that frequently flood the surrounding villages. The Romans built a 6 km long tunnel to drain it, diverting the lake waters into a river to the southwest. It has been the longest tunnel ever built until 1871. After the fall of the Roman Empire, maintenance of the tunnel failed and it to clog up.

So, in 1873, the lake was drained entirely, leaving behind 140 square kilometres of fertile land. Fishers became farmers.



2. Today, the sons and daughters of those early farmers are members of COVALPA. With those small farmers unity, COVALPA became a cooperative and an association grouping 100 horticultural (carrots, beets, spinach, celery) and 400 potato producers. Their yearly turnover is around 12 million Euros. Together with the help of agronomists and consultants of the cooperative, the farmers are transformed into traders of their products.

# BEST SHORT SUPPLY CHAIN PRACTICES FROM EU



This agro-industrial plant of 11.000 square meters is composed of the equipment needed to add value to the products by building a modern value chain:

- a washing, cutting, and selecting unit
- a frozen processing unit
- multiple packaging types of equipment
- a warehouse for cold and controlled temperature

A very short and regulated production chain is the key to the high quality of COVALPA's frozen and fresh products.

The project obtained many of the investments needed to become a leader in Italy they started 15 years ago, called from the farm to the dish. Later the concept was revised and became popular in the EU as **from farm to fork**, co-financed by the local RDP.

Each farmer uploads all relevant facts of their cultivation online, and each of their batches is associated with an RFID: traceability is obtained flawlessly, and consumers can learn the entire story of the products they buy by entering a code on a website.

On the other hand, AMPP is a vegetable producers' cooperative established with EU funding. It is a cooperative of small farmers focused only on potato production. They are supplying their products to COVALPA to be packaged, sold and distributed. This way they complete the **production phase** of the supply chain.

# BEST SHORT SUPPLY CHAIN PRACTICES FROM EU

When one cooperative focuses on production and other focuses on freezing, packaging, selling, transferring to customer, this means all actors that receive the earnings are small farmers at the end of the day.

The collaboration in this example enables AMPP to focus of production while keeping certain standards and not worry about who to sell, how much to sell, how to transport. Gaining strength and power from its producers, as well as high volume and good quality products, COVALPA can bargain about product prices and close sales deals. We defined short supply chain as reducing steps of supply chain or handling them internally, so the earnings stay with the farmers.

This is why COVALPA and AMPP's work distribution and collaboration is a very good short supply chain example.

## 5.2 Glanbia Cooperative Society in Ireland

Glanbia Cooperative Society Limited is Ireland's number one dairy cooperative, proudly delivering for rural communities for over 100 years. They process milk and sell many dairy products under different brand names for the national and international markets including China, the US, the Middle East, and Africa.

In these hundred years they went from this:



# BEST SHORT SUPPLY CHAIN PRACTICES FROM EU

To this:



In 2019 the cooperative had 5.600 members. The 4.500 milk suppliers were paid 1.035 million Euros for the milk they produced. Many members have less than 100 cows. The average milk supplier has seen farm-gate milk value reach €203.000. The cooperative processed 2,9 billion litres of milk, producing and selling 409.000 tonnes of dairy products. One of their main investments is the milk powder plant.

Glanbia is a good example as it cooperates with small farmers of Ireland in the past 100 years, provides security to them and handles product transformation as well as sales

Production, harvesting and selection steps of the short supply chain is done by the small farmers; transformation, sales deals, national and international logistics are done by a Glanbia farmers' cooperative; where again all the added-value and earnings gained from these efforts return to the pockets of farmers.

# EXAMPLES OF SUCCESSFUL SHORT SUPPLY CHAIN MODELS IN TURKEY

In an agricultural sector where access to safe and healthy food is increasingly difficult, foods with low nutritional value and residue risk are becoming more common, the value of the small farmer is increasing day by day. However, due to the competitiveness of industrial food chains and the ever-increasing cost items for the small farmer, farming is abandoned, villages are emptied, and our local seeds become history. According to the ETC Group report in 2017, "rural family farming" feeds more than 70% of the world's population and uses less than 25% of agricultural resources. Moreover, the "rural family farming network" supports biodiversity 9 to 100 times more than the industrial chain.

According to the 2019 statements of FAO, although individuals or families own more than 90% of the farms in the world, the total land of family farms is around 80% of agricultural lands. For these reasons, small farmers, also called family farming, are one way to make agricultural products more nutritious, agriculture more efficient and sustainable.

## 6.1 Participatory Guarantee System in Tahtacıörencik Village of Güdül in Ankara

This example is an initiative that allows farmers to work together with the Participant Guarantee System and produce with agroecological agricultural practices by prioritizing small-scale and eco-friendly farming elements.

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Agroecology is a method of farming that centres on food production while making the best use of nature's goods and services and not damaging these resources.

Family holdings in Tahtacıörencik village produce by following certain criteria they call "non-toxic production" and inform their consumers about their production processes. A total of 26 family holdings came together and used the Community Supported Agriculture method. They work together based on trust and without the financial and bureaucratic burdens of a company or producer cooperative.



# EXAMPLES OF SUCCESSFUL SHORT SUPPLY CHAIN MODELS IN TURKEY

Community Supported Agriculture is defined as a producer and a consumer group collaborating to meet the needs of both parties. While the consumer provides access to healthy, natural, fresh, and seasonal food, the manufacturer sells its products at a fair price and shares agricultural risks with consumers.

**Community Supported Agriculture is founded on four basic principles:**

- Partnership (involvement and commitment of stakeholders to production and acquisition, including the customers)
- Local economic development
- Solidarity (sharing of risks and benefits)
- Trust (direct contact)

Furthermore, The Participatory Guarantee System, which allows solidarity, learning, and progress, was adopted by Tahtacıörencik farmers for the last ten years. Consumers can visit the farm and conduct inspections or observations at any time. This method, which constitutes a trusted network, offers both intermediary sales and access to food communities.

The small farmers, who are part of the Participatory Guarantee System, created channels where consumers and producers communicate full-time, photos of crops planted and grown are shared, consumers can go to the village and look at how they are planted, fertilized, collected, or even included. In addition, producers can sell their products straight from the farm, farmers' markets, or through online websites. Some families have also opened themselves up to small-scale agricultural tourism by providing breakfast.

The important results of these efforts of short supply chain enabled by the Participatory Guarantee System can be summarized as follows:

- Families diversified their products in line with the demands of consumers and visitors, and some started small-scale rural tourism.
- Farm visits were organized for food communities and consumers.
- With more than 40 tours and activities in the village, around 1500 people visited the farms and the village.

# EXAMPLES OF SUCCESSFUL SHORT SUPPLY CHAIN MODELS IN TURKEY

During the pandemic period, purchasing demand from small-scale producers increased by 2-3 times in Turkey. As a result, Community Supported Agriculture and outdoor producer markets have emerged as the safest methods in pandemic conditions.

With activities such as the occasional breakfast festivals, tent camping activities, farm visits, village tours, and sky observation activities, the producers reached their consumers, promoted their products, and established their rural network.

## 6.2 Collaboration of Amasia Working Bees Women's Cooperative and Cattle Breeders Union in Merzifon, Amasya

This example is a success in matter of both collective business management and short supply chain. Even though the spotlight is on Amasia Working Bees Women's Cooperative, their full-time supporter was the visionary Cattle Breeder's Union in Amasya. The Union is very active, visiting the field and knowing all farmers in the area. They selected 15 representative women from three villages (Merzifon, Gümüşhacıköy and Suluova) to form a community called "Amesia Working Bees" and provide them trainings on a variety of subject such as hygiene, food security, business management, becoming a cooperative, branding, quality management etc. Moreover, in the workshops of Amasya Cattle Breeder's Union, hands-on trainings were given on wrapping, packaging, embroidery, logo applications and production for 6 months. Those 15 women started producing and providing their products to the Union for sales. In May 2011, "Amesia" brand was officialised by the Turkish Patent Institute. Until then, it was 4 years of collaboration with the Union. Time came that Amesia would be a legal entity.



# EXAMPLES OF SUCCESSFUL SHORT SUPPLY CHAIN MODELS IN TURKEY

An important fact that leads them to success is that they received trainings and warmed up to workflow within years. Commercial ambitions were not a part of their vision, for that reason they never rushed into becoming a cooperative. Their intension was to have welfare and stay with the land they grew on rather than seeking low paying jobs in cities they feel they do not belong to. This could only happen if they sustained the cooperative, so they worked hard. 20 women became 126 today, all producing hand-made products for their customers. The Cooperative now has 25 markets where they sell their products, has agreements with the airport, markets and restaurants such as Big Chefs, AOÇ, BTA, ABC gurme, Bonservis on top of an online channel that generates a considerable income.

Amesia Working Bees Women's Cooperative is also a good example for short supply chain. The Cooperative was established in November 2011 as a Producer Union company under the umbrella of Amasya Cattle Breeder's Union. The Cooperative produces and Union makes sales deals. The Cooperative doesn't have to worry about where to sell, how much to sell, how much of what to produce. The Union bring feedback from the market and lead the Cooperative regarding product transformations. For instance, in 2020, they told the Cooperative to produce fig jam with walnuts. The Union supported the products of Cooperative to be sold in Municipality shops, created an online platform, planned production and handled logistics. Lately the Cooperative was able to extend their sales to important catering firms. The story of women in Amesia flourished due to their collaboration with the Amasya Cattle Breeder's Union.



It is critical to remind that short supply chain doesn't only concern cutting steps of a supply chain. Every step, from farm to fork, adds value to the product. Handling some more of the processes internally and farmers receiving the earnings also counts as short supply chain. In Amesia's case, the cooperative of women produce, harvest, select, even do product transformation and packaging. The Union gets the products, sells them, signs agreements, distributes products, plans farmers production, and at the end all earnings are distributed among farmers.

# ADVANTAGES OF A SHORT SUPPLY CHAIN

Short Supply Chain has advantages for the producers, customers and the environment:

## The customers;

- Receive fresher products,
- Have access to local tastes,
- Make their purchase with better prices than the market.

## Farmers;

- Create higher revenue which leads to welfare and sustainability of production.
- Gain security if they are able to make agreements to sell a certain amount in the following year to a restaurant, market chain or factory.

- Get in the habit of collaborating with other farmers, managing their production and coordinating relations with customers. This is a skill set that can improve production and sales efficiency.

## Socially;

The concept of reducing the actors supports the farmer and local economy to flourish.

## Environmentally,

Reducing the logistical path of a product creates less greenhouse gases. Similarly, organic production and non-use of chemicals also reduce the productions' impact on the environment.

# FINAL WORD

A short supply chain can be obtained by reducing some of the steps from the process or by handling some steps inhouse in order to involve less actors. As the farmers manage product transformation, packaging, sales and logistics, the value-added of these processes returns to them as earnings. This is why short supply chain is one of the important strategies to support the farmers. This booklet explained the term, its advantages and good practices. It aims to introduce possible models to establish a short supply chain which may help some farmers in bettering their life-work balance and welfare.



With the formation of European Union, it became almost imperative for small farmers to work collectively to maintain a decent standard of living. Competitiveness became tougher. They had to compete not only within their Country yet all the Countries in the Union. This was a driving force for partnerships and search for new advantageous models to be adopted in the agriculture sector. Cooperatives became more sustainable, and they also started collaborating. For instance, while a group of farmers focused on production without worrying about sales and logistics, others filled their gaps and took over those tasks. Trust increased as farmers and cooperatives made money.

Small farmers in the Republic of Turkey are not less capable than any other Country. Examples such as Amesia Working Bees Women's Cooperative and Tahtacıörencik village show that it can be achievable and feasible. There are many other good examples that accomplished to flourish through their collaborations and adopting short supply chain.



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