Value Chain Thinking: A Trainer's Manual

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Contents

EXECUTIVE SUMMARY

Value chains are interactive systems, with the flow of products, money and information highly dependent upon relationships throughout the system. Value Chain Thinking takes a whole-of-chain perspective, emphasising the importance of market orientation and collaboration. It highlights how effective partners align their skills, resources and behaviour to deliver higher value products and services and to reduce waste, with the resultant financial returns being distributed equitably to sustain partners' commitment.

This manual helps trainers to teach Value Chain Thinking principles and decision-making processes, and provides a structure for participants to develop an Action Plan which draws together their skills in production, postharvest activities and Value Chain Thinking. It was developed and tested during "Training of Trainers" courses in Ethiopia, Malawi, Mozambique and Tanzania in 2013-2017 under the Australian Centre for International Agriculture Research (ACIAR)-funded project *Improving Income and Nutrition in Eastern and Southern Africa by Enhancing Vegetable-based Farming and Food Systems in Peri-urban Corridors (VINESA)*.

The case studies presented are about vegetables in developing countries, and the activities are designed for vegetable smallholders in similar countries. However, this manual could be readily applied to other agricultural sectors in a variety of contexts, and to other members in those chains, whether extension officers, input suppliers, traders or retailers. It will help them to: develop a whole-of-chain perspective, and a market-orientated focus; understand the interdependence within chains, and consequently the benefit of building effective partnerships, rather than relying on transactional relationships; assess market opportunities and the suppliers and customers needed to exploit them; to select, produce and process the most promising crops; and to develop and execute an action plan that will increase their income.

Chapter One gives an overview covering the intended audience; course principles, content and sources; and importance of gender sensitivity.

Chapter Two gives an introduction to Value Chain Thinking, including: what is a value chain; how Value Chain Thinking increase farmers' incomes; and Value Chain Thinking in practice.

Chapter Three provides a briefing for the training course itself. It sets out eight activities from which trainers can select how best to help each participant develop an action plan. These include: identifying market opportunities, especially the product qualities and service levels needed to access those opportunities; mapping the value chain, from critical input suppliers to the final customer and end consumers, and so learning where value can be created and waste can be reduced across the whole chain; prioritising their own contribution to the value chain: what skills, resources and inputs should they focus upon to become a key partner in the chain, and building relationships with other key partners.

Chapter Four offers a 7-Step Guide to Connecting Farmers to New Markets. This is a low cost, participative process to identify and evaluate market opportunities, and then develop an action plan based on Value Chain Thinking. To download a separate .pdf of this chapter:

https://avrdc.org/wpfb-file/7-steps-practical-guide_fact-sheet-rev2-pdf/

CHAPTER ONE
Course Overview

1.1 Intended audience

This course is designed for intermediate, literate trainers from training, research and extension services providers. While prior knowledge of value chain principles or practice is not essential, course participants need to be experienced, trained and enthusiastic about how developing Value Chain Thinking (VCT) will supplement smallholders' production and postharvest skills and increase their income. While the course can be given based on the activities identified in Chapter Three, it would be helpful if the trainers have the ambition, knowledge and confidence to adapt the generic material to suit their local circumstances (culture, market, products, etc.). Additionally, it would be helpful if those selected for this training have some understanding of how gender issues could enhance or impede the application of Value Chain Thinking within agri-food supply chains. During the training, it is necessary to recognize that gender constraints may prevent men and women from benefiting equitably from participation in high value agri-food chains.

1.2 Course principles, structure and relevance

1.2.1 Principles behind VCT course

Build participants' capacity: One of the core objectives of Value Chain Thinking is moving farmers from an attitude of "Selling what I produce" to "Producing what I can sell"— i.e., do not grow as much as possible, nor grow just more of the same, but rather grow what can be sold most profitably. However, there is no single 'right answer'; what is best for each participant will depend upon their own situation, for example, the balance between growing for their family's own consumption and growing for sale, and the land, labour, finance and other resources to which they have access. Market opportunities are dynamic, so participants need the skills to adapt to the future. Accordingly, this trainers' course provides a framework for individuals to make their own decisions and action plans.

Adapt to local conditions: The course needs to reflect farmers' circumstances in terms of production environment; market opportunities and constraints, especially routes to market; and the culture of their operations. Trainers should reflect on their local knowledge and try different approaches, then record what they tested and what they concluded so they can build on their own experiences. This should include the topics, issues and activities covered; the exercises and examples used; the value chain maps produced and the action plans which resulted. This may well include the need to train other members of value chains.

Participative: The manual is designed around exercises, not lectures. This in line with the saying: "What we hear, we forget; what we see, we remember; what we do, we understand."

Built-in flexibility: When we tested the manual, it became clear that rather than a linear design, which prescribed that trainers work through all nine activities in turn, the course needed to allow trainers to select activities based on the needs of the trainees and their own confidence and comfort with the material. Hence the structure was revised, as set out in the next section.

1.2.2 Course structure

The course structure is based on participants learning about Value Chain Thinking and then developing their own Action Plan (Figure 1.1). How many of the activities are covered will depend on the trainer's experience, the trainees' needs, and the time and resources available.

1.2.3 Sources

The approach proposed incorporates experience from previous ACIAR projects, the Learning Alliance Process developed by the Dutch Royal Tropical Institute in Ethiopia (Belt et al., 2011); USAID's Value Chain Systems Training, and a number of projects in collaboration with Professors Ray Collins and Andrew Fearne, and Associate Professor Laurie Bonney. In particular, applying a value chain framework to development projects is provided in another ACIAR publication, "A guide to value-chain analysis and development for overseas development assistance projects" (Collins et al., 2015; download at http://aciar.gov.au/publication/mn178); Chapter Two draws directly on the deeper explanation offered in that guide.

1.3 Ensuring gender sensitivity

Women undertake many of the core roles in many agri-food value chains in developing countries, yet women have a subordinate position in many of those societies (World Bank, 1990). For example, there are complicated sets of social relations and norms conferring access to, use of, and ownership of land between men and women. Gender relations and power, as well as overlapping legal and customary law, determine these rights within both the household and community (Moser, 1993). Typically, these social relations also prevent women from participating in and benefiting

Figure 1.1: Value Chain Thinking training course structure

from Value Chain Thinking, particularly in terms of access to resources, decisionmaking and negotiations. To achieve the desired development outcomes, all activities in this manual must be designed to be sensitive to gender distinctions, and delivery must integrate women and their distinguishing needs. Trainers need to understand the relevance of gender in the context, design, implementation and monitoring of this training course, and use this opportunity to strengthen women's role in vegetable value chains (Kabeer, 2003). It is essential that this training is provided in ways that are as accessible and relevant to female participants as to male ones. This might involve training women and men separately, providing childcare, or covering expenses such as transport.

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CHAPTER TWO
Introduction to Value Chain Thinking

2.1 What is a Value Chain?

There are many definitions of value chains, and much discussion over the distinction between value chains and supply chainsIt is essential that the approach used in this training is set out clearly and applied consistently.

Value chains are interactive systems, with products, money and information flowing through them, all reliant on relationships (Fearne and Hughes, 1999) (Figure 1.2). The critical point is that the only source of money into the chain (other than credit or subsidies/aid) comes from consumers. Accordingly, a value chain's economic success depends on delivering a product from seed, through production, processing and transport, which appeals to those consumers being served by the retailer. Achieving that objective relies on the effective flow and use of information along the chain, which usually depends on the extent of trust and commitment between trading partners (Macharia et al., 2013). The critical lesson is that farmers' decisions should be taken based on an understanding of market opportunities and the whole chain, rather than looking at their own part of the chain in isolation.

Within value chains, individuals or firms can undertake more than one function, and information does not have to flow linearly: seed suppliers can conduct their own consumer research while farmers can speak directly to retailers. However, if each actor only knows about their own direct suppliers and customers, because of chain-wide interdependence in the flow of products and money, they are vulnerable to lower returns because of unknown problems in other parts of the chain.

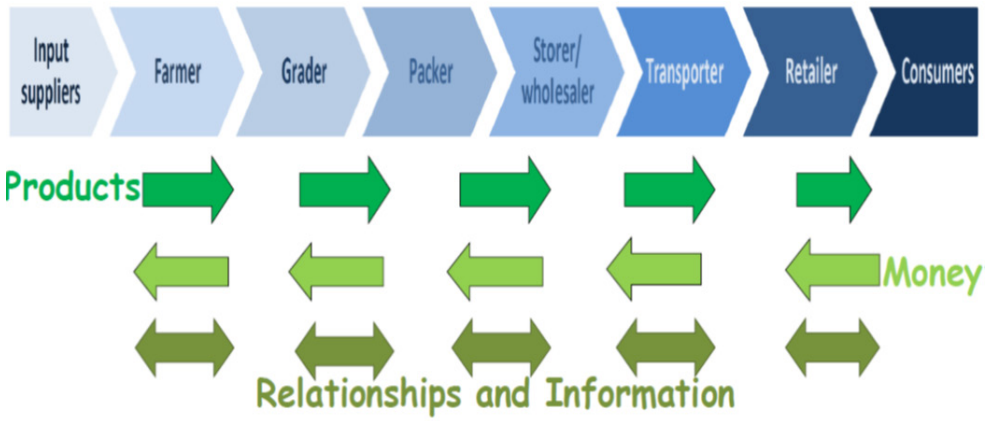

Figure 2.1: A generic value chain

2.2 What is Value Chain Thinking?

One way of understanding Value Chain Thinking is to contrast supply chains and value chains.

Think of the money in both chains as a pie. Consumers determine the size of the pie because they decide whether or not they are going to buy a product and how much they are willing to pay for it.

Supply chains push products from upstream, with farmers adopting a production-focused attitude of "selling what they produce". Products do not reflect the specific requirements of particular market segments, and so consumers decide what to buy mostly on price, rather than their preferences (Collins et al., 2015). As a result, to increase their incomes, everyone in the chain has to compete with each other to try to make their slice of the pie bigger by making someone else's slice smaller (Figure 2.2). In these supply chains, everyone behaves in an opportunistic manner. Customers switch suppliers whenever they can get what they need a little cheaper elsewhere; suppliers will let down customers if they get a better offer from someone else. The relationships are transactional: there is neither trust nor commitment. Information about product prices, volumes and standards does not flow freely along the chain.

In contrast, a *value chain's* product is pulled by consumers, with farmers adopting a market-orientated attitude of "producing what they can sell" (Collins et al., 2015). Everyone works towards supplying the same market opportunity, and so avoids competing solely on price. The pie gets bigger with everyone's slice growing without stealing part of someone else's (Figure 2.3). Relationships are stable and stronger, with greater collaboration and sharing of information, because people along the chain want to work together as preferred suppliers and customers.

'Growing the pie' requires Value Chain Thinking (Figure 2.4). This involves a collective decision amongst those involved in the chain to change their objectives and behaviour. In effective value chains, firms do not act in isolation,

Figure 2.2: Supply chain strategy of growing individual slices of the pie

but work together to grow, process and deliver products to meet the expectations of specific consumers, which means retailers can attract more shoppers— and if the product meets their particular consumers' needs, they might even be willing to pay more.

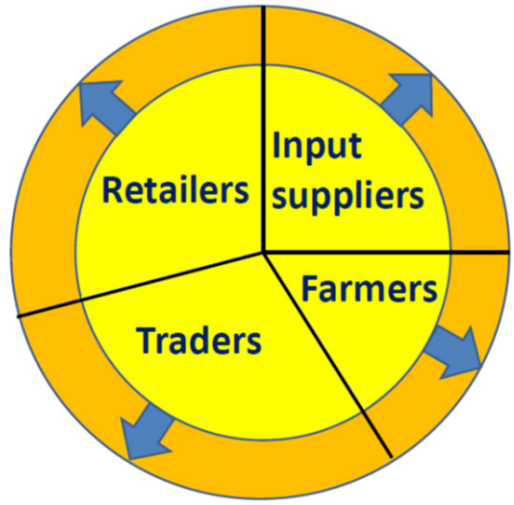

Figure 2.3: Value chain strategy of cooperatively growing the pie

An efficient chain produces what shoppers want when they want it; there is less wastage, and revenue increases. When the benefits of this are shared across the chain, suppliers and customers become partners.
Value Chain Thinking increases farmers' incomes when they:

- understand market opportunities, and focus on producing what those consumers want and,
- become preferred suppliers by providing more suitable products and superior service to customers, for example in terms of reliability.

Essentially, this involves reducing the intensity of competition. When a farmer produces the same product as many other farmers and does not offer better service to customers, the only way customers and consumers choose suppliers is on price. Contrastingly, Value Chain Thinking enables a farmer to stand out from the crowd by growing a crop suited to a particular market, and by offering better services to those customers which give access to that market. The farmer thus becomes a much more attractive supplier, and reduces competition since customers make choices based on factors other than just price. The potential for the farmer's income to increase rises.

Supply Chain Thinking "Growing your slice"	→	**Value Chain Thinking** **"Growing the pie"**
Compete on price		**Compete on value**
Independence and self-interest		**Interdependence and mutual interest**
Flexible, transactional relationships		**Stable, collaborative relationships**
Short-term trading		**Long-term planning**
Suppliers chosen on quality and cost		**Suppliers selected for quality, skills, service and partnership**
Suppliers are price takers		**Prices negotiated**
Opportunism		**Commitment**
Limited information sharing		**Open communication**

Figure 2.4: Contrasting Supply Chain Thinking and Value Chain Thinking

2.3 Value Chain Thinking in practice

Value Chain Thinking can be considered as a four-piece puzzle, with every piece needed to complete it (Figure 2.5). Each piece is explained below.

Puzzle Piece No. 1: Understand Consumers

Since consumers determine the 'size of the pie', it is essential to understand what they want from a particular product. This may include asking such questions as:

- What product characteristics will change their behaviour?
- How much do they buy?
- How frequently?
- How many of them buy it?
- Where do they buy it?
- How much they are willing to pay for it?

In considering these questions, it is critical to recognise that consumers are not all the same and they do not want the same product, so value chains need to understand *specific* consumers' needs, and how they can work together to deliver those needs. Only then can the chain 'grow the pie' by selling more, ideally at a higher price, to those *specific* consumers. This involves deciding priorities for the resources (time, money, skills, land, etc.) for each member of the chain. For example, retailers need to understand how to meet shoppers' needs better than the competition, with seed suppliers, farmers and wholesalers using their resources to supply retailers with the quality and quantity of products most suitable for their shoppers. Two case studies of this market-oriented approach are given in Case Studies 1 and 2 highlighted in the boxes.

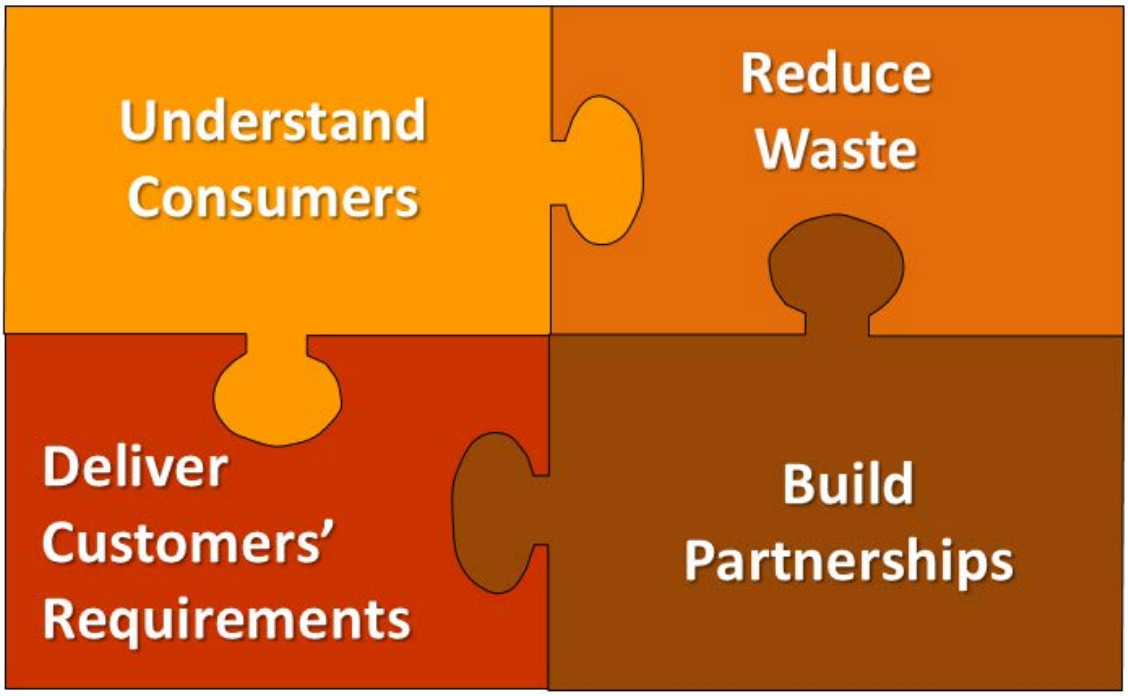

Figure 2.5: The Four Piece Puzzle of Value Chain Thinking

To increase the 'size of the pie', value chains need to understand what consumers want, especially higher values consumers

There are many different types of market opportunities, which include:

- Displacing existing suppliers whose customers are finding them unreliable
- Import substitution
- New products
- Opportunities currently being missed, for example supplying new consumer segments, such as non-indigenous ethnic minorities, or a returning diaspora who have developed new tastes while abroad

This process can include processing products in ways to make them more attractive to potential consumers. For vegetables, this may include increasing their shelf-life, convenience, or taste (Figure 2.6).

It is critical to distinguish between adding value based on personal preferences or assumptions about consumers, and value creation based on market research. *Anecdotes are not evidence*. Overall, the 'understanding consumers' piece of the Value Chain Thinking puzzle should lead farmers to ask:

1. What products, and what characteristics of those products, are shoppers looking for?

2. Which crops and how much should I grow; and how should I grow them?

3. Can I process those crops to make them more attractive/valuable to consumers?

Figure 2.6: Processed products are attractive to consumers and have longer shelf-life. Food can be dried and packaged, or processed into sauces, jams and other products.

CASE STUDY 1: Harvest of Hope Vegetable Box Scheme, Cape Flats ownship, Cape Town, South Africa

Market opportunity: A group of consumers wanting healthier vegetables grown with less/ safer chemicals.

Product: Organically grown vegetables, delivered directly to shoppers initially via pick-up points at primary schools, but now with 29 collection points. The approach helps to offset the unavoidable variability in yield, timing and quality of different crops, since the vegetable boxes' content can be adjusted to reflect availability. Collectively, the farmers earn US $7000/month.

Participants: Now involving over 140 urban smallholders, organised by Abalimi Bezekhaya (Farmers of Home) as part of Harvest of Hope, established in 2008.

Benefits to farmers:

- Access to markets outside their local community;
- Secure contracts/monthly income;
- Bulk purchase of inputs reduces costs, and
- Working in the packing shed earns additional income and helps to build farmers' understanding of downstream activities, which feeds back into how they farm.

As a further example of Value Chain Thinking, the organisers responded to feedback from their consumers, some of whom criticised the lack of variety and out-of-season produce caused by reliance on locally-grown fresh produce. As a result, the organisers introduced supplementary products from other sources, and so attracted more consumers.

Further details: https://www.youtube.com/watch?v=4-qsAB7pw-U

Box 2: Case study on Iraq al Amir Women Association, Ammam, Jordan

Market opportunity: Vegetables which guarantee safer production systems, and better returns for farmers

Product: A brand of low/safe pesticide-produced spring/green onions, with 75% of final price paid to farmers. The farmers also use a new variety of onion, which does not flower as early, can be harvested later when prices were higher, and has a longer shelf-life.

Participants: 42 farmers working within a women's cooperative.

Benefits to farmers: On average, households improved their income by 20%.
The project required improved production skills in soil fertility and pest and disease management, as well as extending activities into postharvest processing by cleaning the onions in the field, grading at household level, and then packing at cooperative level. The association developed its own brand to communicate origin and responsible/healthy produce to consumers, improving recognition and aiding repeat purchasing. Farmers also plant seedlings rather than seed to shorten crop cycles and reduce losses from seeds not germinating. Participants are charged a fee of 8% of their gross revenue from sales towards costs of marketing, packaging and transport.

Further details: *Urban Agriculture* magazine, Number 25, September 2011, page 54. http://www.ruaf.org/sites/default/files/BDU-11031-UAM%2025_0.pdf


The association's own 'responsible production' brand logo

Reducing waste increases the 'size of the pie'

Puzzle Piece No. 2: Reduce Waste

Studies from the World Vegetable Center have established that across vegetable chains losses range from 30-80% (Srinivasulu et al., 2015). One of the main causes identified by these studies is damage due to lack of proper packaging (Figures 2.7 and 2.8). For example, as shown below, poor quality and over-packed wooden crates have 30 – 50% damage.

Another significant cause of waste is lack of proper cooling, since a 10 °C drop in temperature can double the shelf-life of vegetables. A product that would keep for 8 days at 12 °C, only lasts for 4 days at 22 °C.

Given the high outdoor temperatures in Eastern and Southern Africa, especially in the direct sun, this can make a very significant difference to postharvest losses. Low cost cooling techniques, like shading and brick evaporative coolers as shown below, can generate cost-effective returns (Figures 2.9 and 2.10).

Figures 2.7 and 2.8: Losses of tomatoes caused by poor packaging during transit

Figures 2.9 and 2.10: Use of simple technologies such as shade covers and evaporative coolers prolongs shelf-life of vegetables.

However, it is important to remember that waste means more than just any product that does not reach a consumer. It also includes:

- Any product that sells for a lower price than it could sell for elsewhere
- Making a product better than it needs to be
- Unnecessary activities, or applying unnecessary/excessive inputs

The 'Reduce Waste' piece of the Value Chain Thinking puzzle should lead farmers to ask:

1. Where does waste occur on-farm and downstream in the supply chain?

2. And so, what can I do differently to reduce waste on-farm and downstream?

This is discussed in Exercise 1 under Section 3.3.3.

Delivering what customers require provides long-term access to markets by becoming a preferred supplier

Puzzle Piece No. 3: Deliver Consumers' Requirements

The requirements of final customers, i.e. those who directly serve consumers likes shops, stallholders, restaurants and hotels, are important because they are the gatekeepers to the marketplace (Fearne and Hughes, 1999). As well as wanting the quality of product sought by their shoppers or clients, priorities for customers typically include frequency of delivery; reliability; grading; and packing and postharvest processing to increase shelf-life. Meeting customers' requirements may require cooperation amongst farmers; chain members coordinating production, delivery and demand across the whole chain; gaining new skills in postharvest processing, and investing in different inputs, especially improved seeds and certified chemicals.

The 'Deliver Customer Requirements' piece of the Value Chain Thinking puzzle should lead farmers to ask:

1. Which potential customers best serve my target shoppers/ consumers?

2. What are these customers' priorities?

3. How can I contribute to meeting these requirements?

Building partnerships is hard to imitate, and ensures the pie is divided into larger slices

Puzzle Piece No. 4: Build Partnerships

One of the competitive strengths of Value Chain Thinking is that it involves people working together (Hobbs et al., 2000). This takes time and effort, with most value chains going through four stages (Figure 2.8). This means collaborative value chains are very hard to imitate, and so there is less competition because few people can copy it. As trust and commitment grow, there will be greater willingness to share information, risk and rewards. The first step is to find suppliers and customers willing to work cooperatively—not all will be—and then:

- Agree to focus on consumers and service, not just price and volume
- Learn about each other's businesses, and so see how to work better together
- Identify and solve problems together
- Reward commitment, quality, reliability and reducing waste

Case Study 3 in the box gives an example of what this means in practice.

This final 'build partnerships' piece of the puzzle should lead farmers to ask:

1. Which traders and retailers best serve my target shoppers/consumers, and will give me a fair return?

2. How do I become one of their preferred suppliers?

3. Additionally, do I need to cooperate with other farmers?

Activity 6 looks at choosing partners and building relationships.

CASE STUDY 3: White haricot bean production, Shashemene, Ethiopia

Participants: Burka Gudina, a farmers' marketing organisation with nearly 900 members

Value Chain Thinking in Practice: The group interviewed farmers, small local collectors, large urban merchants, and an export trader, and identified the key problems including impurities, high moisture content and small beans. Then, as part of solving problems together, the farmers committed to:

- Keeping their stores clean
- Improving quality
- Allowing buying price adjustment based on market price
- Ensuring members paid back 'seed loans' to exporter

Similarly, the exporter committed to:

- Giving technical advice on store management
- Checking produce before it was loaded onto trucks, and providing sacks for produce
- Helping finance access to improved seeds
- Providing information on the export price he received for products

Further details: http://www.ruaf.org/sites/default/files/UA%20Magazine%2024%20sept2010web%2038-39.pdf

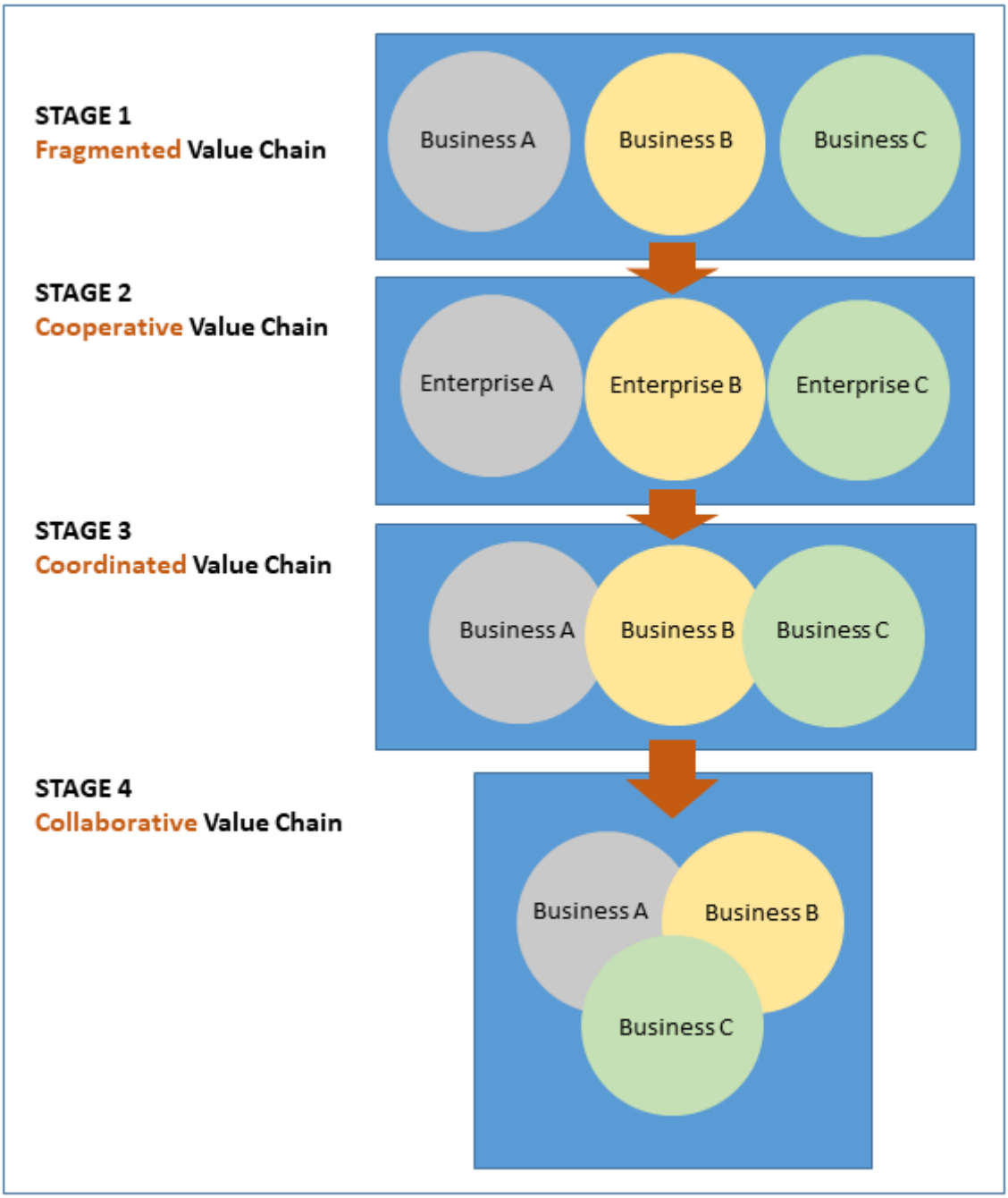

Figure 2.11: Evolution of a collaborative value chain.*

*Adapted from Value Chain Management Centre (2012) Characterizing the Determinants of Successful Value Chains http://vcm-international.com/wp-content/uploads/2013/04/Characterizing-the-Determinants-of-Sus-VC-031912.pdf

2.4 Common mistakes in Value Chain Thinking

There are five common mistakes people make that prevent them from benefiting fully from Value Chain Thinking.

The first mistake is to think, "It's too hard." It will take time and persistence.

The second mistake is to make assumptions. These might include expecting those downstream to understand what consumers' value in the product. However, most retailers sell a large number of products, so they struggle to give attention to every product, to the inevitable detriment of individual value chains. Farmers also often assume they know what affects shopper behaviour; often they do not. They can be a long way from the market, and not have access to reliable or up-to-date information. Perhaps farmers understand commodity markets, where products are standard, but they rarely have much experience of smaller, niche markets where higher returns can be found. In addition, farmers may be men, whereas shoppers are often women, who will make decisions on a different basis.

The third mistake is going it alone. Value Chain Thinking only works through collaboration, both to ensure the right product reaches the right market opportunity, and that the resulting higher returns are shared.

The fourth mistake is selecting the wrong partners. Not everyone is a potential partner, since some suppliers and customers will not be willing and able to go through the changes in behaviour set out in Figure 2.8 above.

The final mistake is giving up. Value Chain Thinking is challenging, but the alternative is to return to acting like a supply chain and competing on price, which typically keeps farmers' incomes well behind the growth in other sectors.

Further Reading

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CHAPTER THREE

Training Activities

3.1 Course structure

This chapter of the manual explains the training activities in detail. The structure is based around Activity No. 9 (Core Activity) which involves participants developing an Action Plan for how they will run their smallholding when agreements have been made with specific customers. There are eight previous activities that contribute to Activity No. 9 (see Figure 1.1 in Section 1.2.2):

Activity 1: Mapping the chain and reducing waste

Activity 2: What do consumers want?

Activity 3: What do customers want?

Activity 4: Creating value

Activity 5: Postharvest opportunities for farmers

Activity 6: Working as Partners: How to choose partners and build relationships

Activity 7: Learning from existing chains

Activity 8: Gender equity in value chains

Activity 9: Preparing an Action Plan

Trainers are encouraged to select and adapt those activities which suit trainees' needs, and which reflect their own experience of the local context.

Activities 1, 4, 5 and 8 should take one day, and can be undertaken in a classroom, or just out in the field where there is a shelter.

Activities 2-3 have a choice of approaches, from the most effective (which involve meeting with customers and consumers), to the least expensive (which can be just classroom-based).

Activity 6 involves farmers meeting prospective customers, and so will take longer to organise and carry out.

Activity 7 is known as 'walking the chain', and can be a valuable experience. This involves farmers meeting members of an existing, good practice chain to ask questions in order to understand the chain's structure and operations. Organising this is a significant task, and it will require funds to transport the farmers, and potentially compensate people they meet for their time.

Activity 9 comes at the end and involves each farmer making a detailed action plan, and potentially negotiating cooperation amongst other farmers, and so is likely to involve several rounds of discussions.

3.2 ACTIVITY 1: MAPPING THE CHAIN AND REDUCING WASTE

3.2.1 Key Messages

1. Unless farmers supply consumers or final customers themselves, they need to work with others in the value chain, which can only start by understanding the whole chain.

2. Farmers need to know where waste occurs, and what causes it.

3. Reducing waste cuts farmers' costs and 'grows the pie'.

3.2.2 Background

The starting point for Value Chain Thinking is to understand a value chain's structure, and who does what in the chain (Fearne and Hughes, 1999). From this information, it is possible to know how the product flows along the chain, and which activities offer scope for reducing waste

(the second half of this activity) and create value (Activities 2-4). Accordingly, Task 1 below involves mapping the chain, and Task 2 uses the map to identify where waste occurs, and what causes it.

Waste is:

- any product that is not consumed
- any product that sells for a lower price than it could sell for elsewhere
- making a product better than it needs to be
- undertaking unnecessary activities
- applying unnecessary/excessive inputs

The factors affecting waste include:

- quality of seeds and other inputs
- production techniques
- speed from farm-to-consumer
- packaging and handling
- shelf-life and preserving produce
- grading to direct the right quantity and quality to different outlets, and ensure as much as possible is sold

These activities are spread across the chain, and explain why a value chain's ability to improve efficiency by reducing waste is dependent on concerted action across the chain.

This activity involves mapping the chain from input suppliers to the final customers and consumers to identify who is involved in getting product from farms to these consumers, and where and why waste occurs. Course participants create a map of the main people involved in a specific vegetable value chain that represents a promising market opportunity. Typically, the members are a combination of:

- **Input suppliers: seeds, chemicals, compost, equipment, advice, finance etc**
- **Producers:** principally involved in farming activities, but potentially extending to some **postharvest processing;**
- **Graders/collectors/traders/ wholesalers: involved in sorting, transporting and storing;**
- **Processors: undertaking cleaning, processing, packing and labelling,**
- **Retailers:** shopkeepers; stallholders; street vendors; supermarket chains; farmers selling direct; institutions, eg schools and hospitals; hotels and restaurants, and
- **Consumers:** shoppers and their families.

For each of the main actors, the maps should list what activities they undertake. Then the map is used to identify not where waste occurs, but where it is caused.

3.2.3. Examples of Value Chain Maps

The first example is a mango export value chain. The first task was to identify all the inputs (left hand column), and then the main activities along the chain and who undertook them. Next, chain members traced the activities that created the most waste (circled in red on the map). For example, harvest was seen as a significant cause of waste, because poor handling of the fruit at that stage would be revealed days or even weeks later when the fruit started to show damage, by which time it was either being graded or was even on display in the supermarket.

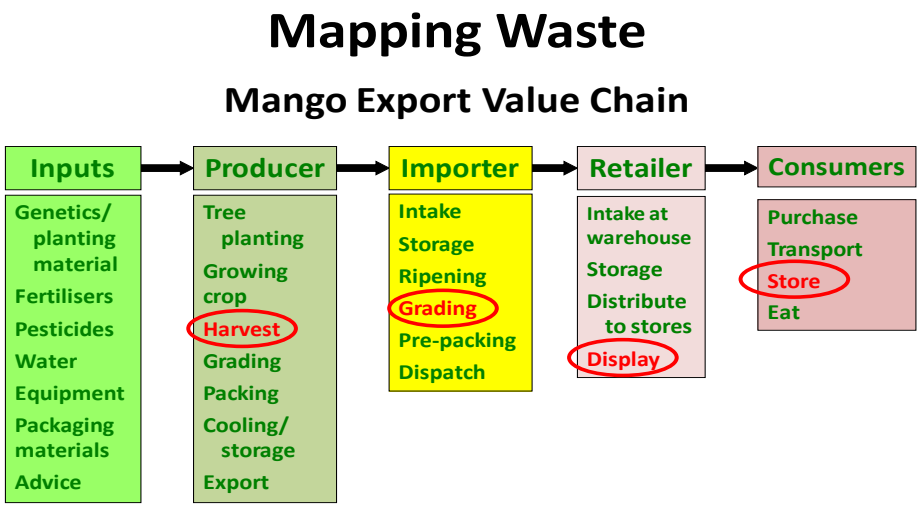

Figure 3.1: Mango export value chain

The second example is a fresh tomato chain. Again, the main inputs and activities along the chain were mapped. Notably, participants identified labour as a wasteful activity because they felt many farmers were not well trained and were not using their time and skills effectively, for example through poor planting, hence that activity was also highlighted as a source of waste.

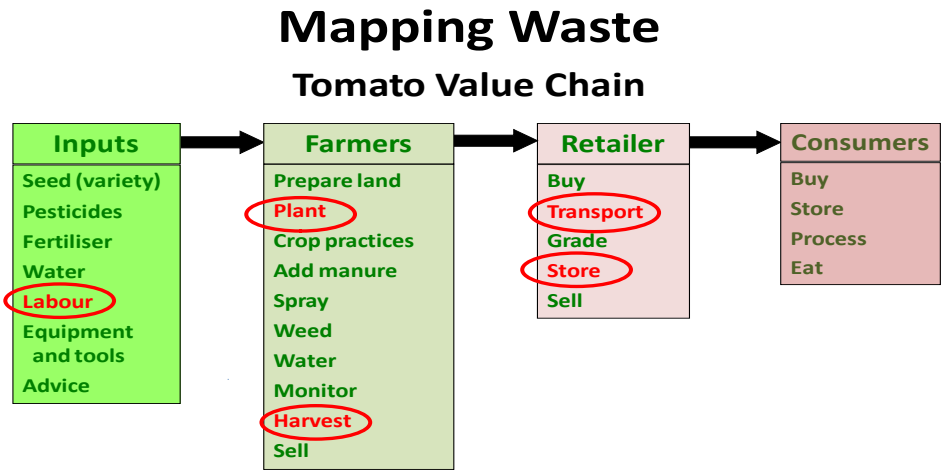

Figure 3.2: Tomato value chain

EXERCISE 1: Where does waste occur in value chains, and what causes it?

Task 1 – Mapping the Value Chain

This activity helps course participants to identify the main activities in their value chains and the chain members who perform them, and so appreciate the interdependencies between chain actors.

Split participants into groups of 3-5 people, with each group working separately, before coming together to explain and discuss their results. Ask each group to identify the inputs and activities in order along a value chain serving a particular market they may wish to supply, using words or pictures on different pieces of paper/sticky notes, for example attached to flipchart paper (as shown below). Use of sticky notes makes it easier for groups to correct mistakes, or to add in forgotten activities.

Groups can be asked to look at:

- different crops to reveal how activities vary
- he same crop but different routes to market, highlighting where the chain splits to link to different customers and consumers

Participants should place all the activities in order from inputs into farming through to consumption of the final product, and grouped into columns under the chain actors who undertake the activity. Some activities can be undertaken by different members of the chain, and Activity 5 will encourage farmers to consider opportunities to undertake more postharvest activities and so earn a larger slice of the pie.

Figure 3.3: Value chain map produced using sticky notes

Having brought the groups back together, ask them to explain the maps they have prepared, and encourage discussions comparing value chains for different products and markets. Can participants see any advantages in being part of particular chains compared to others?

Task 2 – Mapping where waste occurs, and discussing how to reduce it

Ask participants to think about where waste occurs in the upstream end (on-farm) and downstream end (markets, consumers) of the chain, and then identify those activities causing that waste. As shown below, participants should write a 'W' on those activities which are most critical to reducing waste and to making the value chain more efficient in order to 'grow the pie'.

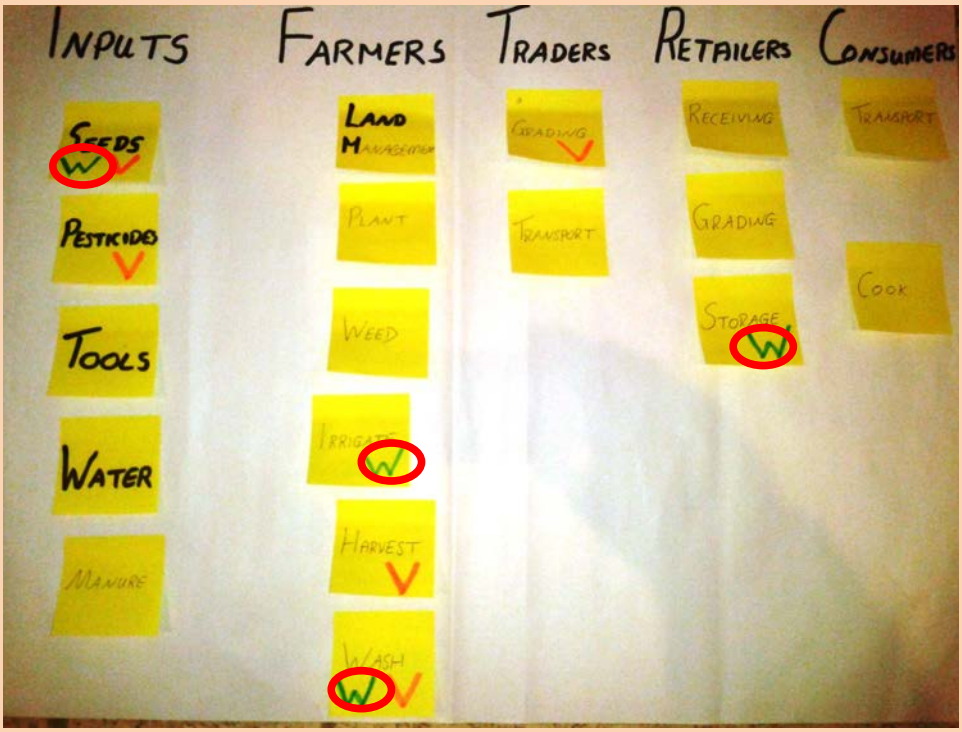

Figure 3.4: Value chain map highlighting key activities to reducing waste

Use the task to encourage discussion. For example:

- is waste on a shelf or stall caused by poor sorting, grading or washing?
- is waste on-farm caused by poor inputs or skills, and how could farmers tackle these problems?
- Are any activities duplicated? For example, does grading often occur more than once? This is a form of waste, so ask why it happens and how the duplication could be eliminated.

These results should feed into each participant's Action Plan:

- What will they do to reduce waste?
- What extra training or different inputs might they need?

3.3 Preparing for Activities 2, 3 and 4: Identifying Market Opportunities

One of Value Chain Thinking's critical success factors is whether farmers develop greater market orientation in choosing what to grow and how to grow it, and then selecting customers who will enable them to exploit market opportunities. These opportunities include:

- any market outlet where higher returns may come from better products and service
- reducing waste
- stronger partnerships along the chain
- shorter supply chains

This might involve supplying supermarkets, hotels, farmers' markets, schools, branding etc.

Encouraging this market orientation is the objective of Activities 2-4. However, prior to commencing these activities, trainers need to investigate promising market opportunities which participants could pursue. This may include seeking advice from other well-informed people and reviewing any formal market research which has been completed by government departments, NGOs, universities, etc. Ideas could be validated through consumer interviews or surveys. Invest time on this research; do not rely on training participants' assumptions about the market. Further details of how this could be done are set out in Chapter One (Step 1): The 7 Steps to Connecting Farmers to New Markets.

3.4 ACTIVITY 2 - WHAT DO CONSUMERS WANT?

3.4.1 Key messages

1. 'Size of the pie': the total price paid by consumers determines the maximum amount of money that can be distributed upstream. So, to increase their incomes, chain members either

   a. Leave the size of the pie the same, but fight on making their slice of the pie bigger by making someone else's slice smaller, or

   b. Grow the pie, by making their products and services more attractive to consumers, and then sharing the benefits, and so growing the size of everyone's slice.

2. To increase income, farmers need to start by identifying promising market opportunities and delivering the priorities for exploiting those opportunities, thereby breaking free from the crowd and reducing the level of competition.

3. Do not assume that all consumers want the same things, or that you know what they want. Ask them!

3.4.2 Background

Firstly, it is important to distinguish between customers and consumers:

- Consumers are individuals who eat the final product, so they determine the size of the pie. Their needs vary, so we need to know who they are in each value chain.
- Customers are businesses who buy products, so they control access to consumers. Their needs usually include reliability and consistency: "Deliver what I want, when I need it."

Understanding consumers underpins Value Chain Thinking. Lack of knowledge about what influences consumers' behaviour results in squandering time and money on producing products which are not valued, and so they do not 'grow the pie'. This includes recognising the differences amongst consumers: they are not all the same, and they look for different things. Whilst price is critical to many, some will be willing to pay more or become more loyal for products that are fresher, better tasting, look better or have higher nutritional benefits. Postharvest processing and packaging matters to some shoppers if this makes products more interesting or convenient to use, or extends their shelf-life.

This knowledge should inform farmers' Action Plans about what to grow, how much and of what quality, and:

- How to create additional value (Activity 4), including from postharvest activities (Activity 5).
- Which customers will enable them to target those market opportunities, and how to secure their business (Activity 3).

3.4.3 Activity

Trainers should explain the key messages and how reflecting them in Action Plans will increase participants' income, based on finding market opportunities where price is not the only factor. This will involve:

- Exploring what consumers and final customers want.
- Working out how to provide those products and services.
- Prioritising farmers' training, money and time on those activities, suppliers and customers which will generate the best returns.

This exercise could include three tasks:

1. The simplest – but least effective – approach would be to have a group discussion amongst the trainees. The risk is that this perpetuates the idea that farmers understand the market – they often do not – and they base subsequent decisions on their own assumptions, which is a common and significant mistake. Anecdotes are not evidence!

2. Informal focus group of shoppers or a field trip to meet shoppers. Participants should ask about those characteristics consumers want from the product the farmers are interested in which would change their behaviour beneficially (buy more; pay more; have more loyalty a supplier or brand). This includes:

    - Which stall/shop from which they buy food
    - How they decide what to buy
    - How much they buy
    - How much they are willing to pay
    - What would encourage them to buy more, such as greater convenience; better hygiene; packaging; better quality? Ensure shoppers explain what exactly they mean by "quality": is it appearance, and if so, is it colour, shape, size, blemishes etc.? Is it flavour, and if so, is it tenderness, ripeness, juiciness, sweetness etc.?

3. Use existing market analysis as a basis for discussion.

3.5 ACTIVITY 3 – WHAT DO CUSTOMERS WANT?

3.5.1 Key message

Getting access to market opportunities, especially to higher value consumers, means providing the product and service that the specific final customer (retailer, hotel catering manager etc.) requires - and the most valuable final customers are likely to require better service.

3.5.2 What are the product and service priorities for customers?

This activity helps participants to learn about the critical issues that final customers need, for example quantity, frequency of delivery, reliability, packaging, grading, shelf-life etc. Meeting customers helps participants to learn more about both market opportunities, including where customers have demand for a product but cannot get it on terms they want, and the most critical aspects of service that suppliers need to provide to gain access to those opportunities. Tasks might include:

1. Group discussions with a range of customers (shop buyers, stallholders, catering managers, wholesalers), which would allow participants to compare the different challenges, and so assess which ones would suit their own resources and capacity

2. Field trips to meet different potential customers, which would be more convenient for them, and

3. Role playing, with farmers playing the part of different customers, trying to imagine what would be important to different businesses.

The types of questions for participants to ask customers are:

- How do you choose what to sell? What are you looking for the products you buy? How do you assess quality?
- What are your shoppers/guests like? What types of consumers are more attractive, and what distinguishes them? Do you know what your consumers want?
- Where and how much waste is generated in your shop/hotel etc? Are the causes of this waste understood; what efforts have been made to reduce the waste, and with what impact; and what is preventing further reductions?
- How much variability is there in the supply and demand for particular vegetables (daily, weekly, seasonally and annually)? Is it predictable? How is this managed; does it produce waste or selling products for less than they are worth, and what could be done to improve the situation?
- Are there problems with fulfilling orders for particular vegetables? Are these problems to do with availability in terms of volume or quality? If some suppliers are more reliable, why is this, and what should we learn from them?
- What other risks do you face that are caused, or potentially could be reduced, by your suppliers?
- Do you tend to deal with the same suppliers, or swap around? Why?
- If you do not currently buy direct for farmers, would you be interested in this?
- Are there formal contracts or informal/verbal agreements? If so, how long ahead do they go?
- How do you incentivise/reward better suppliers?
- What do you look for in a good supplier?
- Do you discuss longer term plans with your suppliers?
- Do conflicts ever arise with suppliers, and how are these resolved?
- Do you have any other frustrations with sourcing the product, and how could they be eliminated?

3.6 ACTIVITY 4 – CREATING VALUE

3.6.1 Key message

Growing the pie requires:

- Knowing what influences shoppers' and customers' behaviour/decisions.

- Focusing on those activities along the chain which create value, which unless farmers supply consumers or final customers directly, means working with others to create value and deliver levels of service which will gain access to higher value markets (Activity 6).

3.6.2 Background

This activity uses the same process as mapping waste in Activity 1. However, instead of identifying the sources and causes of waste, it looks at what product characteristics and services are required downstream, as identified during Activities 2 and 3. These are listed in the final column of the value chain maps, and then traced upstream to see how those characteristics are derived, such as choice of variety, production, postharvest processing, speed to market etc. Again, the objective is to help participants prioritise the use of their resources and training, and identify what further advice they need.

3.6.3 Examples of Mapping Value

The first value map is based on the case study of the Iraq al Amir Women's Cooperative in Jordan (see Case Study 2, page 16). In summary, the market opportunity was green/spring onions which were produced with less/safe pesticides, and which guaranteed a fairer return to farmers (right hand column in map below). The value chain map then shows which activities created that value, and therefore helped farmers to prioritise their resources and training. For example, it was important to have uncontaminated water; only use known (labelled) and approved pesticides; cooperate amongst farmers to provide the volume and length of season that consumers needed to maintain the habit of buying the product consistently, and finally, ensure the product was packed and labelled/branded to distinguish it clearly from similar vegetables but which did not offer the same assurances. This branding helped consumers to find the product easily on shops' shelves.

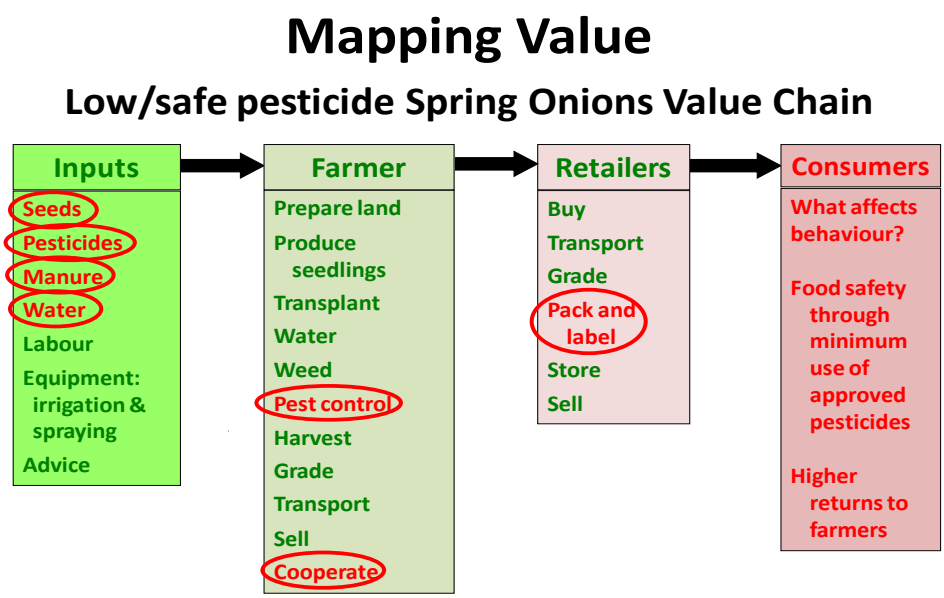

Figure 3.5: Spring onion value chain

This second example shows a value chain supplying sweet potatoes to hotels. Only the colour of the potato (through varietal selection) is considered significant in terms of product quality, with hotel catering managers placing more emphasis to suppliers' consistency, for which harvesting and grading are important, and reliability, which needs farmers to cooperate so that orders' timing and quantity were always met.

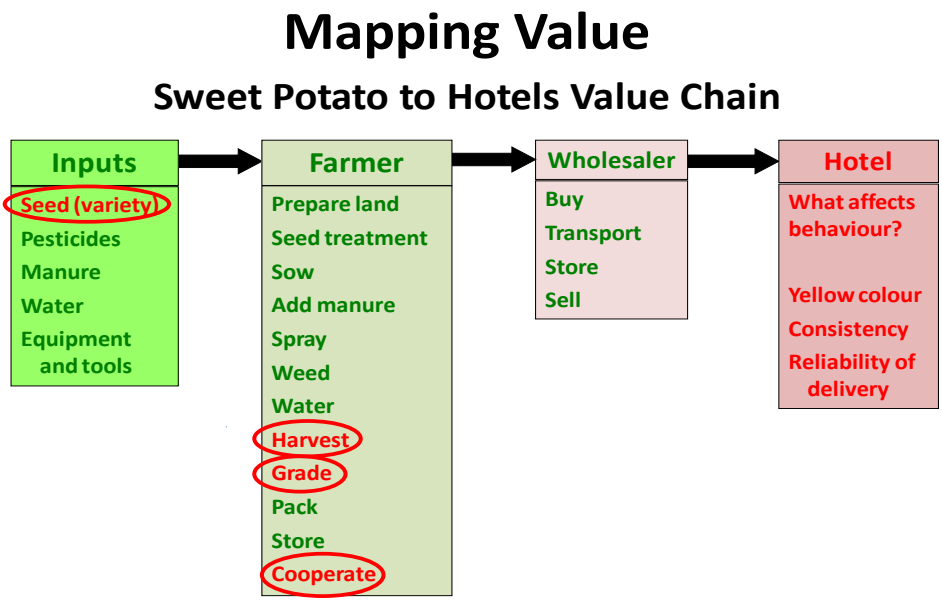

Figure 3.6: Sweet potato hotel value chain

In the next example, a pork value chain, two distinct groups of consumers were identified as potentially offering higher returns. The first were 'discerning consumers' given their willingness to pay more for a product which was tastier and juicier than standard pork. Expert advice recommended that switching to a different breed and using alternative feed would result in a more attractive product, so those inputs are ringed in red. The second group was 'healthy consumers', who were particularly concerned about having lower fat meat produced from pigs which were not routinely fed antibiotics. Breed and feed were again important (though different breeds and feeds to supplying discerning consumers), and so was raising the pigs in less intensive conditions which eliminated the need for routine use of antibiotics.

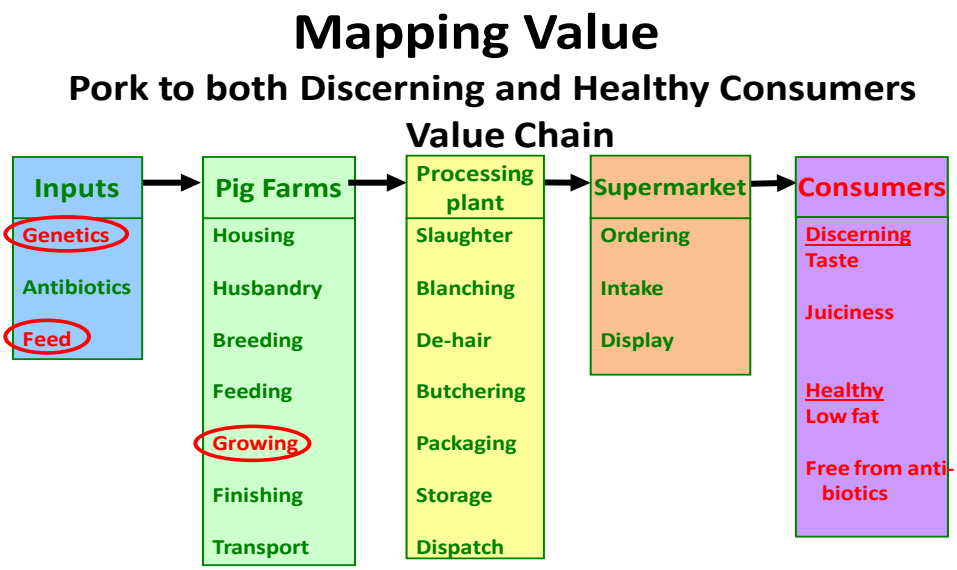

Figure 3.7: Pork value chain

The final example explores the requirements of some retailers and consumers for tomatoes which have a longer shelf-life, so reducing waste. Multiple sources of value were identified by chain members, including varietal selection; advice to improve monitoring and harvesting, as well as investing in shade both on-farm and by stallholders.

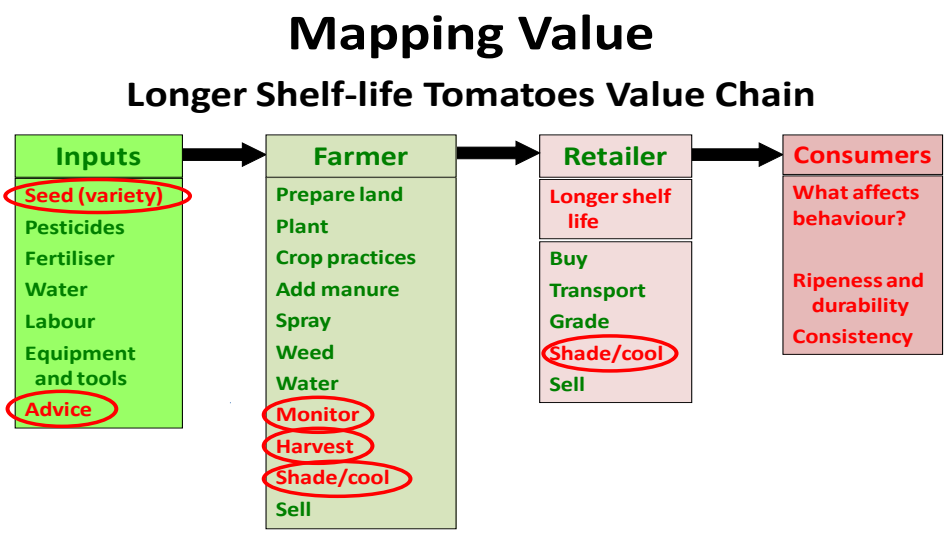

Figure 3.8: Long shelf-life tomato value chain

EXERCISE 2: What increases value of a product, and where is this created in the value chain?

Using the same value chain maps as produced in Activity 1 about reducing waste, course participants should identify how/where consumer value is created, and what activities are critical to delivering the service the final customer needs.

Back in small groups, the first step is for participants to list what they learnt from Activities 2 and 3 about what consumers and customers value about the products they are investigating. Then, they should discuss which activities are responsible for those product characteristics or service: who/what is involved?

This might involve:

- particular inputs
- special attention to some farming practices or postharvest processing such as grading, sorting and packing
- speed to market
- how retailers present the product to shoppers

Groups may find the discussion reveals they need to add new activities to their map. Then each important activity should be marked with a V, as shown in Figure 3.3. Encourage groups to present their conclusions to each other, and share what they have learnt.

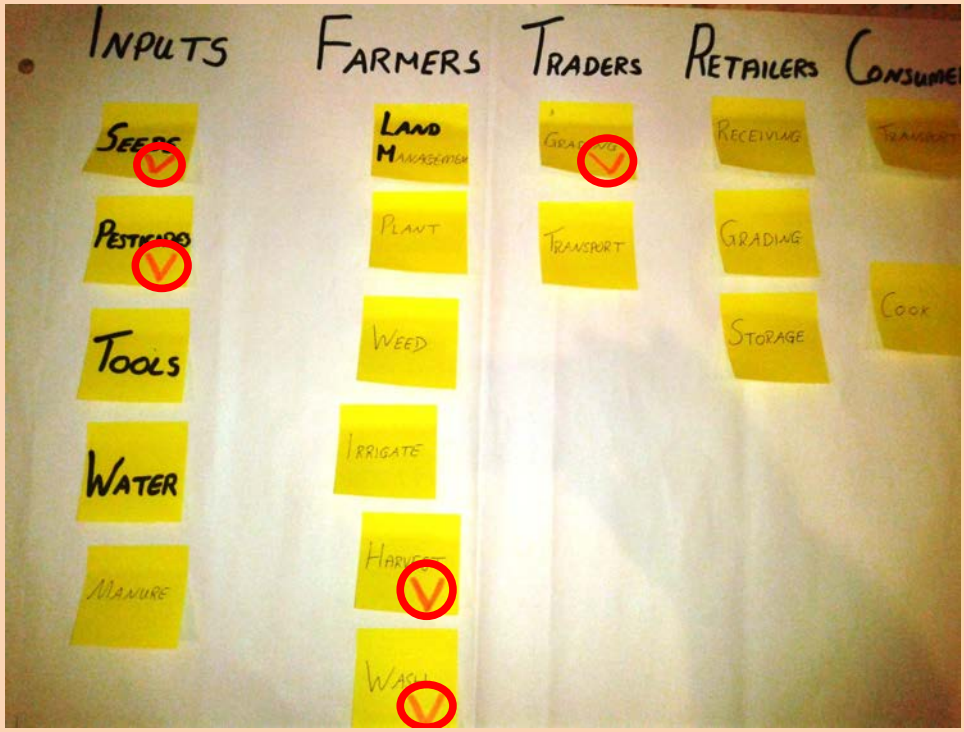

Figure 3.9: Value chain map showing activities that are key to creating value

Having identified critical inputs and activities, ensure that participants include the findings in their Action Plans. Do they need further training on optimising activities, or require ongoing advice from extension staff? Do they need to meet with potential seed suppliers to explore whether they can find a reliable source of the seed variety and quality they will require?

3.7 ACTIVITY 5 – POSTHARVEST OPPORTUNITIES FOR FARMERS

3.7.1 Key message

Farmers should consider postharvest activities if this makes them more attractive to high value customers, or allows them to earn a higher income.

3.7.2 Background

The objective is to encourage participants to think about what postharvest activities would increase their potential income, and/or make them preferred suppliers for higher value markets. This might involve doing some activities more effectively, like grading, either because this relieves customers of the task, or because any lower grade produce could be channelled to other customers rather than discarded. In the example below from the Jordanian women's cooperative, the farmers identified that they needed to take on responsibility for packing and labelling rather than leaving it to retailers. This meant their product was segregated throughout the supply chain, and so maximised the chance of it selling for its true value, rather than being mixed with standard green onions and sold at a lower price.

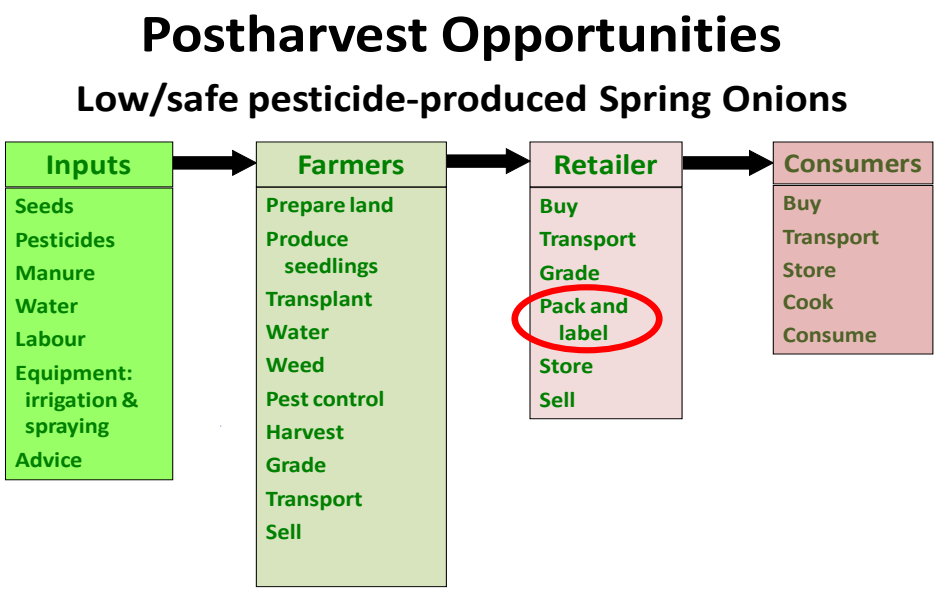

Figure 3.10: Low pesticide spring onion value chain

3.7.3 Activity

Use the value chain maps already produced for waste and value to discuss which postharvest activities farmers could do either to increase their income (recognising that many activities will increase their costs and/or require extra time) or to make them more attractive suppliers to their customers, and so improve their access to higher value market opportunities. Do they need additional training? If so, ensure this is recorded in their Action Plans.

3.8 ACTIVITY 6 – WORKING AS PARTNERS: HOW TO PICK PARTNERS AND BUILD RELATIONSHIPS

3.8.1 Key messages

Value Chain Thinking requires a collective decision by key chain members to

- focus on delivering target consumers' needs
- provide better service to customers
- reward product and service quality, and commitment

Accordingly, critical partners are those who:

- are committed and able to reduce waste and create value
- supply important inputs, and/or
- provide access to higher value markets

Farmers need to select critical partners, and then build cooperation and commitment.

3.8.2 Background

Value Chain Thinking involves a deliberate decision by chain members to work together to improve their returns by delivering better services to each other and the type of product their consumers want (Collins et al., 2015). It does not just happen, and it is not easy – but it does increase incomes. Accordingly, farmers need to build relationships with those chain members who are critical to the success of their Action Plan. In return, those partners also need to recognise their interdependence, and so develop commitment and share benefits to take advantage of market opportunities.

The foundations for strong relationships amongst value chain partners are shared objectives and motivations, and then complementary resources (skills, land, finance, equipment, access to market etc). These foundations need to be built upon by partners' attitudes and behaviours, including:

- understanding each other's abilities and requirements
- open communication
- reliability and honouring commitments
- sharing risks, costs and rewards, including through incentives
- working together to solve problems, while also pre-emptively preventing issues arising.

In combination, these foundations and behaviours lead to more trust, cooperation and commitment; and less opportunism, conflict and abuse of power/dependence (Hobbs et al., 2000). Cooperation is when value chain members collectively respond to market opportunities and threats. It increases as relationships become more committed, moving from spot market and one-off transactions; to repeated sales; to formal/informal contracts between farmers, traders and retailers, and finally close partnership. Building partnerships relies on farmers following the five rules of being a good supplier:

- **Negotiate:** Select suppliers and customers, and negotiate price
- **Commit:** Build relationship; resist opportunism
- **Deliver:** Volume and quality (grading) consistently – be reliable
- **Monitor:** Constantly check what the market and customers require, by asking for feedback
- **React:** When performance differs from customer/consumer expectations, act on the feedback

Chain members also need information to flow to make decisions which improve the chain's performance. These flows typically reflect the nature of relationships, for example, withholding information is often a result of an abuse of power or lack of trust, while effective flows come as mutual benefits are gradually realised. Access to information can also vary between men and women across the value chain, potentially reducing the chain's effectiveness, and diminishing the equitable division of resources and benefits. In all discussions, the causes and consequences of such gender distinctions should be addressed.

Partnerships may also include cooperating with other farmers, to bulk up supplies, and so increase scale and availability to attract buyers and potentially increase the price offered, and to negotiate lower prices for inputs. However, such cooperation needs leadership, organisation, mutual trust and common vision to overcome the challenges. These include:

- coordinating sowing and harvesting, and sometimes sorting, grading &/or packing
- agreeing varieties to suit a single market and a production schedule (not each farmer's preference)

In addition, women's participation in formal farmer cooperatives can be constrained by membership requirements, for example, when based on formal land ownership and capital. Such barriers to their involvement should be removed. There are a number of practical steps which can strengthen relationships, though it may take several years to achieve them all:

1. Developing agreed objectives and expectations in terms of focusing on consumers, final customers and improving efficiency.
2. Developing terms of trade and incentives which help to share higher returns (from 'growing the pie') by rewarding those behaviours and activities which create value and improve commitment, volume, reliability and efficiency.
3. Learning about each other's businesses, and so appreciating what contribution others make, and what risks they shoulder, which will reveal the inter-dependence within the chain. Conversely, ignorance and suspicion can breed distrust.

4. Solving problems, like reducing waste, through mutual commitment of time, money, expertise and bearing risks. Those who do not contribute to making improvements do not earn a right to share the rewards.
5. While contracts may be formal or verbal, placing emphasis on them being long term; rewarding reliability and improvement. Where arrangements are vague, parties must resist the temptation to take advantage; commitments should always be honoured.
6. Communicating openly, honestly and ensuring consistency between words and actions. In time, sensitive information should be shared, confident that confidentiality will be respected and trust will not be abused. Even when everyone is busy with their day-to-day business, ongoing communication helps build commitment. Feedback should be given constructively, and action taken in response where necessary.
7. Working with input suppliers to ensure availability to critical inputs of the necessary quality/varieties.
8. Agreeing what postharvest processing would 'grow the pie' by meeting retailers' and their shoppers' needs.
9. Keeping the chain's strategy under review given that the context (consumers, competition, technology, best practice, etc.) is dynamic.

3.8.3 Example

The value chain maps can be used to identify critical partners (Collins et al, 2015). In the example of the mango export value chain, it is evident that to deliver what consumers valued – sweet and ripe fruit – it is essential that the importer ripens the fruit expertly, and carefully selects individual mangoes to send to retailers only when they are in peak condition. Accordingly, for the producers to maximise the market opportunity, they needed to find the best importer with the skills and commitment to undertake these activities effectively.

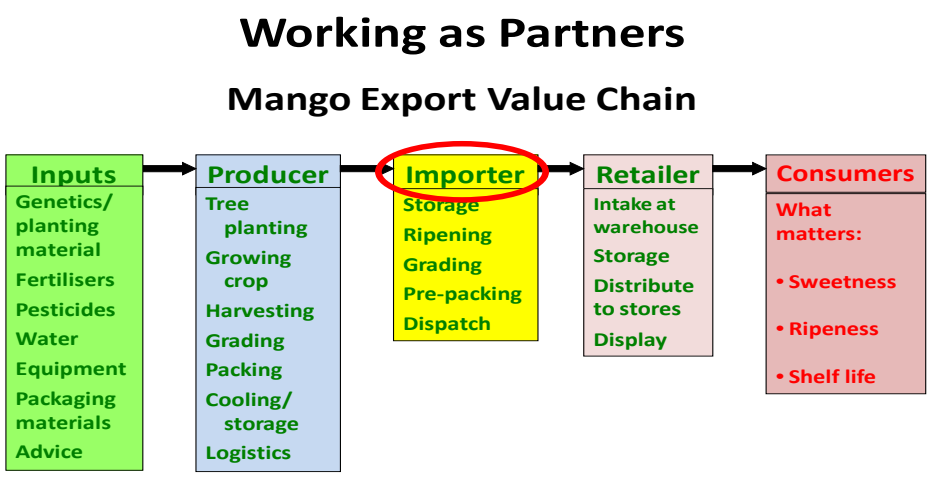

Figure 3.11: Mango export value chain

3.8.4 Activity

Using the value chain maps, trainers should discuss with participants which relationships are most important, including potentially with other farmers.

Once participants have decided which market opportunities to pursue through their Action Plans, trainers should help participants arrange and conduct meetings with partners who are critical to implementing their Action Plans. Trainers should help participants plan the discussion, which could be based around the following issues:

- Do partners agree with the maps of the chain?
- Do they agree about what specific consumers value, and the services required by the final customer?
- Can they agree terms of trade which reward creating value, reducing waste and improving quality, volume, services, commitment and reliability?
- What information does everyone need (quality; delivery quantities and timing etc.), and how will this information be found and shared?
- How can farmers ensure they remain preferred suppliers?
- What are the likely levels of demand and availability? What coordination is needed of production and orders/ delivery amongst farmers, and between farmers and customers?

3.9 ACTIVITY 7 – LEARNING FROM AN EXISTING VEGETABLE VALUE CHAIN

3.9.1 Background

This activity provides participants with the opportunity to learn from an existing value chain. This will teach them about different parts of a specific chain, and the practical challenges and benefits to applying Value Chain Thinking. The activity is known as 'walking the chain', and can be a very illuminating experience. It involves meeting chain members to ask questions in order to understand the chain's structure; what its consumers value about vegetables and whether/ how this is reflected in decision upstream, and how relationships are affecting the chain's ability to 'grow the pie' by creating value and reducing waste.

3.9.2 Activity

Trainers may need to use contacts and facilitators to gain the cooperation of chain members, since the benefits of the activity will depend upon how open those individuals are with their answers. It is important that each team is well prepared with questions and for recording answers – the same questions suggested for Activity 3 could be used here, as well as the checklist of issues provided in Activity 6.

Participants should have discussions during the activity about what they are learning, and to decide on whether this suggests additional questions to ask in later interviews. Finally, participants need to draw lessons for their own Action Plans.

3.10 ACTIVITY 8 – GENDER EQUITY IN VALUE CHAINS

3.10.1 Background

Social norms and behaviour between genders may reduce a value chain's performance. For example, men and women across the value chain may have different attitudes to cooperation amongst farmers and with suppliers and customers. Similarly, if women in a culture do most of the shopping, then male farmers may understand less about what shoppers want and make decisions based on incorrect assumptions. Access to resources like training might also affect genders differently.

3.10.2 Activity

Participants should discuss the different roles of women and men in the value chain. They can use the value chain maps to identify the typical roles of males and females in the value chain by marking each activity with an M for males and/or F for females. Then they should discuss how the behaviours and constraints encountered by female and male producers, processors and retailers may prevent Value Chain Thinking, for example through:

- access to resources (land, finance, transport etc)
- inclusion in decision-making
- division of labour
- building partnerships
- receiving the benefits of Value Chain Thinking, and so encouraging the behaviour required to sustain collaboration

Both men and women farmers should be involved in suggesting potential solutions to improve gender equity. However, it may also be helpful to have separate discussions in single sex groups. Female participants could be asked to debate:

- How do women farmers interact with men and women among different types of value chain members (input suppliers, traders, retailers, consumers etc.)?
- What type of constraints do women face with each of these interactions, and how does that affect the scope for Value Chain Thinking?
- As female farmers, how could they change behaviour to strengthen their position in the value chain, and how should this be reflected in their Action Plans?

Similarly, male participants could discuss:

- How do male farmers interact with men or women along the value chain (input suppliers, traders, retailers, consumers etc.)?
- How do male chain members support or marginalise women in the value chain? What impact does this have on value chains' effectiveness and opportunities to grow the pie, and everyone's share of that pie?
- How should male behaviour change to avoid marginalising women? How should this be reflected in their Action Plans?

3.11 ACTIVITY 9 – PREPARING AN ACTION PLAN

3.11.1 Key Messages

1. To increase their income, farmers need to decide:

- What and how to grow, and how could they improve their returns by reducing waste (Activity 1) and creating the quality of product to suit particular market opportunities (Activity 2)
- How to be preferred suppliers by delivering the service needed by the final customers who provide access to those market opportunities (Activity 3);
- Whether to undertake additional postharvest activities, like processing or grading (Activity 5), and
- How to pick partners and build relationships (Activity 6)

2. What must farmers excel at? Their Action Plan should focus training, time, skills, advice and money on being excellent at those activities which contribute most to distinguishing them from the crowd, and so increasing their income.

3. Having identified critical activities, ensure the Action Plan includes:

- Prioritising further production and postharvest training and advice; and
- Identifying critical inputs, and then seeking advice on getting the type/quality needed, for example from extension staff, and meeting with critical suppliers, such as seeds.

3.11.2 Background

Activity 9 and producing the Action Plan are the culmination of each participant's learning from the course. It should bring together their knowledge in production, postharvest processing and Value Chain Thinking. The aim is to focus on the activities farmers can undertake to differentiate themselves from their competitors in serving higher value market opportunities. If a farmer does not prioritise what will be attractive downstream (more value; lower waste; stronger partnerships), they are doomed to compete on price, because they cannot distinguish themselves in any other way from competing farmers.

Trainers need to help each participant to develop an Action Plan based on Value Chain Thinking. This means the plan:

- Is market-orientated by identifying market opportunities, and what that means in terms of delivering consumers' needs, so that produce is pulled through the chain to meet their demands, rather than pushed through the chain based on what is produced upstream;
- Fits the size of market opportunities with volumes available. If a farmer is only willing to work alone, s/he will only be able to serve a small market opportunity. Even working in cooperation, farmers need to balance their ambition with their capacity to meet customers' requirements in terms of volume and reliability, especially given the inherent uncertainties in agricultural production. It is better to start small and take small steps, than be too ambitious and fail.
- Reflects each farmer's training needs, interests, skills and capacity. In particular, it balances each farmer's aspirations in terms of production of:
    - **Crops for Consumption** – for the farmer's own family
    - **Crops for Cash** – usually a standard/commodity crop which provides a relatively predictable, if low, return to meet the farmers' need for income and cashflow
    - **Crops for Value** – which offer higher returns based on Value Chain Thinking

- Justifies what to produce, how and for what route-to-market based on market opportunities and the participant's own resources (land, time, initial finance, inputs, skills, support from family etc.).
- Prioritises those inputs and activities, including postharvest, which are most critical to both creating value and reducing waste on-farm and downstream.
- Targets critical partners based on who creates value, reduces waste or provides access to the market opportunities, and sets out specific actions on how to become a preferred supplier to those critical partners.
- Identifies what information will be needed before, during and after production, and how that information will be gathered and used.
- Ensures that gender norms do not prevent the value chain improving its efficiency and effectiveness, or distributing the resultant benefits.
- Lists what external support will be needed, and how it will be obtained.
- Is dynamic and capable of adaption with experience and changing market opportunities.

3.11.3 Activities

Using the maps created in Activities 1 and 4, discuss those on-farm activities and choice of inputs which have most influence on reducing waste (Activity 1); creating the quality of product the target consumers want (Activity 2), and providing the service the customers need (Activity 3). These should be indicated with 'V's for value and 'W's for waste on the map. There may also be some postharvest activities immediately downstream which farmers could undertake (Activity 5) if they would enable them to capture more value. Remember that if there are no Vs and no Ws in a farmer's list of activities, and they do not build partnerships, they can only compete on price, which constrains their potential income.

Farmers need to focus on these critical activities, so discuss with them what additional production and postharvest training would help them excel at these activities. Similarly, having identified key inputs, what advice can they get on how to optimise them, for example from extension staff or from meeting with potential seed suppliers? Build the answers into the Action Plan – bringing in experts in finance, nutrition, production, postharvest processing and retailing if necessary – and use them to prioritise additional training.

Trainers should also discuss with both male and female participants (together and individually) what constraints they may face in implementing their Action Plan, and how these could be avoided.

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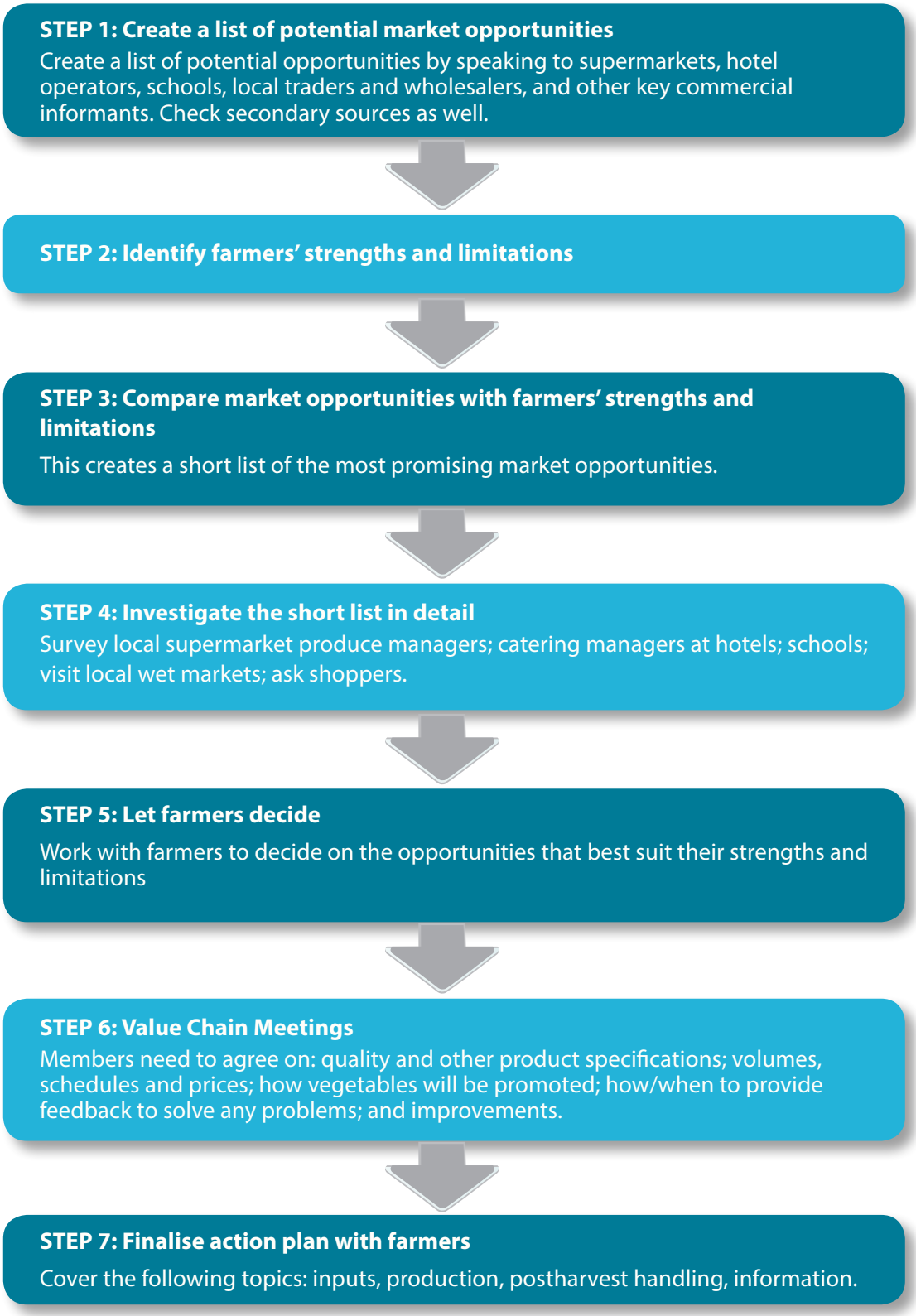
CHAPTER FOUR

Steps to Connecting Farmers to New Markets

Chapter Four of this manual sets out a 7 Step process to connect farmers to those higher value markets best suited to their skills, attitudes, resources and access to inputs. This 7 Step Guide has been used in several case studies in countries where VINESA project is operating (Macharia et al., 2016). Part 4 starts with a summary of the 7 Steps (Figure 4.1), and then explains each step in detail, concluding with advice on preparing an Action Plan for each farmer. It is important to work through each step.

Figure 4.1. The 7 Steps to Connecting Farmers to New Markets



STEP 1: Create a list of potential market opportunities

What are we trying to do in Step 1? Speak to people who can help identify market opportunities for farmers. These will be compared in Step 3 to farmers' strengths and limitations.

Remember: *Value Chain Thinking is about farmers adopting an attitude of producing what they can sell for the best price, rather than simply selling whatever they are accustomed to growing.*

Small-scale farmers often fail to benefit from available lucrative opportunities largely due to their limited ability to participate in high value market chains (Weatherspoon and Reardon, 2002) caused by lack of understanding about what products these markets demand, when and in what volume and quality (Weinberger and Lumpkin, 2007). To help small-scale vegetable growers overcome these major obstacles, one should initially make a list of potential market opportunities by reviewing secondary sources, including reports on consumer trends and opportunities for import substitution, as well talking to industry experts and NGOs. Narrow down these opportunities by speaking to people who have direct experience in supplying and selling the products being investigated. This might include supermarkets, hotel operators, processing companies and kitchen managers at schools, hospitals, and in the military. It is also worth talking to entrepreneurial traders/ wholesalers, meaning those who have a positive attitude to working with farmers to supply new markets, rather than those who just want to protect the current situation and focus on high volumes at low prices.

Explain at the start of each discussion that you are only interested in opportunities:

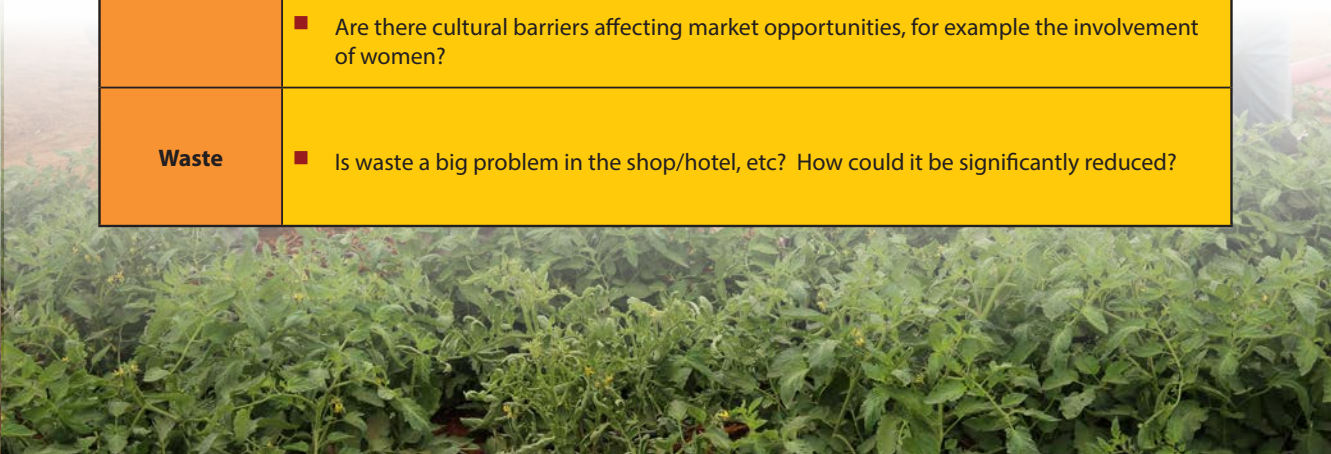
- for a small number of farmers – not for all the farmers in the region!
- where these farmers can compete for higher prices because of their skills in farming and Value Chain Thinking, not by offering lower prices.

Some examples of questions to ask are given in Table 1. Feel free to include other questions that are appropriate to the situation.

Remember: *While you are only looking for market opportunities for a small number of farmers who want to be part of a specific value chain, don't forget that they can work together with additional farmers to increase their production, yields and cooperation if they want to supply a bigger market opportunity.*

Remember: *Assumptions are very risky! Gather evidence, not anecdotes.*

Table 1: Examples of Questions to Gather Market Information	
Products	■ What quality is likely to be required, including postharvest activities like grading? ■ What quantity will customers want; how frequently and how does this change across seasons? What are typical minimum purchase levels?
Consumers / Shoppers	■ What are the trends in vegetable shopping, especially amongst wealthier shoppers/ diners/tourists? ■ What are the changes in where people shop, such as supermarkets versus wet markets, and the vegetables they are choosing? ■ Are new market opportunities emerging where farmers are being slow to react, for example, new ethnic populations? ■ Are some shoppers looking for new value-added products, like preserved vegetables, sauces or other processed products?
Supplies	■ What vegetables offer high or growing demand? Is there a shortage of any kinds of vegetables? How does this vary across seasons? Why is supply too low, and how could farmers or others in the supply chain solve this? ■ Where is there a realistic chance of substituting locally grown vegetables for imports? ■ Are there opportunities for branding, for example to provide an assurance of quality or low pesticide use or being produced in a particular locality? ■ What is the typical price, and how does it vary across seasons? How are higher costs, such as better inputs or packaging, offset by higher prices? ■ Are there regulations that could affect farmers responding to particular opportunities? These could be regulations about food safety or market operations.
Suppliers	■ Who is involved in their supply chains? What benefits would encourage them to change suppliers? ■ Are existing suppliers unreliable? If so, precisely how, and why? ■ Are there cultural barriers affecting market opportunities, for example the involvement of women?
Waste	■ Is waste a big problem in the shop/hotel, etc? How could it be significantly reduced?



STEP 2: Identify farmers' strengths and limitations

What are we trying to do in Step 2? By making a list of farmers' specific strengths and limitations, in Step 3 we can match them against the market opportunities found in Step 1 (Srivastava et al., 2005). This will help prioritise the most suitable opportunities for more investigation.

Remember: Start where farmers are. A realistic assessment of potential market opportunities must start with looking at farmers' priorities, skills, resources (skills, land, finance) and attitudes to change and cooperation.

To avoid investigating unsuitable opportunities, it is important to start by listing farmers' strengths and limitations, and then deciding which market opportunities should be looked at in more detail. To identify these strengths, ask what these farmers could offer that would be more attractive to customers compared to other farmers? Equally, what might limit farmers' ability to meet customers' requirements? Some examples are given in Table 2, but these should be discussed and agreed with the farmers to make sure nothing is missed.

Table 2: Examples of Strengths and Limitations	
Skills and Attitudes	■ Skills (***Remember:*** Additional training can be included in the Action Plan in Step 7.) ■ Their preference for balancing - Crops for Consumption[1] - Crops for Cash[2] - Crops for Value[3] ■ Willingness to take some risks in return for potentially higher incomes? (***Remember:*** Farmers might be more willing to take a risk if they can start by taking small steps -- for instance, at first using only a small amount of land for "crops for value".) ■ Willingness to work with other farmers to have enough volume to supply customers, to reduce risk of problems in fulfilling orders ■ Opportunities and constraints created by ethnic and gender issues ■ Knowledge of postharvest processing techniques
Resources	■ Land, including amount, soil, microclimate, location (is the production area known for producing particular, high quality crops?) ■ Money ■ Postharvest facilities to process and store ■ Time available to change to new practices. (***Remember:*** In many cultures, this needs to be considered separately for men and women in households because of their different roles in the family and on the farm.) ■ Transport to market (availability and cost)
Access to inputs	■ Seeds ■ Water ■ Fertilisers and certified chemicals ■ Packaging ■ Training and advice ■ Credit

[1] **Crops for Consumption**: Grown for the farmer's own family.
[2] **Crops for Cash**: Usually a standard/commodity crop that provides a relatively predictable, if low, return to meet the farmers' need for income and cash flow.
[3] **Crops for Value**: Offering higher returns based on Value Chain Thinking, but initially returns may look more risky until confidence grows amongst value chain members.

STEP 3: Compare market opportunities with farmers' strengths and limitations

What are we trying to do in Step 3? By comparing the list of potential opportunities produced in Step 1 to farmers' strengths and limitations identified in Step 2, we can see which ones are most promising and worth investigating in more detail.

Remember: *Farmers become preferred suppliers by understanding what extra benefits they can offer potential customers to make them change from their existing suppliers.*

One approach is shown in Table 3. Start by listing the market opportunities down the left hand side, and farmers' strengths along the top. Then put ticks and crosses in each box depending on whether farmers have, or could quickly develop, the strengths needed for each opportunity (*Note:* This table only illustrates how this could be done, the list along the top should be the specific strengths identified in Step 2). This should allow you to create a short list of the 2-3 opportunities for which the farmers are most suited, which will be investigated in more detail in the next step.

	Table 3: Do farmers have what is required?				
	Skills	**Land**	**Inputs**	**Finance**	**Postharvest processing**
Market Opportunity 1					
Market Opportunity 2					
Market Opportunity 3					
Market Opportunity 4					

Other types of issues to consider in producing the short list include:

- What volume of crop is required? Is it realistic that a farmer could supply that individually? If not, are enough of them willing to work together?
- Are there any formal or informal barriers, for example cartels controlling access to the market?
- If farmers are cautious, could they start small, and then expand production as their confidence builds? Would customers be happy to start by trialling the farmers as new suppliers, and then increase the order once reliability and quality have been proven?

STEP 4: Investigate the short list in detail

What are we trying to do in Step 4? Having agreed a short list of market opportunities in Step 3, investigate these in more detail. These opportunities should be the ones that can give farmers higher returns compared to their cost of production (Atrill and McLaney, 2002). Depending on the short list, this could involve interviewing the supermarket produce manager, or catering manager at the hotel or school identified as a potential customer; visiting local wet markets to speak to stallholders; or talking to cooperative traders and wholesalers. Ask about their needs for:

- Consistency in delivering quality
- Reliability in terms of delivering on time and with the expected volume
- Cost competition – not the cheapest, but products that are suitable for their specific market, and offered competitively
- Improvement – how they expect suppliers to get better

Some examples of the types of questions to ask are given in Table 4a.

If at all possible, also investigate how shoppers in the chosen venues choose which vegetables to buy. *What Do Consumers Want*? If this is not possible at this stage, it is essential it is included in the Action Plan produced in Step 7 as a priority for the future.

Remember: *Wherever practical, involve farmers in this process. It is an important skill for them to have in the future as market opportunities change.*

Table 4a: Examples of Questions to Ask Potential Customers	
Products	■ How do you choose what to sell? ■ What are you looking for in the products you buy? ■ How do you assess quality?
Consumers/ Shoppers	■ What are your shoppers/guests like? ■ What types of shoppers/guests are more attractive as potential customers, and what distinguishes them? ■ Do you know what your shoppers/guests want?
Supplies	■ How much variability is there in supply and demand for particular vegetables (daily, weekly, seasonally and annually)? Is it predictable? How is this managed? Does it produce waste, or force you to sell products for less than they are worth? What could be done to improve the situation? ■ Are there problems with fulfilling orders for particular vegetables? Are these problems to do with availability in terms of volume or quality? If some suppliers are more reliable, why is this, and what should we learn from them?
Suppliers	■ What problems are caused by your current suppliers? How could they be reduced? ■ What do you look for in a good supplier? Do you tend to deal with the same suppliers, or swap around? Why? ■ If you do not currently buy direct from farmers, would you be interested in this? ■ Are there formal contracts or informal/verbal agreements? If so, typically how long do they last? How do you incentivise/reward better suppliers? ■ Would you be willing to agree longer term plans with your best suppliers?
Waste	■ Where and how much waste is generated in your shop, hotel, etc? ■ Are the causes of this waste understood? What efforts have been made to reduce the waste, and with what impact? What is preventing further reductions?

These types of questions could be supplemented by working through the short questionnaire in Table 4b with each potential customer. Ask them to rate problems with current suppliers of different vegetables that the farmers could grow.

Table 4b: Customer Survey

	Potential Crops		
	Vegetable 1	***Vegetable 2***	***Vegetable 3***
Consistency of supply (volume)			
Freshness on arrival			
Shelf-life			
Taste			
Blemishes (state nature of blemish)			
Food safety			
Damage due to packing/ transport			
Arrive ungraded/sorted, or inaccurately graded			
Currently insufficient supply			
Growing consumer demand*			
Current suppliers unreliable			
Please add and score any additional problems:			

Assessment by customer
1 = Not a problem
2 = Some problems
3 = Significant problem
4 = Very significant problem

***Growing consumer demand**
1 = Declining
2 = Static
3 = Rising slowly
4 = Rising rapidly

STEP 5: Let farmers decide

What are we trying to do in Step 5? Farmers need to decide which 1 or 2 opportunities to pursue by working through the results of Step 4.

Now that they have more details, the farmers should consider again which market options and trading partners offer them better returns now and in the future, *and* would be best suited to their strengths and limitations (Macharia et al., 2013). This involves identifying members, inputs, and activities in each value chain. Next, identify which of these are critical to the requirements of the market opportunity. Then, encourage the farmers to discuss which opportunities are most attractive. The deciding factors will vary depending on the chain, but some examples to work through are given in Table 5.

Remember: *Value Chain Thinking is about* ***targeting higher value market opportunities*** *and* ***picking the right partners*** *for strong relationships.*

Table 5: Assessing Alternative Value Chains

Farmers' strengths	■ Do they have the skills, attitudes, resources and inputs needed to be better than competing farmers in the most critical activities, and so encourage prospective customers to change suppliers? ■ Is additional training available to build key strengths?
Working with other farmers	If serving the market opportunity requires cooperating with other farmers to bulk-up supplies, they must commit to an agreement to work together. ■ Does the scope exist for developing the leadership, organisation, mutual trust and common vision to overcome the challenges? Can the farmers reach agreement in practice? ■ Can they grow varieties to suit the specific market opportunity and the production schedule (not each farmer's preference)? ■ Can they coordinate sowing and harvesting, and sometimes sorting, grading, and/or packing?
Downstream partners	■ Who are the downstream partners critical to getting the product to each market? Will they commit to a plan for volume, timing, quality criteria, price, reducing waste, and discussing other ways to improve? ■ Which customers seem most positive about building cooperative relationships with suppliers? Were they: - understanding about the challenges farmers face? - willing to share information when interviewed? - prepared to share risks, costs and rewards, including through incentives? - ready to work together to solve problems, and pre-emptively preventing issues from arising?
Other costs	■ What waste might occur, and how could that reduce profit? ■ What are the likely costs of transport?

STEP 6: Value Chain meetings

What are we trying to do in Step 6? Get farmers together with the most important members of the chain to agree how they will work together.

Arrange meetings with the key members of the chain. These will be the people identified on the value chain maps who are responsible for the most important inputs and activities. One way to help them choose is to get them to map each potential value chain (Collins et al., 2015). The meetings will agree quality and other specifications; schedule and volumes; prices, etc. *How to pick partners and build lasting relationships:* A summary of topics for the meetings is set out in Table 6.

Table 6: Sample of Topics for Value Chain Partners Meetings

Quality requirements	Cover everything with implications for inputs, production, sorting, grading, storage and transport, such as thresholds on: - Freshness/shelf-life - Cleanliness - Appearance (colour, blemishes, etc.) - Sanitary conditions - Size/shape - Maturity level - Variety - Chemical usage in production - Other postharvest processing
Terms of sale	■ Frequency of supply, packaging requirements, other ways buyer will work to support farmers ■ Price and volumes across the season (estimate if necessary) ■ Payment: - When will payment be made? - Will it be cash/cheque/credit/mix?
Trading conditions	■ Are there other legal or financial requirements? ■ Will the farmers have to produce documents about the chemicals they have used?
Suppliers	■ How the vegetables will be promoted (in-store, to hotel guests, etc.) to highlight their quality and provenance to consumers?
Feedback	■ How and when will customers provide feedback to farmers to minimise problems, improve performance and help build the relationship?

STEP 7: Finalise action plan with farmers

What are we trying to do in Step 7? It is ***essential*** that farmers have an action plan which sets out in specific detail how they will achieve what was agreed in Step 6 with their customers. The plan should state precisely who will do what and when.

A detailed explanation of developing Action Plans is given in the *Core Activity* of the Value Chain Thinking Training Manual, *Preparing an Action Plan* (Dent et al., 2017). In summary, each Action Plan should cover inputs, production and postharvest processing; the specific agreements the parties have made to work together (including between the farmers); and the flow of information along the chain (Table 7).

Table 7: Sample of Issues for Farmers' Action Plans

Inputs	■ How will farmers make sure the critical inputs are available when needed? ■ How will farmers get the money they need, especially to cover cash flow? - What external support will be needed, and how will it be obtained?
Production	For each farmer involved: ■ What to grow; how much to grow; when to plant and harvest; how to grow it. ■ How will critical activities be monitored to check everything is going to plan? ■ Are all the resources ready: land, time, finance, inputs, skills, involvement of family members? ■ How will the value chain deal with variability in production? What happens if too little can be harvested? What will happen to any excess production? How will the chain ensure a high quality product is still sold at a profit?
Postharvest	■ How will the crops be processed (grading, washing, drying)? ■ How will they be stored to protect their quality and shelf-life?
Working together	If the farmers are working together: - What is their formal agreement? - Who will be in charge of negotiating with customers? - Who will coordinate the farmers, and make sure they deliver on time, in full and to the agreed quality? - Who will monitor the products downstream? Visiting the vegetables where they are sold and talking to customers and shoppers will tell farmers a lot about how to make further improvements. Ensure the Action Plan includes money for any traveling involved in negotiation and monitoring.
Information	■ What information will farmers need before, during and after production? Who will collect the information and how will it be communicated to everyone who needs it? ■ How could the chain gather better information on its target consumers (for example, in-store observation and surveys)? ■ When will the key people along the chain gather together to review what can be improved?

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