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ENPARD Technical Assistance: Producer Group and Value Chain Development
ENPARD UNIDO/UNDP Component: Inception Report

Pre-Steering Committee Draft Version

UNIDO/UNDP Project Team

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The inception report provides information on the project's progress in the first 3 months and suggests changes in the project design following a vision of working with business-oriented producer groups in "three plus" value chains aiming at significant economic impact on rural communities and beyond.

Contents

1. Summary

1.1 Achievements

The value chain selection was finalized in the inception phase. The selected value chains will now be analyzed in detail applying specific value chain diagnostic tools.[1] Producer selection began, by preparing and launching an open call for producer groups, as well as preparing integrated business models across several of the selected value chains also drawing from the value chain diagnostics. The Producer groups will be selected to start identifying their needs to engage more effectively in value chains and develop appropriate business models for them. Other actions were initiated and some finalized related to project set-up, research into organizational forms, and results management.

Table 1: Inception phase achievements

Activity	Finalized achievements	Activities and comments
Set-up	• Launch ceremony conducted • Communication strategy drafted and approved • Contracts signed for the office and vehicle; security and other upgrades are underway at the office, and the vehicle is pending delivery	• Initiated procurement of office and communication equipment/materials • Initiated design of graphic identity and preparation of communication materials, social media sites, and page on the MoA website; activity now stopped due to EU hiring a PR firm
1.1: Value chain selection	Seven potential value chains (in "three plus" value chain *clusters*) were selected: (1) High value field crops, including buckwheat and legumes (2) Berries and fruit; (3) High-value, non-traditional vegetables; (4) Dairy; and, (5) Honey	• Expert scoring conducted on 30 value chains according to UNIDO's value chain selection methodology • Quantitative data collected and analyzed on 30 value chains • Data and initial value chain results presented and confirmed by the MoA • Meetings held with the governors and agricultural service centers of 6 marzes.[2] • Note: Only value chains for which profitable business models can be developed and producer groups selected and/or formed, will be supported in implementation.
1.2 & 2.1: Producer group selection	• Open call flyer and leaflet drafted, tested and adjusted • Open call for producer groups launched in Lori marz	• Meetings carried out with 25 potential implementing partners to discuss implementation models and receive recommendations on producer groups. • Meetings held with 18 producer groups, to evaluate capacities and discuss the project.[3]

[1] http://www.unido.org/fileadmin/user_media/MDGs/IVC_Diagnostic_Tool.pdf
[2] The marzes visited for meetings include Shirak, Lori, Aragatsotn, Kotayk, Gegharkunik, and Vayots Dzor.

		• Value adding business models are currently being developed for the selected chains. • Note: The open call is now being piloted in Lori marz, and will later be rolled out in the other targeted marzes.
1.3: Organizational forms		• Research undertaken on organizational forms and the impact of the upcoming law on cooperatives
Results management		• Results chain, outcome indicators, and baseline questionnaire in process

[3] Eighteen producer groups were visited in all of the targeted marzes, involved in the production of berries, buckwheat, dried fruit, greenhouse crops, herb collection, milk collection, and non-traditional vegetables.

1.2 Recommended changes to the Logframe indicators

In order for the project team to effectively support the best performing producer groups to transition into successful cooperatives and enterprises, several adjustments to the indicators are recommended. The indicators below will be applied to the entire UNIDO/UNDP project, including both the EU and ADA funded components.

Table 2: Logframe indicators and recommended adjustments

Intervention logic	Indicators in the EU project document	Indicators in the ADA project document	Recommended adjustment to EU component	Recommended adjustment to ADA component	Justification
Outcome: Rural household incomes from production and value addition in the targeted value chains increased	Output from targeted producers and producer groups increased by 15%.	Output from targeted producers and producer groups increased by 15%	Output from targeted producers and producer groups increased by 30%.	Output from targeted producers and producer groups increased by 30%.	Business-oriented groups will achieve stronger results.
Output 1: Strengthened and newly established primary producer groups.	At least twenty (20) new business-oriented farmers groups engaging in primary production are officially registered at the Agency for State Registry of the Ministry of Justice, and operational, with approved business plans, covering both agricultural and non-agricultural activities. Of these, at least 40% are women-led and	At least 3 new business-oriented producer groups established of which members are min 30% women and min30% young.	At least fourteen (14) business-oriented farmer groups engaging in primary production are operational, with approved business plans, covering both agricultural and non-agricultural activities. Of these, at least 30% are women-led or employ at least 30% youth. Those which are not already registered will be	At least six (6) business-oriented farmer groups engaging in primary production are operational, with approved business plans, covering both agricultural and non-agricultural activities. Of these, at least 30% are women-led or employ at least 30% youth. Those which are not already registered will be	Number of groups: Business oriented groups will require more intensive support, so only 20 primary producer groups will be targeted in the project as a whole. Women and youth: Field research has shown that women-led groups are predominantly made up of older people. Thus, supporting groups that are 40% women-led and employ at least 30% youth, in practice

	employ at least 30% youth.		registered at the Agency for State Registry of the Ministry of Justice.	registered at the Agency for State Registry of the	equates to 70% "vulnerable" groups, which this is not realistic with the business-oriented focus. <u>Registration:</u> Both the existing registered groups and informal groups require support to reach sustainability.
	Training conducted for staff of at least 30 producer groups in a) business planning, administration and organization, b) budgeting and financial management c) commodity marketing, d) food safety and traceability at production level, and e) effective involvement in agricultural and rural policy and planning decision-making.	Training conducted for staff of at least 10 producer groups in a) business planning, administration and organization, b) budgeting and financial management c) commodity marketing, d) food safety and traceability at production level, and e) effective involvement in agricultural and rural policy and planning decision-making.	Training conducted for staff of at least 19 producer groups in a) business planning, administration and organization, b) budgeting and financial management c) commodity marketing, d) food safety and traceability at production level, and e) effective involvement in agricultural and rural policy and planning decision-making.	Training conducted for staff of at least 6 producer groups in a) business planning, administration and organization, b) budgeting and financial management c) commodity marketing, d) food safety and traceability at production level, and e) effective involvement in agricultural and rural policy and planning decision-making.	See comment above regarding the number of groups. For the EU component: 14 primary producer groups + 7 processing groups = 21 groups total. For the ADA component: 6 primary producer groups + 3 processing groups = 9 groups total.
	At least 1,000 farmers trained in the targeted marzes as to possible structures and benefits of group organization, of which	At least 1,000 farmers trained in the targeted marzes as to possible structures and benefits of group organization, of which	At least 700 farmers trained in the targeted marzes as to possible structures and benefits of group organization, of which	At least 300 farmers trained in the targeted marzes as to possible structures and benefits of group organization, of which	<u>Training indicators:</u> 1,000 farmers will be trained in structures and benefits of group organization across the project as a whole.

	min 40% women and min 30% young.	min 30% women and min 30% young.	min 30% women or min 30% young.	min 30% women or min 30% young.	<u>Women and youth:</u> See comment above regarding women and youth.
	Manual for establishing/operating producer groups developed.	Manual for establishing/operating producer groups developed.	Manual for establishing/operating producer groups and replicating successful business models developed. Consulting support will be provided on an as-needed basis.		One manual will be developed, across the EU and ADA funded components.
<u>Output 2:</u> Value-adding producer groups effectively engaged in value addition.	At least ten (10) producer groups engaging in new and improved ways of value addition are officially registered at the Agency for State Registry of the Ministry of Justice, and operational, with approved business plans, covering both agricultural and non-agricultural activities. Of these, at least 40% are women led and employ at least 30% youth.	At least 5 producer groups engaged in new and improved ways of value addition, of which members are min 30% women and min 30% young.	At least three (3) producer groups engaging in new and improved ways of value addition are officially registered at the Agency for State Registry of the Ministry of Justice, and operational, with approved business plans, covering both agricultural and non-agricultural activities. Of these, at least 30% are women led or employ at least 30% youth.	At least two (2) producer groups engaging in new and improved ways of value addition are officially registered at the Agency for State Registry of the Ministry of Justice, and operational, with approved business plans, covering both agricultural and non-agricultural activities. Of these, at least 30% are women led or employ at least 30% youth.	<u>Number of groups:</u> Business oriented groups will require more intensive support, so 5 producer groups will be targeted in the project as a whole. <u>Women and youth:</u> See comment above regarding women and youth.
	Products from modernized producer groups attain at least 10% premium price and annual turnover increased by 20%.	Products from assisted producer groups attain at least 10% premium price and 20% increase in annual turnover.	Products from modernized producer groups attain at least 10% premium price and annual turnover increased by 40%.	Products from assisted producer groups attain at least 10% premium price and 40% increase in annual turnover.	Business-oriented groups will achieve stronger results.
	90% of the products from the targeted	90% of the products from targeted	No adjustment	No adjustment	N/A

	producer groups comply with new improved food quality standards.	producer groups comply with improved food quality standards			
<u>Output 3:</u> Strengthened value chains that provide improved access to affordable, better quality food.	Euro 0.5 million in new financing secured for targeted value chains in the selected marzes.	Euro 0.5 million in new financing secured for targeted value chains in the selected marzes.	Euro 0.35 million in new financing secured for targeted value chains in the selected marzes.	Euro 0.15 million in new financing secured for targeted value chains in the selected marzes.	The 0.5 million euro applies to the project as a whole, across both the EU and ADA components.
	GAP and disaster risk assessment protocols developed and provided to MOA with any necessary training of trainers.	GAP and disaster risk assessment protocols developed and provided to the MOA with related training of staff.	GAP and disaster risk assessment protocols developed and provided to MOA with any necessary training of trainers.		The protocols will be developed for three value chains, across the EU and ADA funded components.
	Actors in the targeted value chains employ 5% more workers than in the beginning of the project.	Targeted value chain actors employ 5% more workers on average.	No adjustment	No adjustment	N/A
	At least 10 pilot hail protection systems and 20 (at least 1 ha) pilot drip irrigation systems shall be implemented, evaluated and used for promotion and dissemination purposes.		No requirement for hail protection or drip irrigation systems. Such systems will only be used so far as they match the selected value chains and producer groups.		The funding is required to support the primary producer groups in income generating activities.

Table 3: Summary of current and recommended adjustments to the number of groups supported

	Primary production	Processing	Total
As currently written in the project document: groups supported			
EU	20	10	30
ADA	5	5	10
Total	25	15	40
Recommended adjustment: groups receiving intensive support			
EU	16	3	19
ADA	4	2	6
Total	20	5	25

1.3 Recommended adjustments to activities

In order to bring the project activities into alignment with the adjustments to the indicators, adjustments are also recommended to several of the project activities.

Table 4: Project activities and recommended adjustments

Activity	Recommended adjustments	Justification
1.1: Value chain selection and marz targeting	• Neither marzes nor intervention zones will be pre-selected (except according to ADA guidelines), as this would eliminate high potential groups that could come through the open call. • The main focus will be the poorer, more remote, marzes, although work in Ararat and Armavir is not strictly eliminated. Syunik may not be targeted as it is already the target of multiple donor initiatives. Tavush will not be considered due to the involvement of Russian Federation project. • The final selection of marzes will depend on the selection of farmer groups.	• By focusing on specific value chains, and replicating strong results, impact on communities and employment will be greater. • Value chain specialization aligns better with the focus on business-oriented groups. • Groups in Ararat and Armavir are more developed, closer to markets, and the value chains are more functional. • In the case of availability of funds, Syunik will be considered for replications piloted first in other marzes.
1.2: Primary producer group selection	• As noted in the Logframe indicators above: a minimum of 20 groups (14 EU and 6 ADA) will be selected and intensively supported to develop new business models. • The project can but is not obliged to form new groups. • No differentiation will be made between informal groups, small enterprises with multiple owners and cooperatives; all will be equally considered for project support. • The requirement of registering *new* groups will be eliminated. The indicator will only be the number of groups supported for increased productivity. • For the selected informal groups, registration as cooperatives will occur (a) when they are developmentally ready, and (b) when the new law on cooperatives is adopted; both are unlikely within the first year of the project. • The objective of distributing drip irrigation kits and hail nets will not be	• Supporting business-oriented groups to increase output and earnings involves a complex process and will require focus. • In most cases, community mobilization will require too much time. Further, the groups will not have a track record to gain credit or build business confidence. • When expanding business model within a value chain to reach scale, new groups may be formed in this case. • Whether existing groups are now registered or informal is not a reflection of their functionality or need for support, but only of the philosophy of the supporting organization. • Many of the registered cooperatives require support to become sustainable and increase member earnings. • Groups should become registered when their business growth requires

	a criterion for producer group or value chain selection.	this step, and not only because it is a project requirement. • Forcing registration too early will increase costs and make the groups more fragile. • The selection of the groups will depend on the identified criteria (for producer group selection).
2.1: Processor group selection	• As noted in the Logframe indicators above: a minimum of 5 groups (3 EU and 2 ADA) will be selected and intensively supported to develop new business models.	• Business-oriented producer groups require more intensive support, and spreading the team's focus too widely will impede good results.
2.2: Processing equipment and technology	• Increase capital investment to 86,000 euro, per group (from 28,667 euro (when averaging EU and ADA funds), by engaging 10 producer groups in the EU and ADA components combined.	• Reducing the number of groups targeted increasing the project's investment capability per group (and impact on value chains) without revising the budget. • The producer groups will require more funds than currently budgeted for equipment.
1.7 & 2.10: Participation of women, youth and vulnerable groups	• Participation of women and youth will be priority, but minimum requirements will be reduced to 30% involvement of women or youth overall.	• Too high a requirement on woman and youth involvement contradicts the business-oriented goals of the project, due to current cultural traditions.
3.1: Value chain analyses	• The value chain analyses will be commissioned in the second quarter, instead of in the inception phase as originally planned.	• The analyses will be based on the value chains to be implemented, and so depends on the initial results of value chain selection.

3.2 to 3.9: Value chain upgrading	• A value chain development strategy will be designed based on the results of the analyses of 3.1. The project team may select certain activities for implementation (while not implementing others), or implement each activity, by prioritizing the desired impacts in a highly focused manner. • The budget for drip irrigation and hail nets will be unrestricted from these specific assets, and will be used as most appropriate for the selected value chains and producer groups. • Increase capital investment to 22,250 euro, per group (from 17,800 euro (when averaging EU and ADA funds), by engaging 10 producer groups in the EU and ADA components combined.	• The activities of component 3 are expansive and will need to be focused in order to ensure a sustainable and impactful result. The best results will be achieved from Component 3 if it is streamlined. • These assets are not relevant to several of the value chains selected; without financing for these other value chains, adequate support cannot be provided to the groups. • While the project may have a focus on dried fruit, fruit production fruit production would only be a secondary focus and grapes will not be included, and so hail net distribution will not be relevant. • The distribution of the disaster risk management assets is not sufficient to provide a solid foundation for a business. Other assets/inputs will be financed which will have more impact on value addition and integrate better in the value chains selected.

1.4 Clarifications

The table below clarifies the project team's approach to various project activities. The intended method of implementation does not involve changing the requirements stated in the project document.

Table 5: Clarifications to project approaches

Activity	Clarification	Comments
1.5 & 2.6: Business plan development	• Business plan development will occur within activities 1.5 and 2.6 and draw from the value chain analyses and the development of generic business and organizational models.	• The implementation of activities of Components 1 and 2 will follow the timeframes described in the business plans.
1.3: Trainings on organizational forms	• The trainings on organizational forms and the benefits of group membership target the shortlist producer groups, which may comprise about 1,000 people (EU and ADA components combined). • A brochure on the expected law on cooperatives, for national distribution, will be prepared in place of the refresher trainings.	• Although the law on cooperatives may be passed only toward the end of the year, the expected legal changes are sufficiently clear that education to farmer groups can begin now.
1.5, 2.2, 2.4, 2.5, 2.6 & 2.8: Trainings on capacity building	• The trainings on business capacity building will be focused on the staff and members of the selected farmer groups only. • No minimums are set regarding the number of people to be trained, the number of trainings, or the number of training topics. • Not all producer groups will receive the same trainings, or the same frequency of trainings.	• The trainings on business capacity building are based on a needs assessment of the selected producer groups, and delivered at a pace relevant to their growth as business entities.
3.2, 3.3, 3.4, 3.5, 3.6, 3.7 & 3.8: Trainings for other value chain actors	• The trainings of Component 3 target other actors in the selected value chains, besides the farmer groups.	• The analyses of Activity 1.3 will identify the gaps and bottlenecks in the selected value chains; the trainings will be designed based on these results.
1.3, 1.4, 1.5, 1.6[4], 1.7, 1.8, 3.2: MoA involvement	• The project team will be able to implement activities that depend on the MoA participation and support, only if the dedicated staff and resources are made available.	• Certain activities require intensive MoA participation and support (such as creating specific Desks for Producer Organizations and Vulnerable People).

[4] The activities use the numbering in the EU component document. The ADA document includes an additional Activity 1.6, to "improve capacity of producer groups to participate in policy decision-making." This activity was eliminated, as it is included in the FAO project. Oxfam Armenia is also implementing this activity, with EU funding. The project team assumes its inclusion in the ADA component to be an oversight and in accordance assumes it to be removed.

1.5 Risks

The following risks were heightened during the inception phase.

Table 6: Heightened risks

Risk	Cause of increased risk	Mitigating measures
Producer risks	Due to their low incomes, producers in informal groups have expressed reluctance to become registered in the State Registry	Work with groups to assist them to increase incomes before requiring them to become registered.
Market risk	The devaluation of the Russian Ruble and other economic problems in Russia make exporting to Russia more difficult and Russian imports cheaper, undermining exporting focused businesses as well as import substitution strategies.	Choose value chains with local market demand, and build capacity while preparing for a time more favorable to export.
Capital risk	The devaluation of the euro has resulted in costs in AMD increasing beyond budget estimations. The late arrival of the EU funds, after the devaluation, has resulted in certain budgets being cut and complications in purchases causing delays.	Focus funds where they will have the most impact. Balance the financing required for trainings and assets for the producer groups with the number of groups to be supported.

2. Introduction

With funding from the European Union, the European Neighbourhood Programme for Agriculture and Rural Development (ENPARD) supports the Government of Armenia in ensuring an efficient and sustainable agriculture that contributes to better living conditions in rural areas. Under ENPARD Armenia a technical assistance component focuses on producer group and value chain development. The component is implemented by UNIDO and UNDP with funding from the EU (2.4 million Euro) and co-funding from the Austrian Government (1 million euro). In particular the project aims at strengthening producer groups, effectively engaging producer groups in value addition activities, strengthening value chains that provide improved access to affordable, better quality food, contributing to the development of rural areas and improve access to local and international markets, and ensuring the introduction of environmentally-friendly farming and food processing practices. Direct beneficiaries of the project include agricultural producers, members of producer groups and their employees, their families and SMEs along the value chains as well as Armenian consumers. The project also will focus on women, youth, and other vulnerable groups.

The project was officially launched on 23 January 2015 after which the first installment from the EU was received by UNIDO on 9 March 2015. The contribution from the Austrian Development Agency (ADA) had already been received on 25 September 2014.

This report informs about the first three months of project activities and suggests some adjustments to the initial project design based on the analysis of statistical data and meetings with a wider range of stakeholders.

3. Inception phase achievements

3.1 Set-up

Key set-up phase accomplishments include selecting an office and a vehicle. Office selection involved evaluating the safety standards of the building with UNDSS preparing a report, coordinating with FAO on shared space, resolving issues of internet connectivity, and negotiating with the landlord regarding security upgrades to the building, partitioning, and guards. Both the purchase of the vehicle and rental of the office were complicated by the devaluation of the euro which increased costs beyond budgeted amounts.

The communication strategy and communication planning framework were also developed and approved during the inception phase. The project team initiated implementation of this strategy by evaluating quotations from graphic designers to create a visual identity, as well as beginning the development of communication materials, social media sites, and a webpage. However, these activities were paused, pending information on how the team will collaborate with the PR company hired by the EU delegation.

3.2 Value chain selection (Act. 1.1)

Activity 1.1, to select value chains in the targeted marzes, was completed, with seven high potential value chains identified, organized in five value chain clusters. Using UNIDO's methodology for value chain selection, ENPARD experts rated 30 value chains on criteria related to the *Potential for Development Impact* and the *Likelihood/Ease of Intervention Success*. The geometric means of the scores for these two sets of criteria were plotted on a graph to identify the highest scoring value chains without discriminating one dimension over the other.[5] This multiple-criteria rating method identified the seven value chains, grouped in five value chain clusters. The selected value chains include:

1. High value field crops, including buckwheat and legumes;
2. Berries and fruit;
3. High-value, non-traditional vegetables;
4. Dairy; and,
5. Honey.

The scoring took into consideration quantitative data, which was collected for 30 value chains on a variety of factors. These factors include primary production quantity and value, farming household auto-consumption, imports and exports of fresh products, numbers of farmers, average income per hectare or head of livestock, processing capacity, processing of local production, domestic consumption of processed products, exports of products processed from local primary production, and import of processed products. These factors were also used to visualize the value chains and domestic markets, and to identify overall value chains constraints.[6]

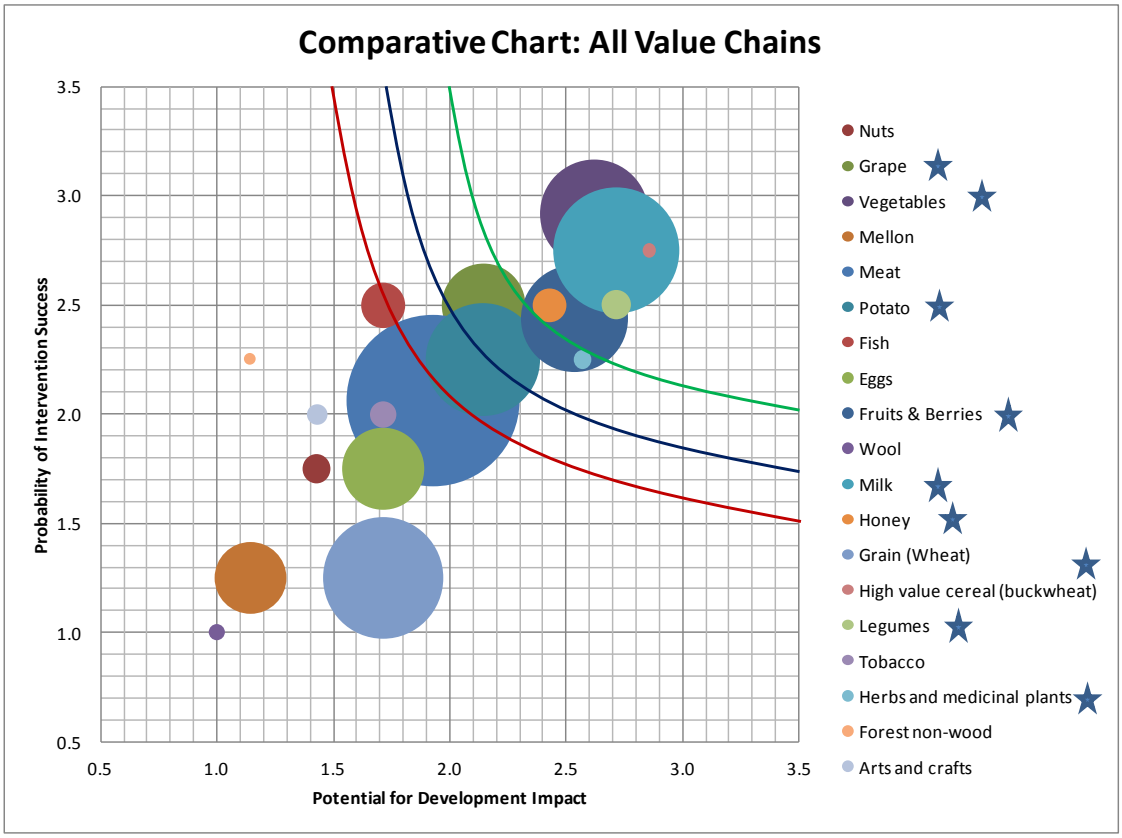
Following the ranking exercise, the results were discussed, cross-checked and confirmed through discussions with potential implementing partners, including public and private sector organizations

[5] Annex 2 provides the criteria used to score the value chains.
[6] Annex 3 provides the value chain visualizations/mapping.

working at the national and marz level, through a presentation at the Ministry of Agriculture, and through discussions with producer groups.

The graph below shows the confirmed results of the multiple-criteria scoring method. Value chains plotted in the upper right hand corner are those scoring highly on both sets of criteria, and thus showing a high probability of intervention success and a high potential to deliver project objectives. Those plotted with the center of the bubble within the curved green line have been selected. Widening the selection to those value chains within the red line would add grapes, potato, and herbs. The size of the bubbles indicates the value of primary production. The value chains within the widest selection (the red curve) have been starred for easier viewing.[7]

Diagram 1: Comparative chart of all value chains



Source: Based on scoring by UNIDO/UNDP project team

While these seven value chains have been selected, the project will support only those value chains for which profitable business models can be developed, or those in which the producer groups which apply to the project are active. Based on these two factors, the number of value chains on which the project will focus will be reduced to "three plus". Project focus entails undertaking a detailed value chain analysis, developing and implementing business models linking value chain segments, and developing a value chain upgrading strategy focused on other value chain actors. Grapes, herbs, and potato will also be considered, if further study of market opportunities proves favorable, and if specific producer groups with convincing business cases apply for support. [8]

[7] Annex 4 provides further description of the value chains in the widest selection.
[8] Annexes 5-8 provide further information on value chains, including data sources, production calendars and a breakdown of production by marz.

3.3 Producer group selection (Acts. 2.1 and 1.2)

The project team developed a methodology for producer group selection.[9] One method used to select producer groups will be through an open call to enable informal and registered groups to express their interest in receiving project support. The open call leaflet and application were drafted in English and Armenian, tested on three farmer groups, and revised based on the results of the test. An open call communication strategy targeting Lori marz was developed, with the goal of informing every farmer of the opportunity for support. Outreach channels will include the governor's office, mayors' offices, branches of agricultural universities, agricultural service center agents, marz level television and radio stations, marz level newspapers, and high-traffic internet and social media sites. The open call will be piloted in Lori, with the communication strategy later to be improved and rolled out in the other target marzes.

The second method used to select producer groups is through the direct research of the team, through the implementation of specific innovative, high impact business models. In this aim, the project team met with governors and key regional staff, as well as the agricultural service center directors, in Shirak, Lori, Aragotsotn, Katayk, Gegharkunik and Vayots Dzor marzes. In addition to these meetings, the project team met with 25 organizations working in value chain and producer group development to seek recommendations of high potential producer groups.[10] Eighteen of the recommended producer groups were visited in each of the above marzes. The visits helped to develop an understanding of the challenges faced by the groups and to gather information to assist in formulating value chain business models.

3.4 Research into organizational development options (Act. 1.3)

In order to anticipate the complexities involved in the formal registration of producer groups, the team conducted research into the current legal requirements for the different organizational forms, including consumer cooperatives, producer cooperatives, Limited Liability Companies (LLCs),Non-Governmental Organizations (NGOs), and contractual farmer groups.[11] A discussion at ICARE regarding the future "law on cooperatives" further informed the analysis. Following the shortlisting of the producer groups which apply for project support, a more thorough study of the organizational options will be commissioned, and a service provider selected to educate the farmers on the organizational options and the advantages of cooperation.

3.5 Results management

Value chain based results chains, with project outcome indicators, were developed based on M&E best practices, which were studied to inform the project's approach. The baseline study questionnaire was developed, to be implemented upon the selection of the producer groups. A cohesive results management strategy will be developed in the upcoming quarter.

[9] The producer group selection methodology is provided in Annex 9.

[10] Non-governmental organizations with whom meetings were held include ACF, Alvarium, Arcolad, Armenian Young Woman's Association, Business Support Center, CARD, CARMAC, COAF, FAO, VISTAA (farmer to farmer program), World Bank Food Safety Unit, French Armenian Fund, French Cooperation, Green Lane, Heifer International, ICARE, Improve our Village, IOM and AM Partners, Millennium Foundation for Education and Research, Oxfam, Movement of Farmers, UMCOR, USAID and World Vision.

[11] The costs, advantages, and tax implications of each organizational form is included in Annex 10.

4. Justification of adjustments to indicators and activities

Field visits undertaken by the UNIDO/UNDP team have revealed that the local and international organizations working in agriculture and value chain development in Armenia have been successful in mobilizing, organizing, and motivating farmers to form cohesive groups. The individuals in these producer groups have received training in organizational management and in good agricultural practices (GAP), and the farmers in the best performing groups use their learning to improve group functionality. In the case of several of the producer groups visited, these achievements have established a strong foundation on which the UNIDO/UNDP component of ENPARD could further build. Additionally, if many of these groups do not receive further support, from a project like ENPARD, their long-term sustainably will be unlikely. Some of these existing producer groups are informal, while many others are officially registered as cooperatives. However, nearly all depend on subsidies, and value creation is minimal. Armenia does not have a shortage of registered cooperatives. Instead, the country is lacking in sustainable business-oriented cooperatives, which create real value for consumers, and capture real earnings for their members.

Therefore, the competitive advantage of the UNIDO/UNDP component will be to complete the good work already accomplished by other organizations, by supporting the most successful of the producer groups to transition into successful, sustainable, cooperatives and companies. These organizations will evolve beyond only having good group dynamics and using GAP, to also developing high value products with strong market linkages, and will be integrated into local and global value chains. Whether the groups, up to now, are informal or have been registered as cooperatives, is of little importance. Both the formal and the informal groups are in need of similar support to generate value and create employment in rural areas. Several groups in both categories show cohesion and the potential to grow into sustainable business entities. Thus, the project team will support the best performing community-oriented groups (informal groups and registered cooperatives) to become successful business-oriented groups, without diminishing their community impact. These business-oriented groups will generate higher income for members, create employment throughout value chains, and will significantly impact their communities and the wider region—thus improving the quality of life in Armenia's rural areas.

This inception report will clarify issues and recommend changes to the project document, with the goal of creating alignment between the project activities and the vision expressed above.[12] None of the recommendations change the intended spirit of the document. Instead, they clarify approaches based on learning from the field, to enable the project team to better seize observed opportunities to support farmers to increase earnings and positively impact their communities.

This section is organized by theme, to provide further explanation of the recommend adjustments to the project indicators and activities (presented in the Summary section). Discussion of the concepts underlying the recommended adjustments to the Logframe indicators and project activities follow.

[12] Annex 1 provides a revised version of the timeline of activities, reflecting changes necessary to account for the vision described.

4.1 Value chain and marz selection

Recommendations:

- Focus on “three plus” value chains across the marzes, including in both the EU and ADA funded components.
- Focus activities in four to six marzes, to be determined based on whether the farmers in the area gain a significant amount of family income from the selected value chain, and whether the farmer groups applying to the program in that area offer a high potential for future growth.

The first factor determining in which marzes the project will be active is the selection of value chains. The producer group selection process will identify the areas in which producer groups will be supported. Producer groups may be selected in as few as four, or as many as six, marzes. Additionally, the feasibility of supporting business-oriented groups in locations with extremely difficult market access will be analyzed, with innovative solutions proposed. Collection centers may be used as an intermediary station, rendering the produce from isolated locations available to wholesalers and processors. When introducing new crops (buckwheat), or re-introducing high value crops (legumes), areas will be targeted based on agronomic potential, with market access and the feasibility of establishing farmer groups also considered.

As a second factor, decisions to exclude certain marzes also limit the selection of producer groups in value chains. ADA’s targeting of Shirak, Lori, and Gegharkunik also influences the choice of value chains, as these areas specialize in field crops and potato. The consensus not to include Ararat or Armavir marzes in the project (since agriculture is already developed there and because of the already established market access) will also impact in which value chains the producer groups which apply for support are active. Eliminating Ararat and Armavir makes a focus on the stone fruit value chain (including apricots and peaches), for example, less likely, as 76% of stone fruits are produced in these marzes. On the other hand, field crops and milk are produced in quantity in nearly every marz. Therefore, a focus on these crops will also enable the project to pilot and prove example business models, which could then be replicated anywhere in the country.

4.2 Balancing the number of groups and group complexity

Recommendation:

- A minimum of 25 groups will be supported: 20 primary producer groups and 5 processor groups, further divided between the EU and ADA components.
- Initially, 20 primary producer groups and 5 processor groups will receive intensive support in establishing new business models; an additional 20 primary producer groups and 5 processor groups will receive consulting support for self-replication of the successful business models.

Supporting business-oriented groups involves intensive support. Business-oriented groups face more complex than the challenges than those faced by community-oriented groups. Further, the official registration of groups adds an additional level of complexity, as such groups are required to pay salaries, keep financial records, and pay taxes. Achieving measurable economic and social impact will require focus. If the team’s attention is spread across too many groups, it would not be able to deliver the intensity of support required to achieve that impact. Therefore, the number of groups to

receive support should be balanced with the complexity of the support required. In the table below, the criteria on the left require more support, while criteria on the right are more easily achievable.

Table 7: Balancing complexity with the number of groups to support

Producer groups with these characteristics require intensive support to achieve success	Producer groups with these characteristics require less support to achieve success
Select more producer groups (> 30 total)	Select fewer producer groups (<= 30 total)
Select larger producer groups (with > 5 members)	Select smaller producer groups (with up to 5 members)
Select business-oriented groups targeting higher earnings	Select community-oriented groups with lower or no earnings
Registered groups in the State Registry (such as cooperatives, LLCs or another entities)	Allow groups to remain informal

It is easier to train farmers in GAP, while providing subsidized seeds and fertilizers, than to develop a successful enterprise capable of purchasing its own inputs and generating profit. To be business-oriented involves producing a high quality product at a quantity large enough to satisfy a market, conforming to food safety requirements, maintaining reliable market linkages, managing employees or group members, keeping adequate financial records, and building financial credibility through the correct management of loans and investments. In addition to the intensity of support to deliver, the project team will also be piloting new business models, which will add a further layer of complexity to the work. Supporting groups with these requirements will entail a huge effort both from the project team, which will not be possible unless the number of groups to receive intensive support is reduced to 25, from 40. However, once the new business models have proved successful, replicating them will be less challenging. A manual will be developed detailing how to replicate the successful models, and consulting provided to producer groups or other implementing agencies interested in replication.

The table below shows how the adjusted number of groups to receive intensive support would better align the project's business-oriented objectives and its income generation and employment creation goals. The four colored cells in the diagram below show options for how the project could be implemented, by focusing on (1) more groups with lower earnings (and less business-orientation), (2) more groups with higher earnings targets (which would require more staff and resources), (3) fewer groups with lower earnings, or (4) fewer groups with higher earnings targets. (The numbers in the paragraph above correspond to the numbers in the table below.)

Diagram 2: Four square matrix of project implementation options

Number of groups (Number of participants): More	(1) More groups, low income *The project as currently written*	(2) More groups, high income
Number of groups (Number of participants): Fewer	(3) Fewer groups, low income	(4) Fewer groups, high income *The project with the recommended adjustments*
	Lower — Higher Targeted income of producer groups	

4.3 Increasing producer group output and turnover

Recommendation:

- With the adjustment to the number of groups to support intensively, the output indicator will be doubled, from 15% to 30%, and the turnover indicator for producer groups will be doubled, from 20% to 40%.

Increasing output by 15% represents an incremental improvement in producer group operations due to increased production capacities, use of value adding packaging, or more efficient operations. While this target would be suitable for community-oriented groups, business-oriented groups and industrial processing operations, would boost output by at least 30%. Component 2 indicators targets a "20% increase in annual turnover" of processor groups. The larger-scale investments involving the establishment of new processing units, will lead to more significant revenue gains.

4.4 Registration requirements

Recommendation:

- Selected producer groups will be registered in the State Registry by the first quarter of year three. Groups will not be forced to register before the members share a common vision and understanding of the implications of registration, or before the capital base (earned income and member donations) is sufficiently high to justify registration.

The project team will support producer groups to grow organically, without artificially forcing them to register before achieving the underlying conditions for sustainability. Hasty registration would not lead to long-term sustainably, but would only further bloat the State Register with fake, failed or fragile producer groups. Issues affecting the timing of registration include the following.

- Official registration will permit groups to issue receipts, sign contracts with institutional buyers, receive investments from third parties, borrow at business rates, and be recognized under the law. When these needs arise, the farmers themselves will be motivated to officially register their group.
- Informal groups with low earnings should not be forced to officially register as the required salary payments and other associated expenditures will increase the group cost structure before generating the revenues necessary to pay these costs, increasing the risk of failure.
- Formal registration as a cooperative brings tax and documentation implications, and could lead to complications for groups that do not have the capabilities to maintain accounting records from the start.
- Farmer groups need to understand their own operations, and their income generation potential, before they can select which organizational form is most suitable for them, including understanding the costs and obligations of each organizational form.

In addition, the groups should be given the choice to determine which organizational form is most suitable to them: a consumption cooperative, a production cooperative, a limited liability company (LLC), or another entity. Cooperatives are member oriented organizations, in which all members have equal ownership and an equal voice. In Armenia, cooperatives register their intended sphere of activity, including "consumption" and "production" cooperatives. Consumption cooperatives provide services (such as plowing, marketing, or access to inputs) at below market prices to

members. Production cooperatives, often known as marketing cooperatives, buy the production of members to sell to downstream buyers. LLCs are share oriented organizations which exist to generate a profit for owners. Cooperatives and LLCs have different decision making structures. In the law on cooperatives, expected to be ratified by the end of the year, the income which cooperatives generate by selling services to members will not be taxed, and may be redistributed to members. All of the earnings of LLC are taxable. Farmers should understand these organizational differences before selecting an organizational form. This understanding is based not only on education about the institutional options, but also on the farmers' understanding of their own group functionality and objectives.

In addition, an organizational option introduced by a Millennium Challenge Corporation (MCC) project, but never used, allows agricultural organizations to register a contract stating their intention to work together, without formally registering as a cooperative. The registration is recorded with the tax authority, but not in the State Register. The project could use this form of registration as an intermediary step, if registration is required, before the group has reached the income generation requirements to operate sustainably as a cooperative. Such groups would be registered in the State Registry by year three of the project.

4.5 Support to informal groups and cooperatives

Recommendation:

- The project will select with both registered entities (most likely cooperatives) and informal groups. There will be no minimum requirement for the number of groups to be newly registered in the State Registry. Instead, the requirement will be the number of groups receiving intensive support to increase output and earnings.

No significant operational difference has been observed between the registered groups and the informal groups visited in the marzes. Other organizations have invested heavily in establishing group cohesion and in building the entrepreneurial mindsets of farmers. However, whether these farmers are organized in informal groups or as cooperatives is more a reflection of the philosophy of the implementing organization than the farmer group.[13] An informal Green Lane women's group grows non-traditional vegetables, but sells only 5% of its produce. Without increasing production to a level which would enable a sustainable market connection, it would be senseless to require this group to register officially as a cooperative. A tomato producing cooperative established by Oxfam distributes all produce to members, and is not sustainable without subsidies. While the Green Lane group is informal, and the Oxfam group is a cooperative, their operations are nearly identical. The project teams' selection of producer groups should depend on the potential of the groups to increase output and achieve sustainable growth, not on whether the group is informal or already registered.

[13] Annex 11 discusses the issues of producer groups visited related to their institutional statuses.

4.6 Support to newly formed groups

Recommendation:

- In accordance with the project document, the project team will be allowed, but not required, to form new producer groups with farmers who are not currently working together.

As stated in the project document, forming completely new groups is an option, but not a requirement of the project. “Opportunities for establishing new producer groups will be identified” (1.2). Generally, using a participative process to form new groups—which prioritizes listening to farmers, respecting their opinions, and building their understanding—requires more than one year. Faster group formation processes rely on asset grants, a top-down approach, do not sufficiently explore farmer motivation or priorities, and usually result in failed groups. Further, the project focus on business-orientation requires that groups already have a track record, which will also assist in building confidence with financial institutions, investors and buyers.

Therefore, the UNIDO/UNDP team reserve the option to form new groups, but without the obligation to do so. In the high value field crop value chain, for example, new groups may need to be formed in order to produce buckwheat or legumes to supply a decorticating and packaging unit. However, the usual group formation time would be shortened as such farmers would already have experience in field crops, have contiguous fields, and would have already collaborated on other community projects.

Finally, nearly every NGO working in the agricultural development sector in Armenia forms new groups—both informal and cooperatives. However, no organization focuses on supporting existing groups to transition into successful business entities. As a result, the country has many producer groups, but few successful ones. Rather than join the crowd, the project team would prefer to fill this gap in Armenia’s development sector. When discussed with possible implementing partners, this strategic positioning was welcomed.

4.7 Crediting groups to UNIDO and/or UNDP

Recommendation:

- When groups engage in both primary production and processing activities, they will be credited both to UNIDO and UNDP. This is most likely to be encountered in the “cooperative of cooperatives” model.

Certain groups may be difficult to classify as primary producer groups or processor groups. For example, UNDP could form several cooperatives to produce buckwheat. It may also form a centralized organization to house a decorticating and packaging facility. However, this factory would require industrial grade equipment, as well as specific planning on throughput and storage. Therefore, UNIDO’s equipment budget and expertise would be necessary. Although shelling buckwheat is not officially considered processing (processing would involve producing buckwheat flour or pasta), the group would still be credited to both organizations.

Whether the groups are classified as primary producers or processors makes little difference to the farmers or to the project overall. However, it does impact which entity between UNIDO or UNDP

would primarily work with the group. When the expertise of both is required, the work process will be smoother if both receive credit.

4.8 The leadership & participation of women, youth and vulnerable groups

Recommendation:

- The involvement of women, youth and vulnerable groups is a high priority for the project team. However, their participation should not contradict the project's business orientation. The minimum participation/leadership of women, youth and vulnerable groups will be set to 30% overall.

A realistic way to achieve results in gender mainstreaming in a business-oriented project, is to develop strong businesses first, and then to integrate women's empowerment into the successful business model. Certain of the value chains have higher engagement of women. While least one value chain enabling the participation of women will be supported, this factor is not the defining objective of the project. Other organizations consulted concur that too high a requirement of gender and youth involvement will undermine the business focus.

The requirement female leadership at 30% (ADA) and 40% (EU) and youth participation at 30% (both ADA & EU), in effect, calls for 70% involvement of "vulnerable groups." While 70% was not the intended target, it would become the target in practice, as most women's groups have very few young women. Instead, the participation of women, youth and other social groups considered vulnerable, will be set to 30% overall—in line with the intended indicator.

Beyond these criteria, attention will be paid to issues of family use of child labor (defined as labor which impedes the normal development of the child in educational and other settings), inclusion of handicapped people in the cooperatives, and outreach to include young women in the criteria of "youth." Therefore, a participatory approach, based on human-centered design methodologies, will be used to address these issues by including specific solutions in the business plans. For example, a cooperative could use earned income to pay a community member to take care of children, to enable young women to participate in the groups. Thus, the project team will go beyond the simple targeting of an indicator, and incorporating gender mainstreaming into profitable business models.

4.9 De-emphasizing hail nets and drip irrigation

Recommendation:

- The selection of value chains and producer groups will be based on their inherent characteristics. Group selection will be unlinked from the emphasis on "supporting measures of drip irrigation, hail protection, and post-harvest handling" (Activity 2.1).
- The funds (in component 3) allocated only to drip irrigation and hail nets will be unrestricted. Thus, UNDP will use these funds to support the productive assets/inputs most needed by the primary producer groups. These could include greenhouses, specialized tractors and combines, or high quality seeds/seedlings (also in alignment with government priorities).

Activity 1.2 links the aim to distribute drip irrigation and hail nets to producer group selection. Additionally, funds designated for the distribution of assets to primary producers are in Component 3, not Component 1 which is focused on the primary producer groups. In addition, these funds are

restricted for use on drip irrigation, hail nets and anti-frost systems. The assets are applicable only to the fruit value chain. Therefore, limiting the use of these resources undermines the team's ability to support farmer groups to pursue the best opportunities.[14] Additionally, hail nets can only be used on vineyards and dwarf fruit trees, while most of the fruit trees in Armenia—and especially those owned by vulnerable farmers—are not dwarf trees.

Disassociating the focus on hail nets and drip irrigation from producer group selection would empower the team to make the best decisions for the farmers, enabling the selection of other crops which offer village-based groups higher potential to increase earnings and boost employment. No investment capital is budgeted in Component 1 for the primary producer groups. The producer groups only receive capacity building on business related issues.[15] Farmers will not form groups, let alone official cooperatives, simply to receive training. In fact, many groups have already been over-trained. Component 1 will not be successful if UNDP has no funds to finance productive assets.

Further, this requirement is contracted in the ADA component, as Shirak, Lori, and Gegharkunik produce only minimal quantities of fruits.[16] In the project overall, the contradiction remains as we have agreed not to target Ararat or Armavir, which constitute Armenia's primary fruit producing zone. (Vayots Dzor and Aragatsotn also produce fruit, although at lesser quantities.)

Additionally, drip and hail protection systems have already been piloted by various projects (including the UNDP) and private businesses, and proved successful. Therefore, further piloting will not be necessary.

Combining the funds from Activity 3.4 and Activity 3.6 (to support producers to improve harvesting techniques, post-harvest handling, and storage), provides 445,000 euro to invest in primary producer groups. Working with 20 primary producer groups, these resources would enable an average investment of 22,250 euro per group. If the project were to engage the 25 groups now planned in the EU and ADA components, then the average investment amount drops to 17,800 per group (15,500 euro in the EU component, and 27,000 euro in the ADA component).

Resolving the problem of high losses in the fruit production sector do to climatic factors would be better addressed as a separate project, possibly to scale up UNDP's previous work with hail nets. Such a project could focus on demonstration farms, while also subsidizing a large percentage of the cost of drip irrigation and hail nets for farmers. A second component of the project could support farmers to replant orchards at higher elevations, where orchards experience fewer climate related

[14] In a value chain based project, the project development cycle (undertaken in the inception phase) should include the following steps: (1) select high potential value chains, (2) study the chains to reveal the constraints and challenges, (3) design solutions to these challenges, (4) assess specifically which tasks (such as training or asset distribution), will be needed to implement the solutions. In the case of the priority given to disaster risk management assets in this project, step four was placed before step one; the specific solution was proposed before the problem was defined.

[15] This approach is different than that of nearly every other organization working in Armenia, including Heifer, Oxfam, UMCOR, and Green Lane, among others. Heifer, Oxfam and UMCOR motivate farmers to form cooperatives by providing equipment, usually tractors in the case of Heifer and UMCOR and greenhouses and cool storage in the case of Oxfam. While Green Lane works with informal groups, it also subsidizes planting materials.

[16] Gegharkunik was selected to replace Tavush.

losses. The disaster risk management protocols required as a project output, could be replaced by the design and drafting of this project.

4.10 Investments in processing groups and facilities

Clarification:

- Reducing the number of processing groups supported overall increases the financing available to each group, enabling the project to more effectively support larger-scale, high-capacity groups in their capital investment needs.

Following the development of business plans, UNIDO will install and upgrade processing technologies and equipment for processor groups. The budget for equipment is 230,000 euro in the EU component, and 200,000 euro in the ADA component.[17] Supporting five processor groups in total, as recommended above, the project's capital investment capability averages 86,000 euro per group. If the project were to engage the 15 groups now planned in the EU and ADA components together, then the average investment amount would drop to 28,667 per group (23,000 euro per group in the EU component, and 40,000 euro per group in the ADA component). As described above, the project will have more impact by working with fewer larger-scale operations.

In addition, over-emphasizing training over capital investment will undermine the success of the groups. The producer groups do need equipment to produce higher value products, and they will be handicapped without sufficient investment to purchase this equipment. Without sufficient capital for equipment purchases, the project risks focusing on planning and capacity building without providing the means to actually increase revenues.

The project team does not advocate for adjusting the project budget, or the project focus to capital investment and/or plant construction. Instead, UNIDO only seeks to align the number of groups supported with the objective of supporting more robust business enterprises. Reducing the number for groups will automatically increase the amount of investment available per group.

Additionally, the average investment of 86,000 euro per group will only be the project's part of any given investment. UNIDO will still require a co-investment of matching funds (at a percentage of the total investment) from the processor groups, and will also seek investment from a third party organization.[18] In fact, UNIDO's increased investment capacity will build confidence in potential partner investors and financial institutions. Such additional funding will be necessary to cover costs in addition to the processing equipment or technology. For example, the groups' may also need to remodel or construct premises for a processing unit, and will also need working capital. UNIDO recommends retaining these restrictions on its use of funding, as they guarantee that the producer groups participate financially. The requirement for third party financing serves as a check that the selected projects are creditworthy. Any excess funds would be used to support the self-replicating groups.

[17] These amounts are allocated to the purchase of technology/equipment for processor groups, which is less than the overall equipment budget. The overall equipment budget includes other purchases, including for example, the project vehicle.

[18] A concept note will be developed to clarify the project's policy on co-investment, setting a flexible target for the percentage of co-financing required per group, whether the co-financing should be in cash or kind, and whether co-financing will be applied to assets or to the overall financing need of the cooperatives (primary production and processing).

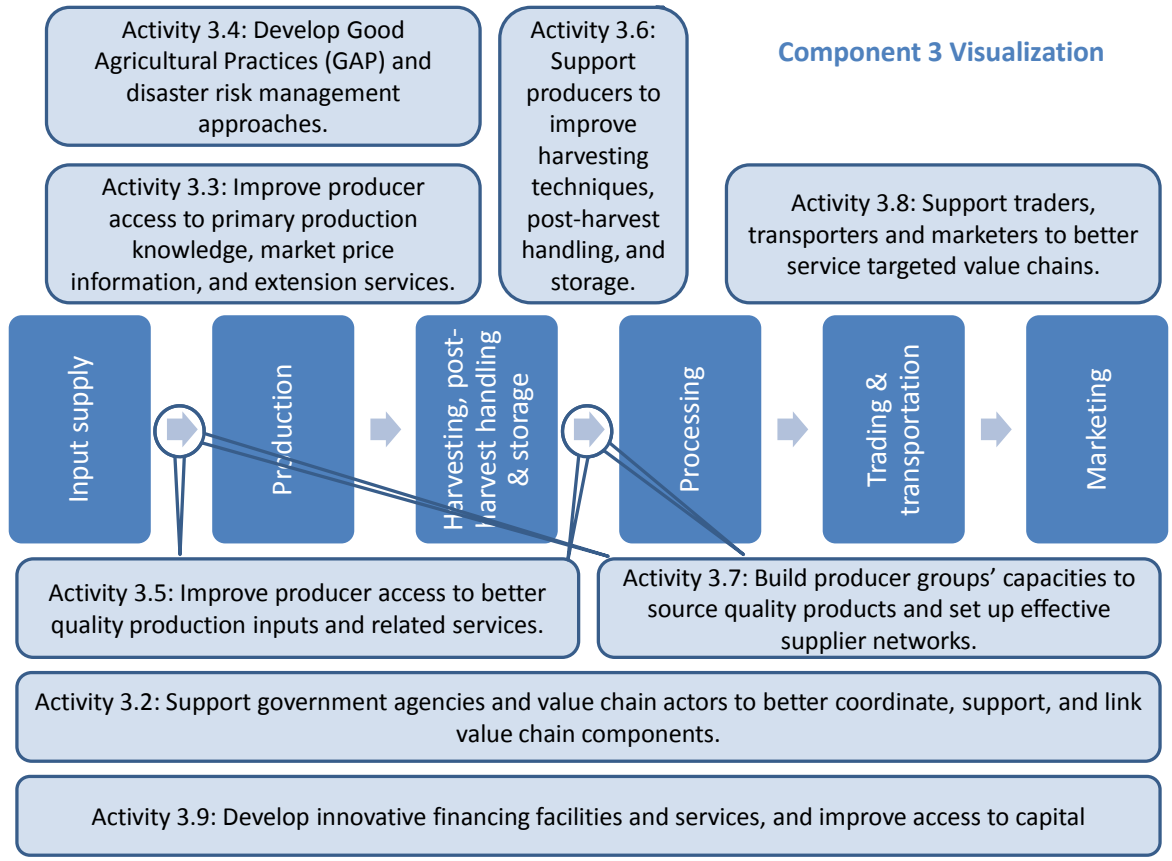
5. Notes on Project Component 3

Recommendation:

- The timing of the value chain analyses were delayed until after the field visits, and will be commissioned in the first year.
- In order for Component 3 to have measurable impact on the selected value chains, its implementation will be flexible and focused, with interventions designed based on the value chain constraints identified through the analyses of Activity 3.1. Therefore, a reasonable implementation plan will be developed after the value chain analyses have been completed.

After analyzing the selected value chains (in Activity 1.3), the Component 3 activities seek to resolve constraints along the entire length of these chains, including the possible lack of access to extension services, high production risks, bottlenecks in upstream input and service provision, midstream harvesting and storage issues, and downstream service provision. In addition, the Component seeks to address cross-cutting factors such as access to value chain finance and access to knowledge (relating to primary production and market prices). As a whole, the activities engage all different value chain actors, in all segments, including the government and service providers. Certain of the activities (3.5 and 3.7), focus on improving the links between the value chain segments (or value chain components). Activity 3.2 involves training government agencies and other supporting entities, in value chain development approaches. Activity 3.9, seeks to arrange financing for any and all of the value chain segments. The diagram below provides a visualization of Component 3,and the targeting of the different activities along the value chain.

Diagram 3: Component 3 Visualization



In actuality, the diagnostics and development of even a single value chain is a complicated process. It would be reasonable to fund an entire project this sole objective. However, since Component 3 is only one section of the project, and will also target a minimum of three value chains, it will be important to establish reasonable expectations. The team envisions two approaches, either of which would be suitable. Whether it is appropriate to select either approach, or using a mix of the two, can only be determined after the value chain analyses of activity 3.1 are available for use.

Undertake only certain of the Component 3 activities: The value chain analyses will reveal the specific constraints in the selected value chains—and whether these constraints pertain to production issues, storage issues, processing issues, marketing issues, breakdown of the links between the value chain segments, or another of a wide range of possible challenges undermining value chain functionality. Only an understanding of the specific constraints will enable the project team to design interventions which could resolve these constraints and improve the flow of goods and capital through the chain. If the value chain analysis of high value field crops shows that for buckwheat, for example, the constraining factor is the low level of production (associated with a lack of knowledge and the unavailability of inputs), then the project team would design specific interventions under activities 3.3, 3.4, 3.5 and 3.7. If the analysis shows that there are no problems related to storage, trading and marketing of buckwheat, then the team would not implement activities 3.6 or 3.8. Just as likely, the reverse could be true, in which case the project team would focus on developing solutions to improve storage capacity, as well as trading and marketing opportunities, instead of focusing on GAP and developing input supply networks. Thus, specific interventions would be designed and implemented, using the activities of Component 3 as a guide, but without undertaking every activity. The planning would be presented at a future Steering Committee for validation.

Undertake each activity, but with a limited and very specific focus: Alternatively, UNIDO/UNDP could undertake each activity, while limiting the scope. For example, activity 3.4 could involve publishing production manuals for the selected chains only. Alternatively, activity 3.4 could involve supporting to scale-up models for successful interventions in GAP or disaster risk management. However, both activities would not be implemented. Or, for example, activity 3.3 could involve supporting the Ministry to include price information for selected products on its website, or assisting regional television stations to broadcast price information on a weekly basis. However, this activity would not include developing complex information sharing systems across various value chain segments, involving various actors and various crops. (This would be an entire project on its own.)

6. Clarifications

6.1 Business plan development

Clarification:

- The task of drafting business plans with the groups will be added to Activity 1.5 and 2.6.

While project indicators require that all groups have "approved business plans," the development of these plans is not included in any project activity. The development of the plans will be included in Activity 1.5, to "develop managerial, administrative, and operational capacities of producer groups," and Activity 2.6, to "build value addition producer groups' entrepreneurial and business planning capacities." The business plans will follow different organizational and business models that the project will develop in consequence of the value chain analyses. The first task following group selection will be the joint preparation of business plans with the producer groups. The remaining activities of Components 1 and 2 will be implemented according to the timeframe set in each business plan. As a result, Activities 1.5 and 2.6 will begin immediately after group selection is complete, and will run parallel with Activity 1.4. to "establish new producers groups," as business plans will be required prior to officially registering the groups.

6.2 Classifying all training delivered during the project

Clarification:

- The trainings in the project document have three different audiences: (1) a wide range of producer groups beyond those selected for project support; (2) the selected producer groups; and, (3) other value chain actors, including national and marz level government officials, and private sector service providers.

Trainings constitute one of the primary means through which the project is delivered to farmers. While the team does not recommend any changes to the trainings as described in the project document, clarifying the targeting requirements will be useful.

6.2.1 Educate producers as to organizational development options (Activity 1.3)

According both the EU and ADA component documents, "at least 1,000 farmers [will be] trained in the targeted marzes as to possible structures and benefits of group organization" (M&E and Reporting). The project team will train a total of 1,000 farmers in the EU and ADA funded components together. The training for the 1,000 farmers relates *only* to education on "producer group types and characteristics" (Logframe). This training will clarify the advantages of transitioning from an informal group to an officially registered group, as well as the advantages and costs associated with each of the possible institutional structures. After receiving applications for project support, the team will narrow the suitable applicants to a pool of about 1,000 individuals, in a variety of groups not necessarily forming part of the supported producer groups but engaging in the chosen value chains. These individuals will receive the training of Activity 1.3. Since the selection process may extend over a few months, the training of the 1,000 will likely be staggered.

The project document calls for "refresher courses … over the life of the project … as it is expected that legal, regulatory, and tax policies for producer groups may evolve over the next three years due to the Ministry of Agriculture's and FAO's efforts to improve and rationalize related laws" (Activity

1.3). The refresher courses will be simplified to information sessions and delivered only to active producer groups selected for participation in the project. However, following the passage of the law on cooperatives, the project together with FAO will design and print an attractive brochure, providing a clear explanation of the law, the advantages for farmers, and the institutional options available. A huge quantity of the brochures will be printed and distributed throughout the country.

6.2.2 All trainings on business capacity building in Components 1 and 2

According to the project documents, "Training [will be] conducted for … producer groups in a) business planning, administration and organization, b) budgeting and financial management, c) commodity marketing, d) food safety and traceability at production level, and e) policy advice for agricultural and rural development decision making" (Logframe). Therefore, the trainings in the activities listed above will be for the selected groups only. No minimum number of trainings, individuals to be trained, or topics of trainings are described in the project document, as these trainings will be designed and delivered based on need, to overcome real challenges.

6.2.3 All trainings for value chain actors in Component 3

Component 3 expands the focus on the project from the selected producer groups to the value chains in which the groups operate. In working to make these value chains more functional, trainings for government officials, service providers, and other value chain actors will be necessary.

6.3. Ministry of Agriculture participation

Clarification:

- Those activities which require the Ministry of Agriculture to dedicate staff and funding, will only be implementable if the human and financial resources are fully committed.

The entirety of ENPARD will be implemented in close cooperation with the Ministry of Agriculture. Nearly every activity of Component 1 calls for Ministry participation, as well as Activity 3.2. Specific project activities require a particularly high engagement from the Ministry. These activities call for the creation of an "Office (or Desk) of Producer Organizations" (Activity 1.4), a "Desk of Producer Organization Development" (Activity 1.6), a "Desk of Women, Youth, and Vulnerable Populations" (Activity 1.7), as well as interest in replicating business models developed for producer groups (Activity 1.8), and in receiving training to boost the "value chain development support capacities" of personnel. UNIDO/UNDP's ability to implement these activities will depend not only on the Ministry's interest, but also on the dedication of the required resources and staff.

Additionally, it will be useless to begin training or to set up a dedicated desk, if the necessary resources are only partially committed, or at risk of being withdrawn at a later date. If this is the case, the end beneficiaries would be better served if specific, realizable projects, corresponding to real, high priority needs, were defined and implemented.

7. Risks

Clarification:

- Due to the devaluation of both the euro and the ruble, market and capital risks have increased. Producer risks will also increase if an unrealistic requirement of early cooperative registration is forced on them, ignoring their real constraints and issue of enterprise development.

Some of the risks listed in the project document have become more relevant, although they are still not expected to impede the successful implementation of the project.

- Producer risks: The initial visits to producer groups have revealed their reluctance to register as cooperatives, when the costs of salaries and registration are not subsidized. This risk can be overcome by requiring groups to register only after their earnings have increased sufficiently to pay these costs, and at a logical point in their development.
- Market risk: Processing companies exporting fruit and vegetable products to Russia report a drastic decrease in sales, due to the devaluation of the ruble and the economic situation in Russia. The situation has become so critical for some exporters that they have been blacklisted by their creditors. This situation may not only undermine the producer groups opportunities to export to Russia, but the Armenian market may be flooded with cheaper exports from Russia. Such a situation could undermining plans pursue an import substitution strategy (such as for buckwheat). Potato producers on the other hand, report a growth in export quantities.
- Capital risk: The devaluation for the euro, which effectively shrinks the project budget, makes the risk of insufficient funds more acute. Careful business planning for the producer groups and partnership with financial partners can overcome this gap in terms of capital investments. However, the reduction in the activity-focused funds, such as hiring consultants and organizing trainings, cannot be made up through other sources.

Annexes

Annex 1: Timeline of activities (Changes are marked in red)

Year	1st year				2nd year				3rd year			
Quarter	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q
Output 1: Strengthened and newly established primary producer groups												
1.1 Identify value chains in target marzes.												
1.2 Identify existing and the potential for new business-oriented producer groups												
1.3 Educate producers as to producer group types and characteristics												
1.4 Establish new producers groups												
1.5 Develop managerial, administrative, and operational capacities of producer groups												
1.6: Document lessons learned for appropriate legislation for producer groups												
1.7: Promote participation and access of women, youth, and other vulnerable groups												
1.8: Develop models for the further establishment of sustainable producer groups.												
Output 2. Value-adding processor groups effectively engaged in value addition.												
2.1 Identify business-oriented producers groups that aim to engage in value addition.												
2.2 Install appropriate technologies/equipment and improve technical performance of producer groups' value addition capacities.												
2.3 Study existing and potential markets and support producer groups to develop new and improved value added products.												
2.4 Improve producer groups' technical capacities in storage and packaging of value added products.												
2.5 Help producer groups develop marketing capacities and link them to buyers of value added products.												
2.6 Build value addition producer groups' entrepreneurial and business planning capacities.												
2.7 Link producer groups to existing finance schemes.												
2.8 Improve value addition producer groups' capacities to comply with food safety and quality standards.												
2.9 Support value addition producer groups to engage in cleaner production and energy saving technologies and practices												
2.10 Support access of women, youth and other vulnerable groups to participate in value addition.												
Output 3: Strengthened value chains that provide improved access to affordable, better quality food.												

3.1 Conduct analysis of selected value chains and develop intervention strategies.												
3.2 Support government agencies and value chain actors to better coordinate, support, and link value chain components.												
3.3 Improve producer access to primary production knowledge, market information, and extension services.												
3.4 Develop Good Agricultural Practices (GAP) and disaster risk management approaches.												
3.5 Improve producer access to better quality production inputs and related services												
3.6 Support producers to improve harvesting techniques, post-harvest handling, and storage												
3.7 Build producer groups' capacities to source quality products and set up effective supplier networks												
3.8 Support traders, transporters and marketers to better service targeted value chains.												
3.9 Develop innovative financing facilities and services, and improve access to capital												

Annex 2: Value chain scoring criteria

According to UNIDO's methodology for value chain selection, "potential impact must be … balanced with the likelihood of success, as some development is just too costly or difficult to achieve. Crosscutting objectives such as conflict mitigation, gender equality and food security may also be considered as criteria."[19] The project experts rated 30 value chains on various criteria related to the *Potential for Development Impact*, and other criteria related to the *Probability of Intervention Success*. The specific criteria for each set are shown below.

Potential for development impact (x-axis)

1. Employment: The # of additional employment that value chain interventions would likely bring.
2. # of people to benefit: The expected number of primary producers, processors and service providers in the value chain that would benefit from the project interventions.
3. Scope of benefit: The expected increase in profit margin that the primary producers, processors and service providers would be able to accrue due to the interventions.
4. Technological opportunities: The degree to which opportunities exist to improve production, processing and products through project intervention-related knowledge and technology transfer. This relates to what is technically feasible but also to the costs of the technology.
5. Market opportunities: The degree to which opportunities exist to produce products that can be sold on local and export markets.
6. Auto-replication: The degree to which the value chain support provided by the project to producer groups would be able to be replicated and scaled up by other value chain actors.
7. Government support: The national government prioritizes this value chain in the development of Armenian agriculture.

Probability of intervention success (y-axis)

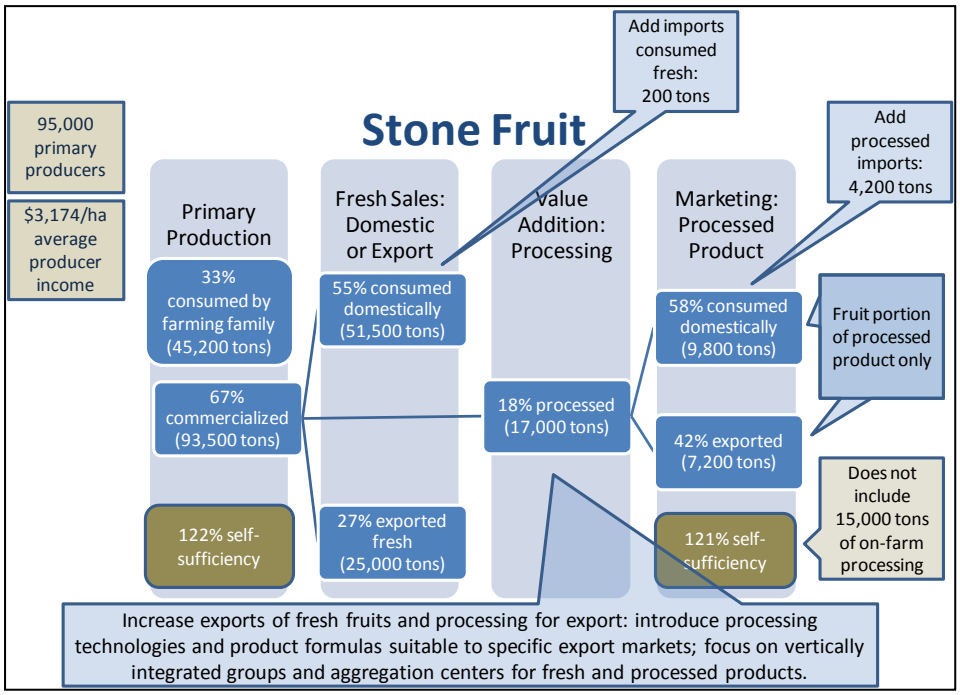
1. Motivation : The degree of motivation with which producers, processors and service providers would participate in value chain development interventions
2. Innovative capacity: The degree to which value chain actors would have the necessary capacity to apply improvements and become subject to project interventions.
3. Synergy: The degree to which the project's value chain development support would complement and build positively on existing (private and development agency) initiatives. If existing initiatives have already successfully covered development interventions a low score is to be applied.
4. Investment capacity: The degree to which value chain actors are able to invest in value chain activities that the project would complement.

[19] http://www.unido.org/fileadmin/user_media/MDGs/IVC_Diagnostic_Tool.pdf

Annex 3: Value chain visualization/mapping

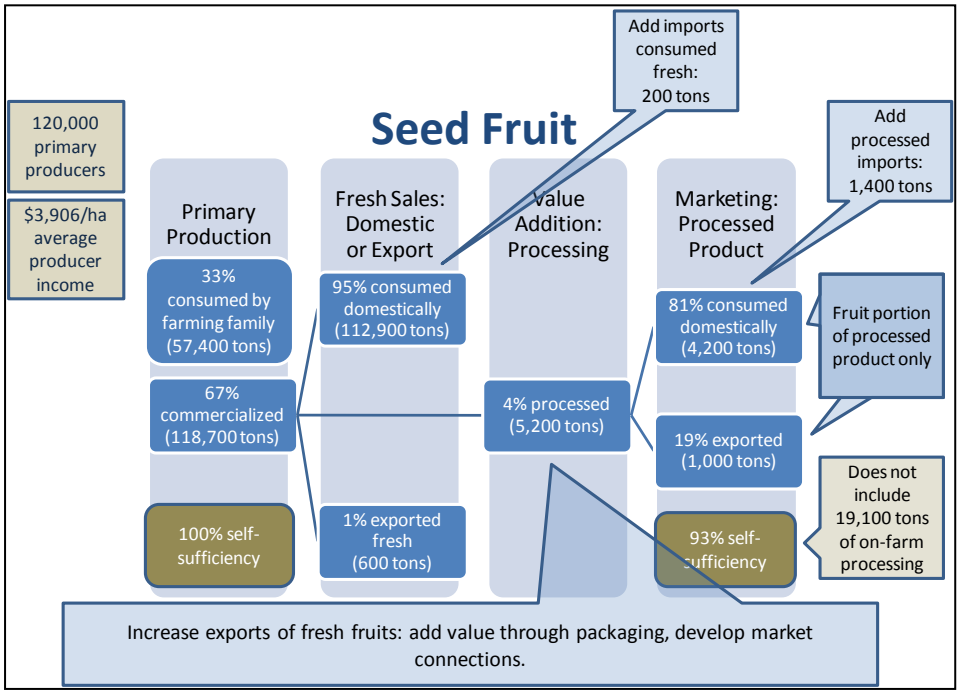
The tables in the body of the report showed the percentages of primary production used for fresh auto-consumption, fresh domestic consumption, fresh exports, and processing of fresh products. The diagrams below show how the fresh production was used from a value chain perspective, with figures showing how the primary production flows through each consecutive value chain segment. The illustrations also show the domestic consumption and export of processed products. All quantities represent primary production equivalents. When possible, information on imported products has also been included.

Diagram 4: Stone fruit



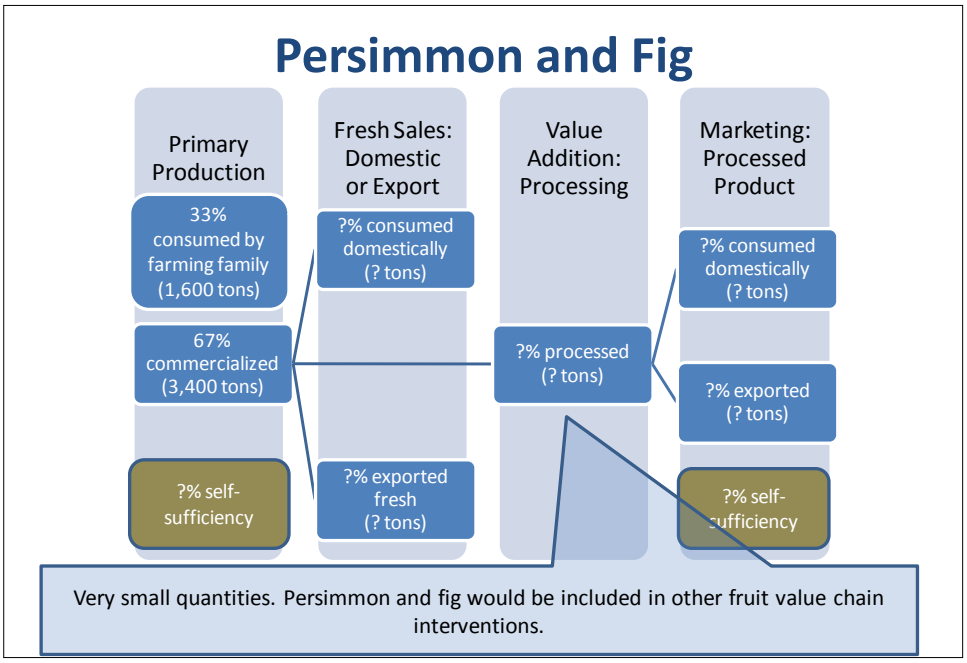
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 5: Seed fruit



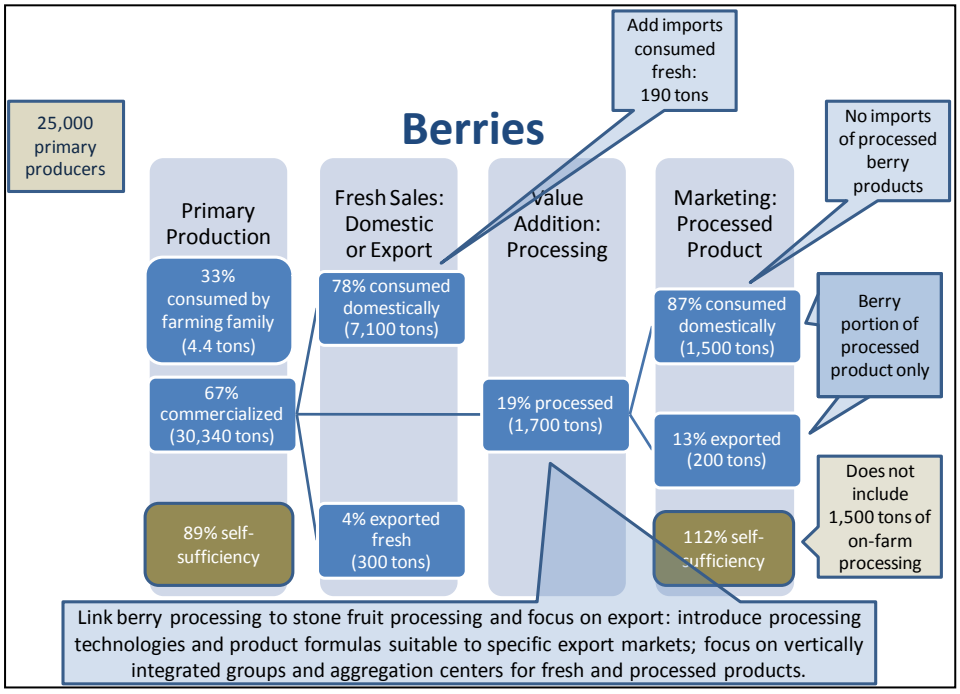
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 6: Persimmon and fig



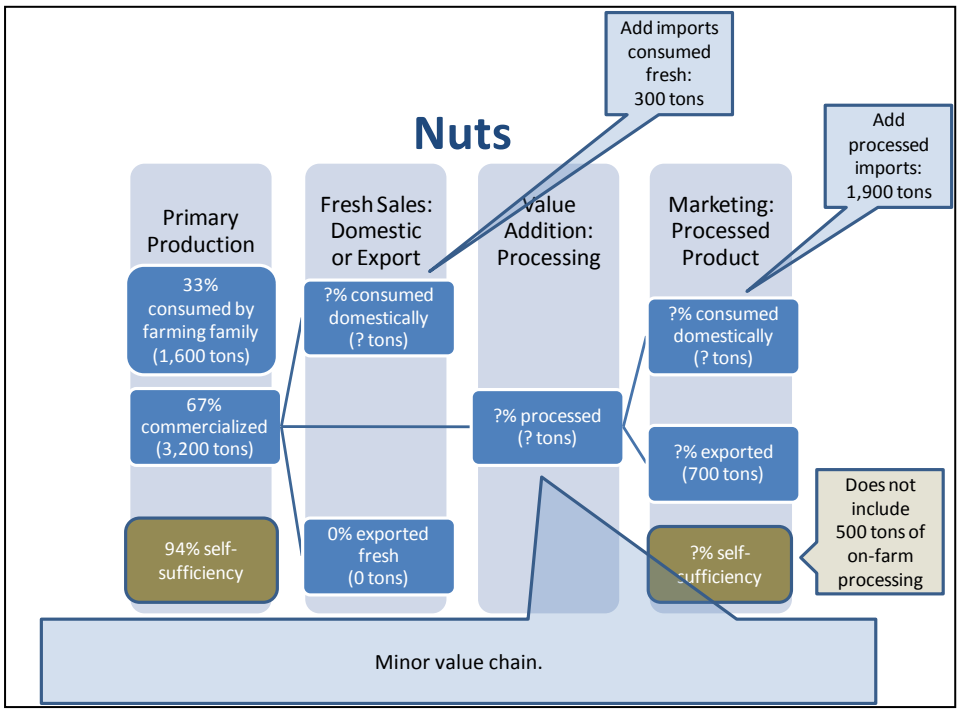
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 7: Berries



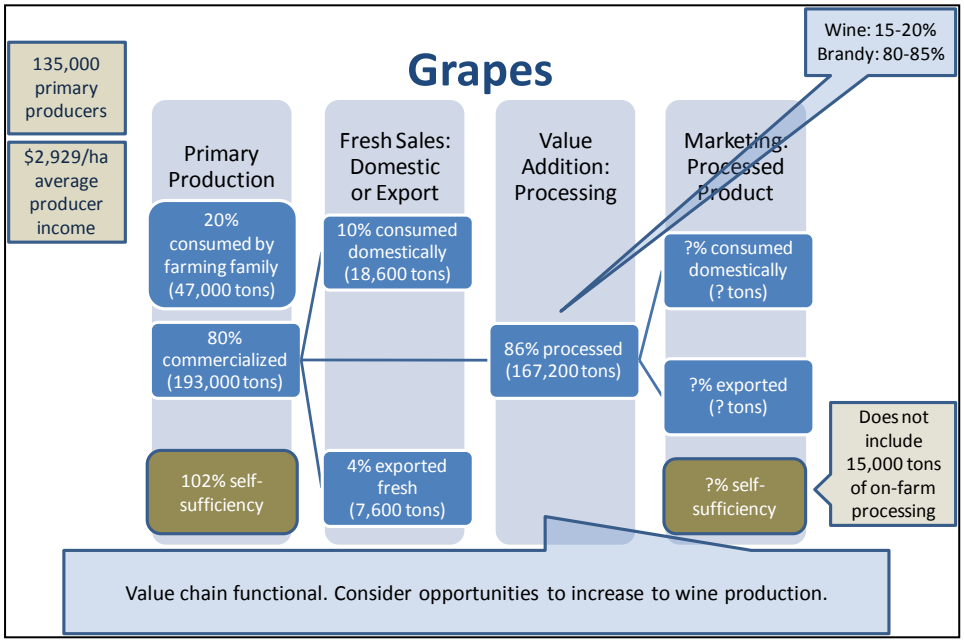
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 8: Nuts



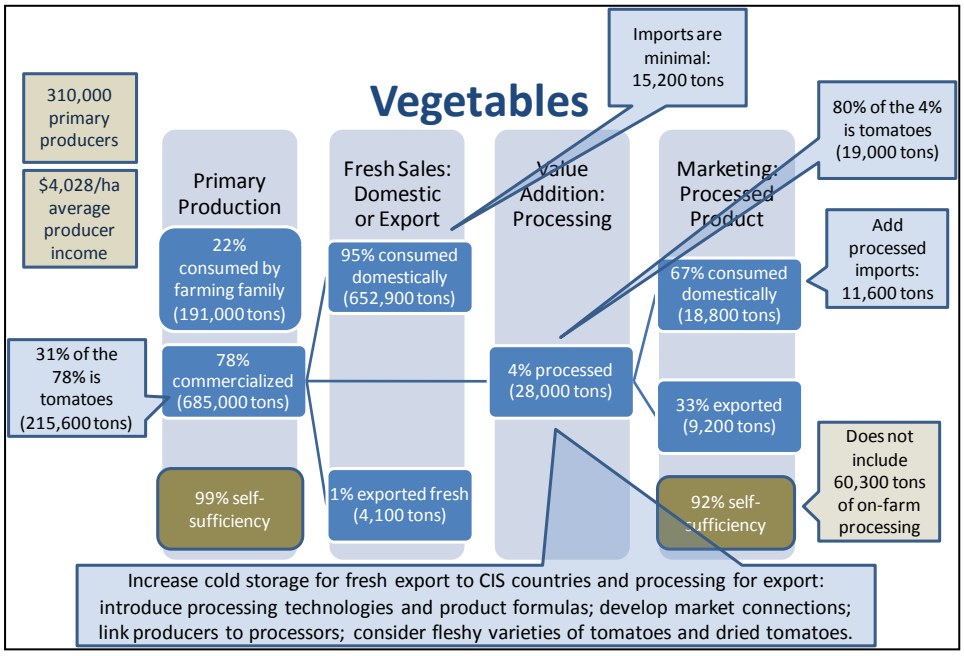
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 9: Grapes



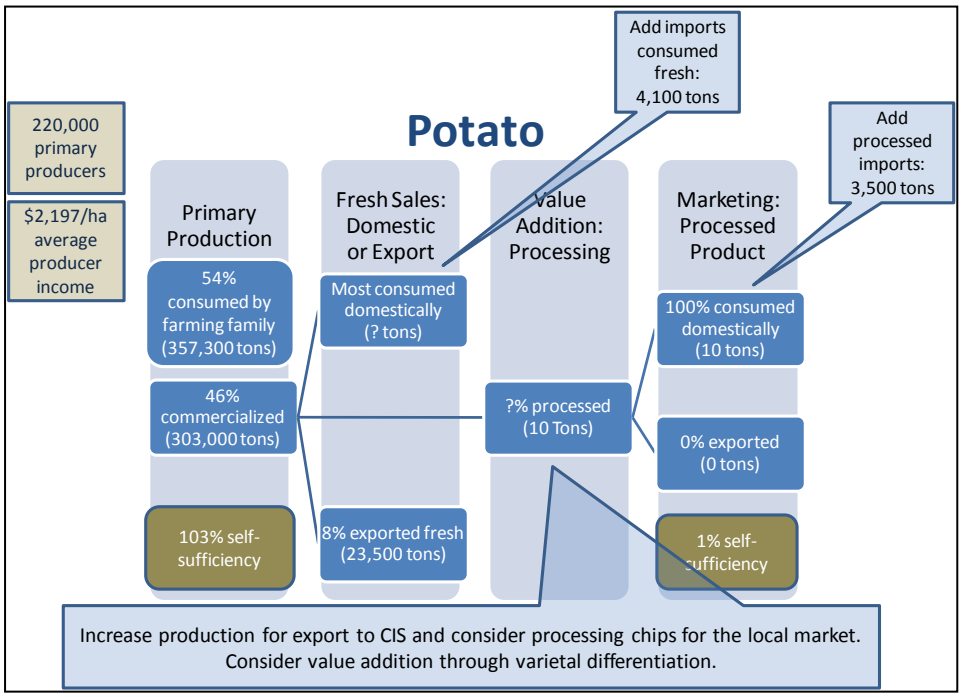
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 10: Vegetables



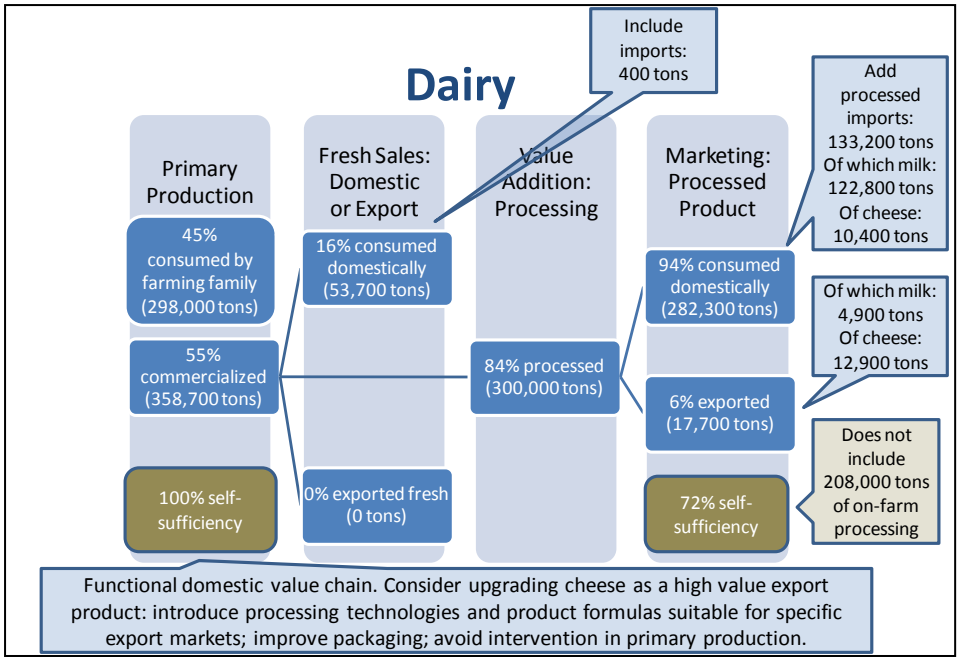
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 11: Potato



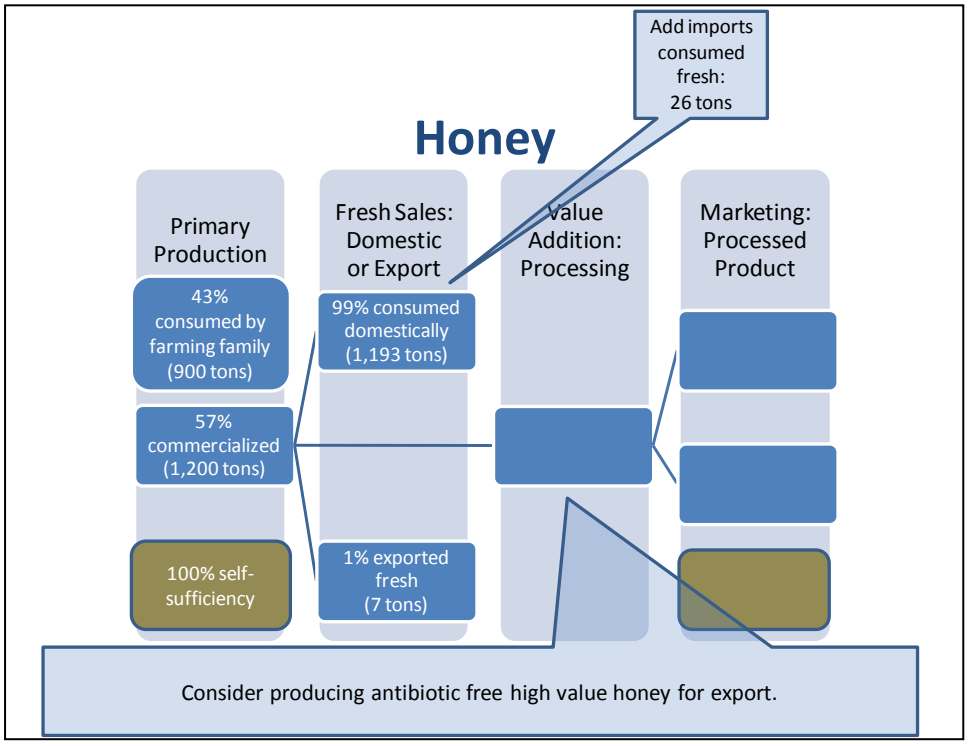
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 12: Dairy



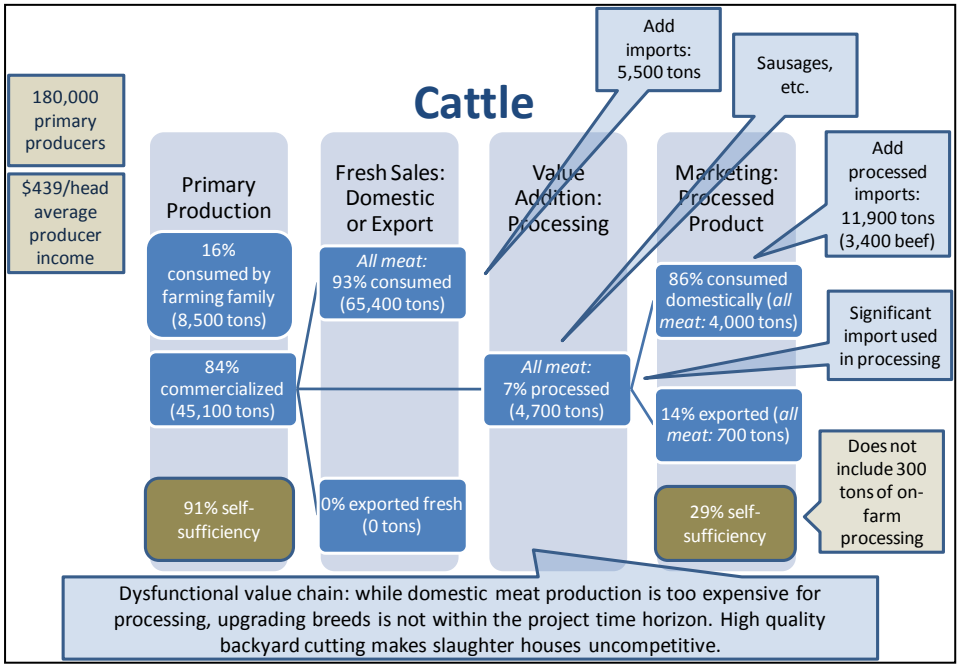
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 13: Honey



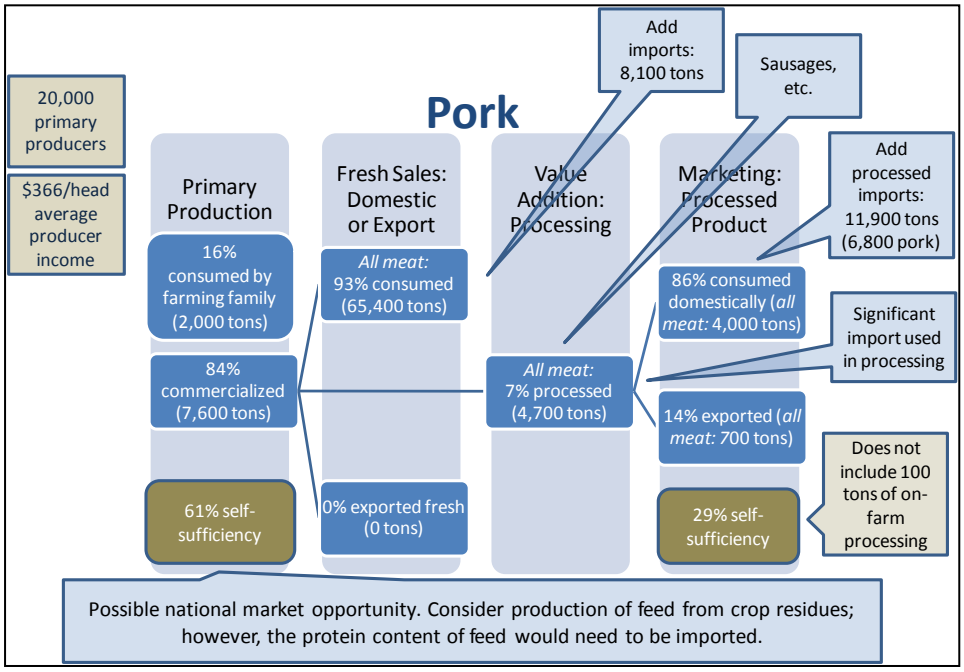
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 14: Cattle



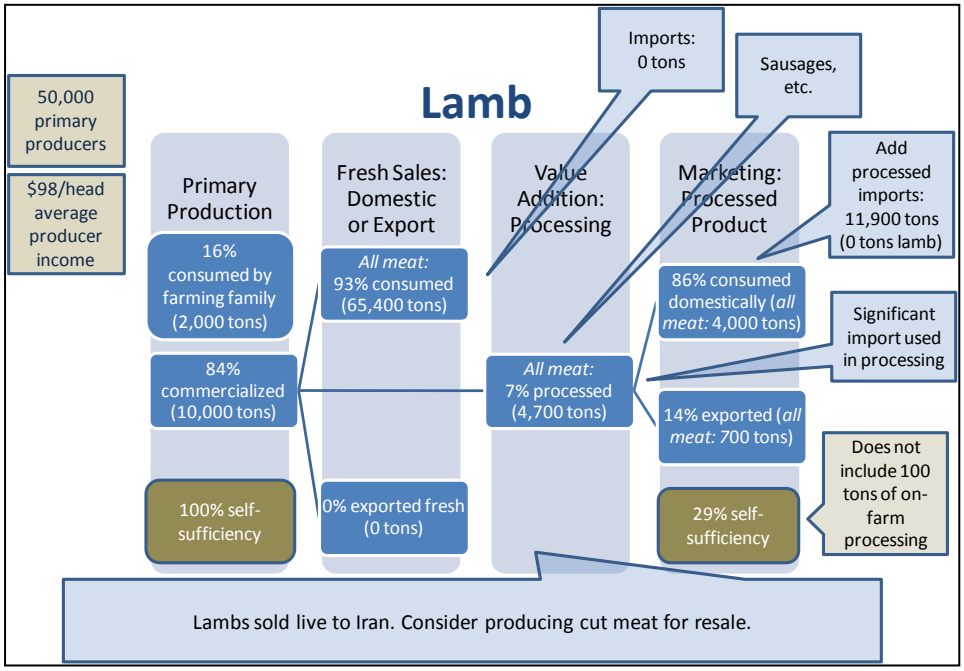
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 15: Pork



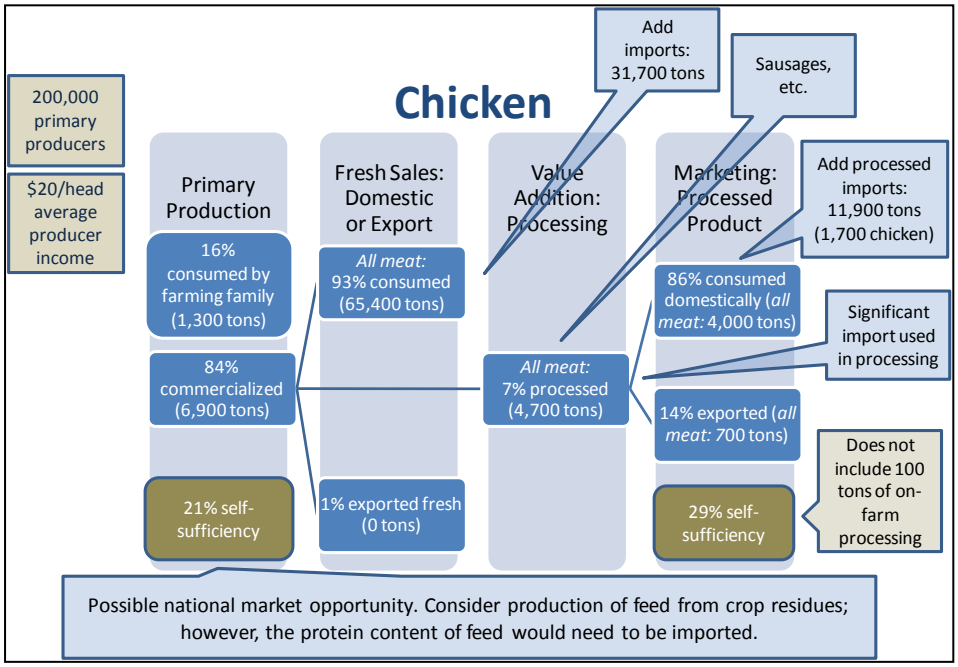
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 15: Lamb



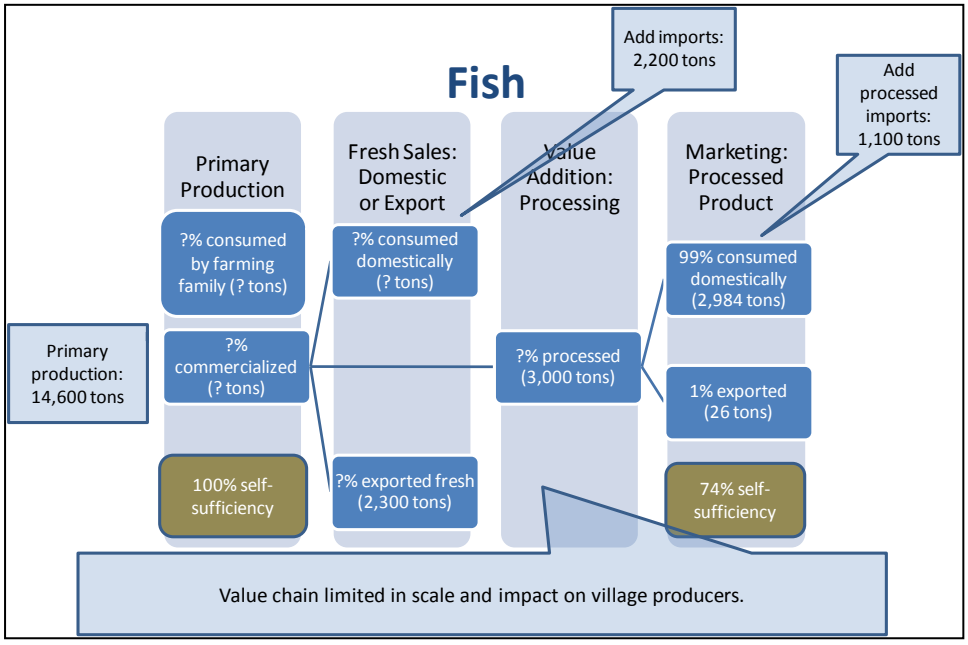
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 16: Chicken



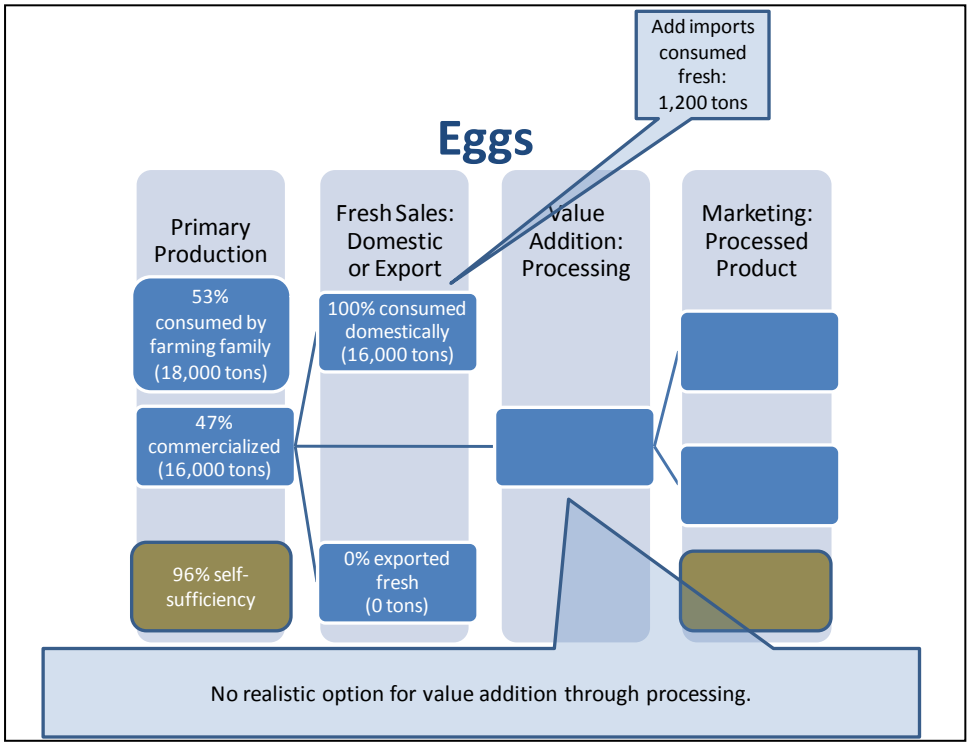
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 17: Fish



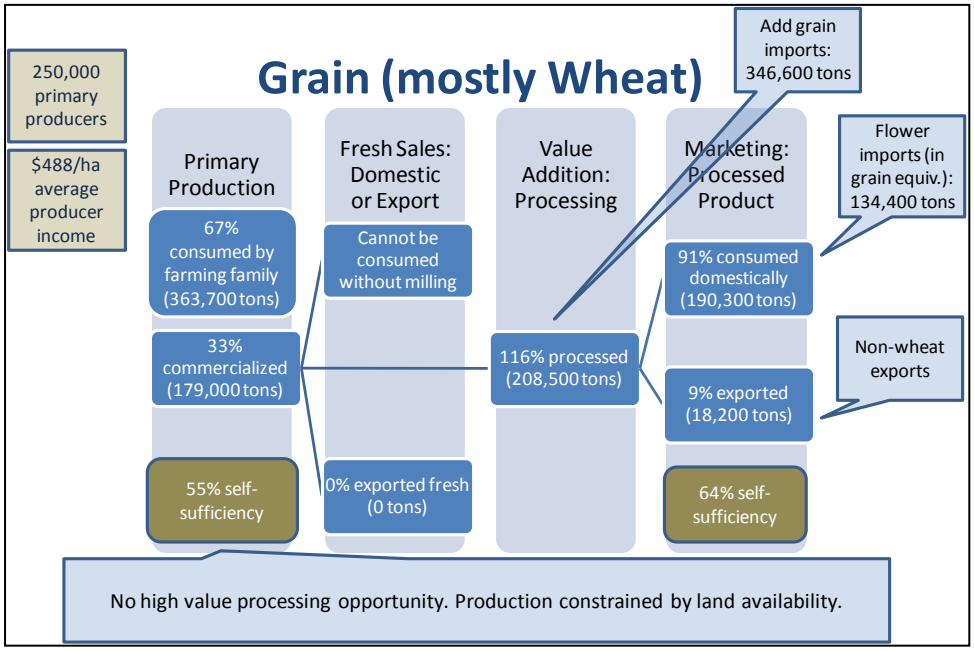
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 18: Eggs



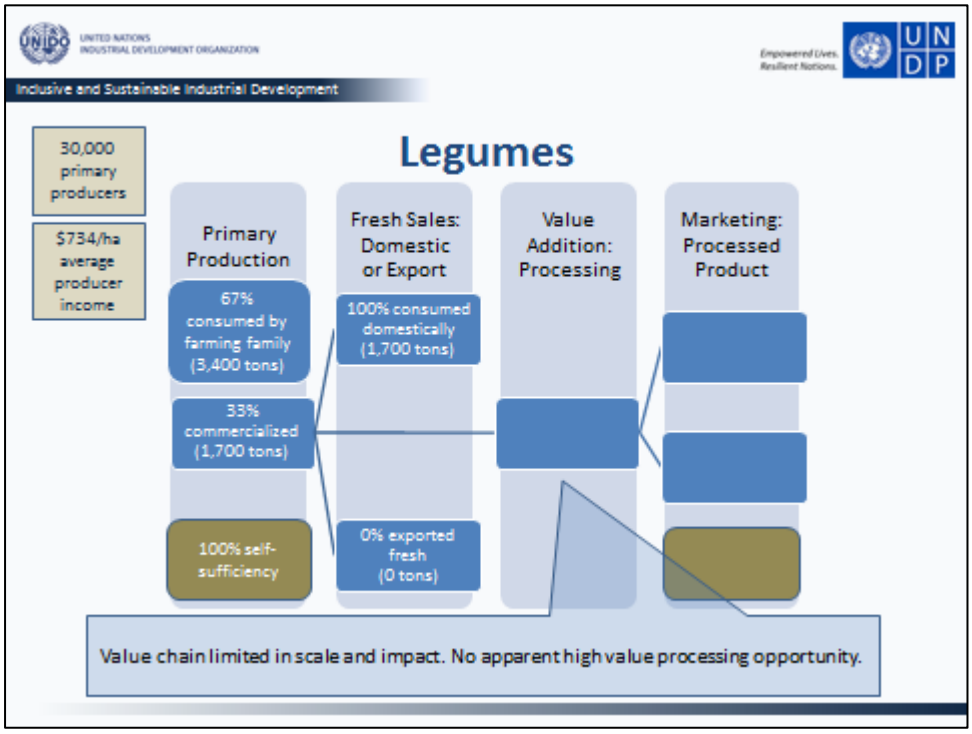
Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 19: Grain (mostly wheat; does not include high value grains)



Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Diagram 20: Legumes



Source: NSS, MOA, Avenue Consulting, ENPARD analysis

Annex 4: Value chain description

Large-scale processors dominate the fruit, vegetable and dairy value chains in Armenia. The producer groups and mid-sized processors would face insurmountable challenges (in terms of quantity, quality and price) if they were to attempt to compete with these companies by producing the same products. Therefore, two primary goals influence the support provided to producer groups in the context of value chain upgrading: first, producer groups will aim to develop high value products, possibly for niche markets; and second, producer groups will be supported to introduce new products, including new forms of processing, and new or reintroduced crops which are not now produced in large quantities.

The sections below discuss the value chains included in the wide value chain selection (within the red curve on the value chain graph discussed in the *Inception phase achievements* section). As the opportunity in buckwheat in legumes was brought to the attention of the project team during field visits, after the phase of quantitative data collection was complete, less information is provided here on these crops.

A4.1 High value field crops: buckwheat and legumes

Production

Buckwheat and legumes are field crops, which grow well in harsh climatic conditions. When decorticated/shelled and cleaned, the crops are about twice as profitable as wheat. As Armenia has generally been a wheat/bread consuming culture, the production of buckwheat has been minimal. However, more recently buckwheat consumption has dramatically increased. However, while Armenia has good conditions for buckwheat production, nearly all of the buckwheat consumed in Armenia is imported. Some buckwheat is imported pre-packaged, while other buckwheat is imported in bulk, and packaged within the country. This latter category claims to be an Armenian product, while such is not the case. Buckwheat production has been tested, specifically in Shirak, and proved successful. However, no mid- to large-scale facility exists in Armenia to decorticate the buckwheat for consumption. As a result, buckwheat production has never expanded.

Legume production offers a similar opportunity to expand the production of a high value field crop. In Soviet times, certain areas of the country specialized in legume production. However, production has fallen into decline.

Possible upgrading strategy

Expanding the production of high value field crops would depend on introducing decorticating/shelling facilities at scale. While this process would not officially be considered processing, it is necessary to render the crops consumable. Village-level production cooperatives could be clustered around a centralized decorticating/shelling and packaging operation, which they would jointly own. Since neither crop requires irrigation, increasing production could focus on reclaiming currently unused lands. Supporting these crops would provide significant income to farming families in regions which are not suitable to growing other high value crops, such as fruit or berries.

A4.2 Berries

Production

Over the last few years international donor agencies have supported the expansion of berry production (strawberry and raspberry) as a high value crop, with strong marketing potential nationally and internationally. Through these agricultural projects, new highly productive, commercial varieties of berries were introduced in many regions of Armenia. Nevertheless the production volume is still far below even domestic market demand. Production volumes can be increased within 2-3 years, with a plant reaching full maturity only after three years. Agagatsotn leads berry production (3,726 tons) followed by Syunik (2,876 tons), Armavir (2,330 tons), Ararat (1,982 tons), and Tavush (1,310 tons).

All types of berries are at a great demand, both fresh and by processors. However, fresh berries are often sold in buckets, rather than in the more appropriate plastic packages, leading to high losses from squishing. In 2013, 85% of the berries were consumed fresh, with only 2% of the primary production exported, and 13% used by processors.

Table 8: Percentage usage of berries and fruits

	Percent of primary production:			
	Auto-consumed by farming households	Consumed fresh by non-farming households	Exported fresh	Processed by companies/coops
Berries	33%	52%	2%	13%
Fruits and berries	33%	51%	8%	9%

Processing

Armenian berries are processed to jams and sweet preserves. Domestic sales of sweet preserves, including from berries, is limited by the lack of the simple technology required for its manufacture. Like dried fruit production, many households prepare their own jams and preserves during the season. Domestic consumption of sweet preserves has a strict seasonality and increases in colder months.

Possible upgrading strategy

Current berry production does not meet local or international demand, and significant potential exists to create collection centers with cooling rooms and processing, which would extend the duration of the sales period for berries. Additionally, value could be added through packaging, which would also reduce the considerable losses. Since processing berries requires the same technical equipment as processing fruits, and since the harvesting periods are somewhat distinct, the same equipment could be used to process both fruits and berries.

A4.3 Fruit

Production

The fruit value chain could be developed both on the production and marketing sides. However, the most sustainable approach to reducing production losses due to climate-related factors is to plant orchards at higher elevations. There, the trees bloom later and harvests are less at risk from hail and

frost. However, the new orchards would not produce sufficient fruit within the project timeframe. Hail nets have been shown to save harvests, but provide a costly, temporary solution.

Another challenge to the fruit value chain occurs when the harvest is plentiful. As a result, fruits are in oversupply and prices fall. While large companies, if they were to further expand, could potentially absorb these large harvests, their primary markets are now constrained due to the devaluation of the Russian Ruble. While support at the village level could also resolve some issues of oversupply, the local market for processed fruit products is already saturated. Thus, village-based groups would have difficulty competing both with the home-based production and with the output of the large-scale processors.

The main stone fruit cultivars growing in Armenia include apricot, peach and plum/prune. The production volume of stone fruit varies by more than 12 times depending on the agricultural season, creating great unpredictability for farmers and processors. Partially as a result of this variation, many of the farmers outside of the Ararat Valley and Aragatsotn marz do not invest in increasing output. Ararat (with a production of 68,556 tons in 2013) and Armavir (64,703 tons) are the primary stone fruit producing marzes. The variation in output is based on climatic factors, with apricot the most weather exposed fruit. Apricot production tops the stone fruit category, with most orchards in the Ararat Valley. The short duration of the primary harvesting season for apricot, from mid-June to the end of July, poses oversupply issues and drastic price variation. Peaches and prunes have a longer harvesting period, from June until October, due to the geographical spread of orchards and varieties.

Regardless of the seasonal fluctuations in production volume, most of the fruit harvest overall is consumed fresh. In addition, the major part of the production is consumed domestically. Exports of fresh fruits are minimal, except of stone fruit, with 18% of the primary production exported in 2013. Stone fruit also leads in terms of processing by companies and organized farmer groups. However, processors are constrained by their capacity to procure a sufficient volume of fresh fruits within the short harvest periods. In years of poor harvests, the shortage of supply and the resulting increases in price cause processors to decrease the volume of planned procurement. Both fresh market buyers and processors prefer high quality fresh fruits, while approximately 60-70% of supplied fruits are of average or low quality. A significant share of the harvested fruits are wasted due to improper harvesting and post-harvest handling methods.

Seed fruit production is widespread across the marzes, with Agagatsotn (46,818 tons), Ararat (20,562 tons), Gegharkunik (24,898) and Kotayk (12,919) leading in production volumes. Most of these fruits are consumed fresh or—in years of good harvests—left to rot. The limited production of persimmon and figs is concentrated in Tavush (1,899 tons) and Syunik (2,128 tons) marzes.

Table 9: Percentage usage of fruits

	Percent of primary production:			
	Auto-consumed by farming households	Consumed fresh by non-farming households	Exported fresh	Processed by companies/coops
Stone fruit	33%	37%	18%	12%
Seed fruit	33%	64%	0%	3%
Persimmon & fig	33%		0%	

Processing

Jams, preserves, purees, juices and compotes are the main types of products manufactured by local food processors. Many types of processed fruits are exported to CIS and EU member countries under Armenian brands. Only minimal amounts of seed fruits are processed, while 12% of the stone fruits were processed. Dried fruits, including persimmon and fig, comprise a relatively small share in fruit processing. Further, only a few registered small companies produce dried fruit, while a countless number of producer households produce dried fruit for home consumption and for commercial purposes. Dried fruit production primarily concerns stone fruit, while persimmon and fig are also dried. Exports of dried fruits are limited due to the small volume of production and overall poor quality.

Possible Upgrading Strategy

Support to the fruit value chain would focus on processing. It will be difficult for small, producer group-operated, processing units to compete in the canned, jarred and juiced fruit sector, currently dominated by large processing companies. These large companies saturate the domestic market with a supply of goods of consistent quality. Village-based processor groups would face a small-scale disadvantage, unable to supply a sufficient quantity, and hampered as well by quality issues, and unable to compete on price or productivity. Additionally, due to the devaluation of the Russian ruble, many existing fruit processors currently face marketing challenges. Further, even the large producers encounter challenges based on their relative small scale, when targeting international markets such as Russia, EU member states, and India.

One solution for the small-scale processors would be to focus on specific niche products for niche markets. Local and international market demand remains high for quality dried fruit.

In general, specific processed fruit products could be reformulated to match the preferences of specific, possibly niche, export markets. Possibly, producer groups could be assisted to acquire the required processing technologies to produce the high value products. Such producer groups would be vertically integrated, operating in the producing and processing segments. Distribution centers could be established, operated by individual groups or by a network of groups, to make products available to local buyers and exporters. However, since berries have high market demand, and fruit the fruit sector has unstable demand (based on fluctuating over-supply), an approach would be to focus on berries, and use the same facility for fruit.

A4.4 Grapes

Production

The production of table and technical grapes in Armenia is concentrated in Ararat (with 104,326 tons of grape production), Armavir (95,921 tons) and Vayots Dzor (5,324 tons). Agagatsotn (14,510 tons) and Tavush (14,529 tons) Mmarzes also have a significant grape production. In terms of production volume, technical grape predominates, as there is steady procurement from brandy and wine making companies. Local varieties of technical grape are cultivated in the largest quantities, such as Areni, Kangun, Voskehat, etc. Table grape is consumed locally and with some good quality varieties (including seedless) exported to Georgia and Russia for fresh consumption.

Table 10: Percentage usage of grapes

	Percent of primary production:			
	Auto-consumed by farming households	Consumed fresh by non-farming households	Exported fresh	Processed by companies/coops
Grapes	20%	8%	3%	69%

Processing

Armenian grapes are used in the production of different types of wines, vodkas and brandy. Over 80% of the grapes purchased by processors are used to make brandy, with the majority of the rest used to make wine. Although Areni Red is one of the most famous wines produced in Armenia, many other red, rose and white wine varieties within dry, semi-sweet and dessert categories also abound. Armenia has more than 20 wine and brandy producers. These companies export Armenian wine and brandy to many countries including the CIS, the EU and the USA. Joint attempts were made to enter the Chinese market for brandy and wine, but the largest consumer remains Russia.

A limited quantity of grape concentrated syrup and raisins are produced at the household level, primarily for auto-consumption.

Possible Intervention Strategy

Whereas grape production offers limited income to producer groups, the manufacture of alcoholic beverages generates more value. While the grape-wine value chain is already functional, producer groups could potentially be supported to produce boutique wine brands for sale in local and potentially export markets. Vayots Dzor marz is well known for such small-scale wineries, while they also exist in Ararat and Armavir, the primary grape producing marzes. Agagatsotn could also be candidates for small-scale wineries.

A4.5 Producer incomes from berry, fruits and grape production

Of the berry, fruit and grape cluster, berries offer the best earnings to farmers, and have the smallest production. Only 25,000 farmers produce berries, compared to 95,000 for stone fruit, and 120,000 for seed fruit. Persimmon and fig production is likewise limited as berries.

At producer (farm-gate) 2013 prices, stone fruit was the least remunerable crop for farmers, while berry production provided the best returns. The market price reflects the added cost from transportation, packaging, wholesale and retail sales.

Table 11: Estimated income from fruits, berries and grapes

Average income in USD	Producer income/Ha	Income/producer @ producer price	Income/producer @ market price
Stone fruit	3,174	426	1,728
Seed fruit	3,906	727	1,863
Persimmon & fig			
Berries		1,137	1,801
Grapes	2,929	762	3,203
Fruits and berries average		949	2,502

Source: NSS, MOA, ENPARD analysis[20]

A4.6 Vegetables

Non-traditional vegetables (such as broccoli, kohlrabi, Brussels sprouts, and artichoke, among others), as well as other specific vegetables, including garlic and green bean, offer high local market prices, and would be expected to continue to sell at a significant margin for a number of years.

Production

Tomato, egg-plant, cucumber, zucchini, bell pepper, cabbage, carrot, beet root, onion, garlic, green bean and cauliflower are the main traditional crop varieties cultivated in Armenia. Tomato has the biggest share in the total vegetable production. Demand for "non-traditional" vegetables (broccoli, leak, kohlrabi, fennel, etc.) is growing, but production is still low. Large quantities of vegetables are produced in every marz, with the production of Ararat (306,185 tons) and Amavir (342,446) far ahead of even the next largest vegetable producing marz, Gegharkunik (62,320), not including potato.

Small volumes of local vegetables are exported fresh to Russia, due to the good taste and freshness. Only 1% of the 2013 vegetable production, or 4,100 tons, was exported fresh. This quantity is still larger than the 600 tons of seed fruits exported in the same year, but far smaller than the 25,000 tons of stone fruits exported. The vast majority of the vegetable production, equating to 95%, is consumed fresh. The high quality vegetables are marketed fresh, while farmers sell their lower quality produce to processing companies. In some areas, especially in Ararat and Armavir Marzes, large processing companies are the primary institutional buyers. However, the lack of production planning undermines the Armenian vegetable market, in many cases resulting in oversupply or shortage, causing price fluctuation. Since specific information for non-traditional vegetables was not available, the table below shows vegetables overall, as well as specifically for tomato.

Table 12: Percentage usage of vegetables

	Percent of primary production:			
	Auto-consumed by farming households	Consumed fresh by non-farming households	Exported fresh	Processed by companies/coops
Vegetables	22%	75%	0%	3%
Tomato	22%	71%	0%	7%

Processing

With only 3% of vegetables' primary production is processed, or 28,000 tons in 2013. Still, vegetable processing exceed the processing quantities of other agricultural commodities (with 17,000 tons of stone fruit processed in the same year, for example). This small processing percentage, but large

[20] These figures represent only very rough estimates of producer income. Producer income was estimated by dividing the primary production value, at the producer and at the market price, by the number of producers of each fruit or berry category. Therefore, the estimate does not take into consideration the differences between farm sizes, production costs in different regions, or levels of professionalization. For example, dividing the producer income at the producer price for stone fruit, by the estimated "producer income/Ha" suggests that the average parcel size is 134m^2, when in actuality most stone fruit orchard parcels are 200 to 300 m^2. This estimate includes even farmers with only a few trees. Generally, when the agro-ecological conditions allow for greater diversification, the parcel sizes for specific crops will be smaller; when diversification is not possible, farmers increase the parcel sizes of a single crop—within the average 1.4 ha allocation per farmer.

quantity, demonstrates the massive volumes of vegetables produced. Armenian vegetables serve as a raw material for many canning products, including pickles, paste, marinades, savory preserves and convenience food. Additionally, some vegetables are IQF processed and available year round at local stores. Each processing company on average manufactures up 25-30 varieties of vegetable canned products, based on traditional recipes or product formulas adapted for overseas markets. Canned production is exported to Russia, Kazakhstan, Ukraine, the USA and EU countries. Some of the companies, such as Artashes, Noyan, and SIS Natural maintain representative offices in exporting countries. Nearly all commercial vegetable processing is undertaken by large companies.

Possible Upgrading Strategy

The goal of assisting village-based vegetable processors to compete effectively in a market otherwise dominated by large companies is unlikely to be successful. One advantage of the vegetable value chain, is the short time required to produce new varieties, as compared to the years required for new berry or fruit varieties to reach full production. Higher value crops such as the "non-traditional" varieties could be introduced where agro-ecological conditions allow.

Supporting communities to grow non-traditional vegetables, perhaps through cooperatives centered around greenhouses, would primarily those communities where the intervention is focused. However, a project to grow seedlings for non-traditional vegetables, which could then be distributed to many communities, would have a wider impact. Such a project would unlock the potential for many communities to produce such vegetables, by providing access to high quality planting materials. A centralized cooperative could be organized to produce seedlings, which would be distributed to community-based cooperatives in a cluster. Members of the community-based cooperatives would grow the non-traditional vegetables, and supply them back to the centralized cooperative, which would then sell the larger quantity of vegetables to institutional buyers.

A4.7 Potato

Production

The quantity of potatoes produced in Armenia exceeds that of any other crop, at 600,511 tons in 2013, above even grain, at 547,765 tons, and above tomato, with the next largest production, at 275,667 tons. Many elite and super elite potato seed varieties are available in Armenia through specialized local companies. In addition to Gegarkhunik (307,489 tons), Lori (72,743) and Shirak (105,518 tons), the main potato producing marzes, all other areas of the country also produce potatoes. Armenia has a great potential to produce high quality potatoes and potato seed for export. Near the entirety of the production is consumed domestically. According to the available data, in 2013, only 4% of the primary production was exported.

Table 13: Percentage usage of potato

	Percent of primary production:			
	Auto-consumed by farming households	Consumed fresh by non-farming households	Exported fresh	Processed by companies/coops
Potato	54%	42%	4%	0%

Processing

Despite the dominant position of potato in local production, Armenia has very limited processing capacities. The only potato processing in the country is on a small scale, with an insignificant quantity processed into chips, and the company Tamara producing some IQF (frozen) potato fries. Only a few small chips producing companies operate in Yerevan.

Potential Upgrading Strategy

Interventions in the potato value chain would focus on processing. However, a suitable processed product would need to be identified, and its market studied. Further the variety of potato used in processing is different than that used for consumption, and so farmers may need to switch varieties to supply a processing factory. Finally, attempts at larger-scale potato processing in the past in Armenia have failed, so the project team would need to investigate these experiences to understand the causes of failure.

However, were a potato processing factory to be successful, it could potentially increase the output of potato production. Medium-scale potato processing into starch, flour or an instant mix will be investigated. Before selecting the potato value chain, the project team would ensure that sufficient supply of potatoes exists (in addition to those already committed to export contracts), and that there is a market for the processed products.

Alternatively, support to potato production for export, could be delivered through better sorting and packaging facilities. However, the value added to the potato value chain through better sorting and packaging of fresh potatoes would likely be less than that added through processing. Additionally, Carrefour will begin purchasing several varieties of potatoes from a group supported by World Vision, which will be marketed with recommendations for the best dishes to make with the different varieties.

A4.8 Producer incomes from vegetable and potato production

Regardless of the low prices of vegetables and potatoes, producer income rivals, and in most cases exceeds, that of fruit producers.

Table 14: Estimated income from vegetables and potato

Average income in USD	Income/Ha	Income/producer @ producer price	Income/producer @ market price
Vegetables	4,028		
Tomato		838	4,942
Potato	2,197	871	1,197

A4.9 Herbs

While wild herbs are collected in mountain communities across Armenia, they could also be cultivated and sold into the growing market. Local herb teas are produced widely, however, high quality teas including berry extracts, could also be produced for other markets.

Production

All herbs and medicinal plants are collected wildly from the different regions of Armenia, with no organized production. Some companies organize the collection and packaging of herbs and medicinal plants for sale through local drug stores and groceries.

Possible Upgrading Intervention

Although information on Armenian herbs and medicinal plants is scarce, their collection, preparation and packaging could present an opportunity for rural communities involved in the collection and commercial production of various herbal teas and cooking mixes. Greenhouses established for the production of non-traditional vegetables, could also be used to produce some herbs.

A4.10 Dairy

Production

Cow milk is supplied by small farmers throughout the country, who have on average 2-3 cows. The cattle are mostly low productivity breeds, due to a lack of selection centers, as well as low access to artificial insemination and high quality semen. Raw milk is collected at collection points established by NGOs and processing companies, which pay exceedingly low prices. While some milk cooperatives have been established, they are primarily involved in collection and milk sales only. Households produce other dairy products, such as "matsoun" (Armenian yogurt), cottage cheese and butter, for auto-consumption and sale at local markets. A small quantity of raw milk is sold at Yerevan market by intermediaries, without proper packaging or refrigeration. Farming households across Armenia produce milk, with Gegherkunik (121,000 tons) and Shirak (108,000 tons) leading in production volumes. The table below shows the uses of primary production of the animal-based products, with milk production having the highest processing percentage—equating to nearly all the milk not consumed by farming households.

Table 15: Percentage usage of animal products

<table>
<tr><th rowspan="2"></th><th colspan="4">Percent of primary production:</th></tr>
<tr><th>Auto-consumed by farming households</th><th>Consumed fresh by non-farming households</th><th>Exported fresh</th><th>Processed by companies/coops</th></tr>
<tr><td>Cattle</td><td>16%</td><td rowspan="4">78%</td><td>0%</td><td rowspan="4">6%</td></tr>
<tr><td>Pork</td><td>16%</td><td>0%</td></tr>
<tr><td>Lamb</td><td>16%</td><td>0%</td></tr>
<tr><td>Chicken</td><td>16%</td><td>1%</td></tr>
<tr><td>Fish</td><td></td><td></td><td>15%</td><td></td></tr>
<tr><td>Milk</td><td>45%</td><td>9%</td><td>0%</td><td>46%</td></tr>
</table>

Processing

As noted above, dairy production in Armenia is considered a matured industry. The local dairies produce sour cream with different fat contents, curds, yogurts," matsoun," pasteurized milk, heavy cream, drinking yogurts, butter and various traditional cheeses. Ice cream production capacities are large, and although seasonal, the significant investments in technology have led to large production volumes. Ice cream and cheese are the main dairy export products, targeting the Armenian Diaspora in overseas markets.

Possible Upgrading Strategy

Support to the dairy value chain could focus on the production of higher value milk products for the domestic market, and potentially for export. The project would introduce product formulas and processing technologies suitable to specific end markets. Nearly the only cheeses produced in

Armenia are the local varieties, such as Lori. One large company, Marianna, produces gouda, which retails for nearly ten times the price of the local varieties.

Further, supermarkets do not buy dairy products such as cheese from small-scale or household producers as the process is not sanitary. At the same time, primary producers are forced to accept the low prices of the industrial dairy processing companies. An opportunity may exist to support small-scale processors to meet hygienic and food safety standards, while also upgrading product quality by targeting unique products, and thus shift some of the value in the chain to the village producers.

A4.11 Honey

Production

Small farmers, owning from 5 to 10 beehives, are the main honey producers in Armenia. Few institutional/registered companies produce honey, let alone market the product with adequate packaging and labeling. Armenian honey is polyfloral, collected from wildflowers. In the local market honey is sold though an informal network, often of relatives, rather than through grocery stores. Small export quantities of Armenian honey reach Russia and Europe. The main obstacle to exporting domestic honey is the high production cost. The price of honey in the local market reaches as high as 10 USD/kg, while in the international market the price varies from 3-5 USD/kg.

Table 16: Percentage usage of honey

	Percent of primary production:			
	Auto-consumed by farming households	Consumed fresh by non-farming households	Exported fresh	Processed by companies/coops
Honey	43%	57%	0%	0%

Possible Upgrading Intervention

Producer groups could be assisted to brand honey as “pure honey from high in the Caucasian Mountains,” for marketing in export markets. Whipped honey as a spread of a similar consistence as Nutella could be produced as a higher value product. Additionally, buckwheat production benefits from having a large number of bees as pollinators. Therefore, a likely intervention in the honey value chain would be to support the farmer groups engaged in buckwheat production to also keep beehives, and make honey.

Annex 5: List of references of value chain statistics

All quantitative data are for the 2013 season. Overall, production of all crops and animals grew in 2013 while also trending up in previous years.

NSS

1. Main Indicators of Industrial Organizations by Economic Activities (five-digit code), for January-December 2013 (in Armenian) - http://armstat.am/en/?nid=82&id=1523
2. Food security and poverty, January-December 2013 - http://armstat.am/en/?nid=82&id=1530
3. Area Under Agricultural Crops and Gross Harvest for 2013 (in Armenian) - http://armstat.am/en/?nid=82&id=1535
4. Sum Totals of Exhaustive Livestock Census January 1, 2014 (in Armenian) - http://armstat.am/en/?nid=82&id=1536
5. Foreign Trade of the Republic of Armenia for 2013 according to the Commodity Nomenclature of External Economic Activity at 4-digit level - http://armstat.am/en/?nid=82&id=1584
6. Foreign Trade of the Republic of Armenia for 2013 (According to the Commodity Nomenclature of External Economic Activity at 8-digit level) - http://armstat.am/en/?nid=82&id=1574
7. Consumer price indexes (prices) in the Republic of Armenia, January-December 2013 (in Armenian) - http://armstat.am/en/?nid=82&id=1520
8. Realization (Use) of Agricultural Product by Peasant Farms for 2013 (in Armenian) - http://armstat.am/en/?nid=82&id=1541

MOA

9. Agroprocessing - http://minagro.am/agroprocessing/
10. 2010-2020 SUSTAINABLE AGRICULTURAL DEVELOPMENT STRATEGY OF THE RA - http://minagro.am
11. MOA Expert estimates.

Others

12. Agriculture in Armenia snapshot - http://www.avenueconsulting.am/resources/avenue//uploads/pdf/aafab24852e8b106fd66818c0349bf8e.pdf

Annex 6: Production calendar

Table 17: Production calendar

Crop	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov
Apricot											
Peach											
Plum											
Cherry											
Apple											
Pear											
Persimmon											
Fig											
Berries											
Nuts											
Grape											
Tomato											
Cucumber											
Pepper											
Eggplant											
Cabbage											
Garlic & onion											
Carrot											
Potato											
Mellon											
Honey											
Herbs & med. plants											
Forage crops											

Sowing	
Harvesting	

Annex 7: Production by marz

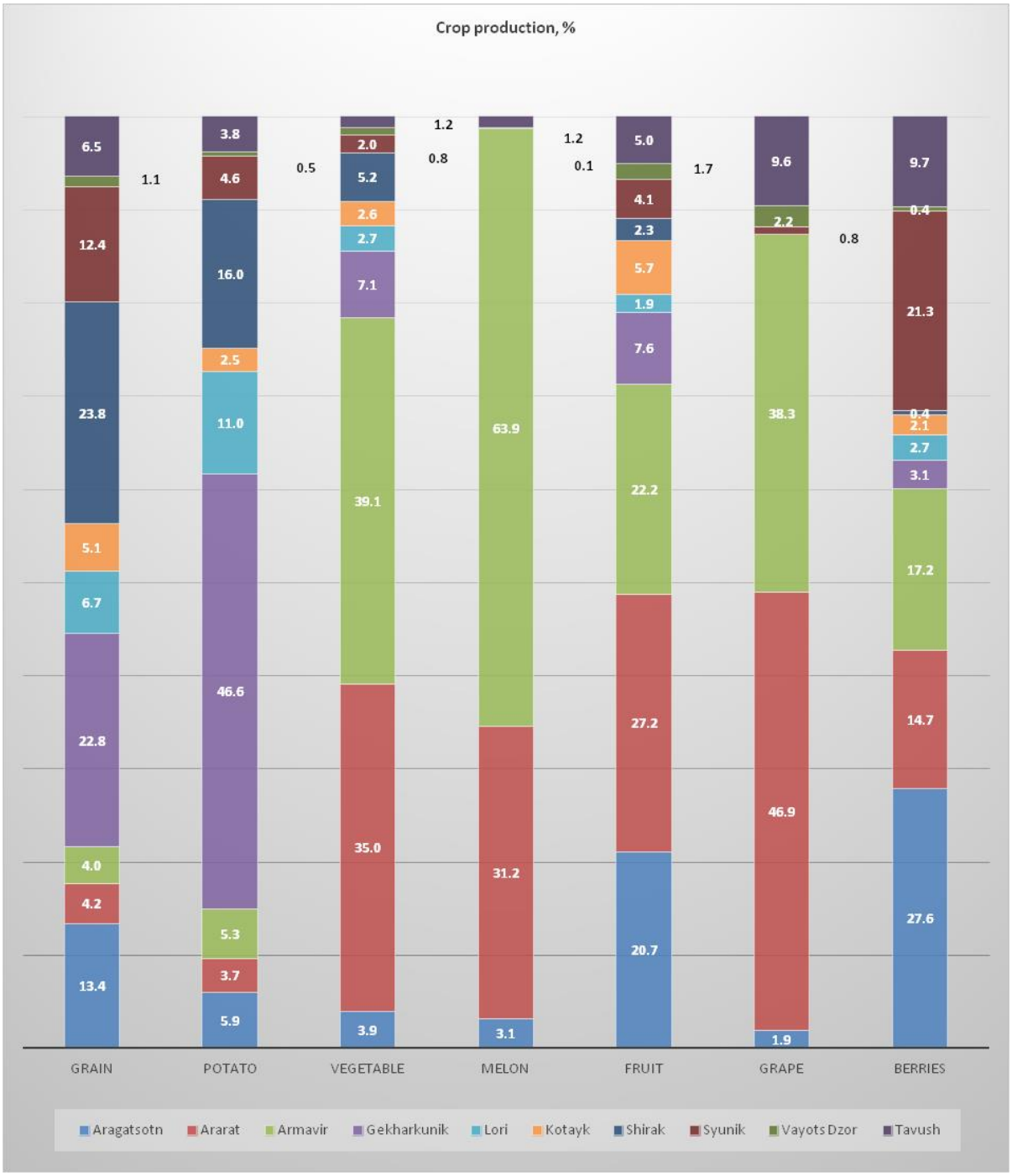
Table 18: Production by marz

2013		Yerevan	Agagatsotn	Ararat	Armavir	Gegherkunik	Lori	Kotiak	Shirak	Syunik	Vayots Dzor	Tavush
VC cluster #1: fruits, nuts & berries	T	5,900	69,914	91,805	75,010	25,550	6,264	19,349	7,732	13,993	5,730	16,877
	%	1.7	20.7	27.2	22.2	7.6	1.9	5.7	2.3	4.1	1.7	5.0
Stone fruit (tons)	T	2,910	18,120	68,556	64,703	231	1,455	5,470	1,567	1,325	2,515	9,251
	%	1.7	10.3	38.9	36.7	0.1	0.8	3.1	0.9	0.8	1.4	5.3
Seed fruits	T	2,750	46,818	20,562	7,488	24,898	3,655	12,919	6,053	6,614	2,957	3,983
	%	2.0	33.8	14.8	5.4	18.0	2.6	9.3	4.4	4.8	2.1	2.9
Berries	T	120	3,726	1,982	2,330	421	361	286	52	2,876	49	1,310
	%	0.9	27.6	14.7	17.2	3.1	2.7	2.1	0.4	21.3	0.4	9.7
Nuts	T		1,204	660	331		212	672	60	1,050	209	434
	%	0.0	24.9	13.7	6.9	0.0	4.4	13.9	1.2	21.7	4.3	9.0
Fig, persimmon, others	T	120	46	45	158	0	581	2	0	2,128	0	1,899
	%	2.4	0.9	0.9	3.2	0.0	11.7	0.0	0.0	42.7	0.0	38.1
Grape	T	4,200	14,510	104,326	95,921		217	598		1,192	5,324	14,529
	%	1.7	6.0	43.3	39.8	0.0	0.1	0.2	0.0	0.5	2.2	6.0
VC cluster #2: vegetables & potato	T	5,484	73,650	330,356	377,596	369,809	96,591	38,705	150,659	47,867	9,922	35,877
	%	0.4	4.8	21.5	24.6	24.1	6.3	2.5	9.8	3.1	0.6	2.3
Vegetables, total (tons)	T	4,582	34,369	306,185	342,446	62,320	23,848	22,390	45,141	17,218	6,684	10,822
	%	0.5	3.9	35.0	39.1	7.1	2.7	2.6	5.2	2.0	0.8	1.2
Tomato	T	1,447	7,812	159,650	96,168	422	703	2,376	1,382	2,317	1,451	1,939
	%	0.5	2.8	57.9	34.9	0.2	0.3	0.9	0.5	0.8	0.5	0.7
Garlic and onion	T	300	2,210	10,199	29,829	3,072	1,227	1,290	3,805	2,128	2,538	1,853
	%	0.5	3.8	17.4	51.0	5.3	2.1	2.2	6.5	3.6	4.3	3.2
Cucumber	T	1,127	4,748	21,619	35,414	270	791	1,096	1,499	1,532	877	2,152
	%	1.6	6.7	30.4	49.8	0.4	1.1	1.5	2.1	2.2	1.2	3.0

Cabbage	T	50	8,291	10,665	29,881	48,206	16,268	7,110	15,871	5,549	256	2,106
	%	0.0	5.7	7.4	20.7	33.4	11.3	4.9	11.0	3.8	0.2	1.5
Others	T	1,658	11,308	104,052	151,154	10,350	4,859	10,518	22,584	5,692	1,562	2,772
	%	0.5	3.5	31.9	46.3	3.2	1.5	3.2	6.9	1.7	0.5	0.8
Potato	T	902	39,281	24,171	35,150	307,489	72,743	16,315	105,518	30,649	3,238	25,055
	%	0.1	5.9	3.7	5.3	46.6	11.0	2.5	16.0	4.6	0.5	3.8
Value chain #3: Dairy												
Milk	T	3,000	80,000	40,000	41,000	121,000	81,000	58,000	108,000	62,000	25,000	40,000
	%	0.4	12.2	6.1	6.2	18.4	12.4	8.8	16.4	9.5	3.8	6.0
Most likely "plus" value chains												
Information not available												
Value chains eliminated												
Mellon (tons)	T	800	6,492	65,372	132,503	0	75	0	0	0	306	2,530
	%	0.4	3.1	31.4	63.7	0.0	0.0	0.0	0.0	0.0	0.1	1.2
Meat, total ton	T	1800	15600	9800	15400	23500	16300	14700	21400	13900	5600	8800
	%	1.2	10.6	6.7	10.5	16.0	11.1	10.0	14.6	9.5	3.8	6.0
Eggs	M	28.7	59.4	54.7	127.7	58.2	43.7	117.3	40.1	26.3	17.4	41.7
	%	4.7	9.7	8.9	20.8	9.5	7.1	19.1	6.5	4.3	2.8	6.8
Wool	T	4	213	164	184	233	66	103	184	206	34	34
	%	0.3	14.9	11.5	12.9	16.4	4.7	7.2	12.9	14.4	2.4	2.4
Grain	T	423	73,419	23,220	21,956	125,115	36,725	27,861	130,583	67,825	6,215	35,423
	%	0.1	13.4	4.2	4.0	22.8	6.7	5.1	23.8	12.4	1.1	6.5
Legumes	T		150	544	1,028	227	438	378	76	904	103	1,258
	%	0.0	2.9	10.7	20.1	4.4	8.6	7.4	1.5	17.7	2.0	24.6
Tobacco	T	0	0	534	141	0	0	0	0	0	43	960
	%	0.0	0.0	31.8	8.4	0.0	0.0	0.0	0.0	0.0	2.6	57.2

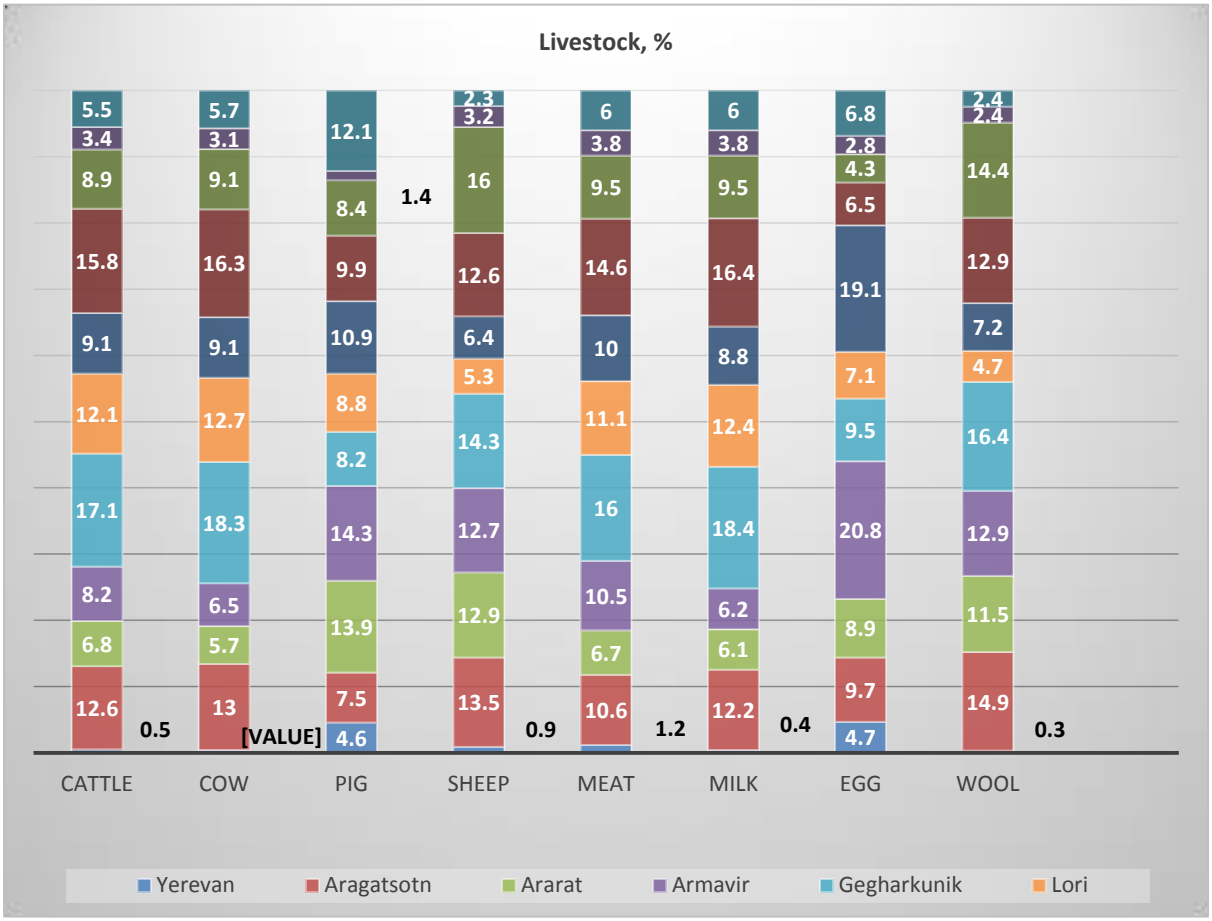
Annex 8: Percentage of crop and animal production by marz

Diagram 21: Crop production by marz



Source: NSS, MOA, ENPARD analysis

Diagram 22: Animal production by marz



Source: NSS, MOA, ENPARD analysis

Annex 9: Producer group selection methodology

The project team will use two parallel methods to select producer groups. In the first, the project team will develop value chain-based business models, for the highest potential value chains. These business models will show whether producer group cooperatives—working in a linked method across different value chain segments—will have the potential to grow into profitable enterprises. Producer groups will be selected to implement business models which prove technologically feasible and financially viable. The selection of these groups will be initiated by the project team, by collecting recommendations from local and international stakeholders, meeting with the groups, and evaluating their potential. Value chain innovation most often comes from technical experts with the capability to analyze the opportunities and introduce new and innovative technological solutions. Resource poor farmers, who may have little experience beyond their own village or region, will most often have a traditional approach to agriculture, and rarely drive innovation or value creation.

The second method uses a well-publicized "open call for applications" to give all of the producer groups in the targeted marzes the opportunity to apply for support. This method also guarantees transparency through the creation of traceable, documented, justification as to why a group was selected or rejected. (Even the groups selected through the approach described above, will be required to complete the applications and pass through the rigorous selection process.) This approach allows producers to propose their own groups, which may also have high potential for future value creation. In referring to the "three plus" value chain approach, the "plus" represents the value chains which may not have been initially selected, but which will be considered based on the applications received via the open call.

As a first step, in producer groups selection, the project team project team met with the governors and regional extension centers (GAMK) to present the project, including objectives, value chains, target groups, selection criteria, evaluation process and supporting mechanisms of selected groups. During the meetings, governors appointed focal points and agreed to provide information regarding existing formal cooperatives and informal farmer groups. The communication strategy and the effective media channels for the open call were also discussed at the marz level, involving the wide distribution of an informative leaflet describing the submission process and application forms. The project team will undertake the same agenda in the other targeted marzes, namely Kotayk and Gegharkunik. Testing and finalizing the application is underway and will be completed before launching the open call.

In addition to the groups which the team identifies through recommendations, team-initiated meetings, and the field evaluations, UNIDO/UNO will also undertake a multi-stage producer group selection process. The process will begin with a large number of applicants and arrive at the groups selected for support. This selection process will have the following stages:

1. The open call and field research (undertaken under Activities 1.2 and 2.1) will identify a large number of producer groups interested in participating in the program. The number of group submissions will be unlimited, depending on the results of the open call.
2. The team will shortlist groups whose applications, received via the open call, meet the selection criteria. The project document also calls for training 1,000 farmers in the benefits of group membership and the institutional/organizational options (activity 1.3). Therefore, it would be convenient (although not absolutely necessary) if the membership of the

shortlisted groups equals 1,000 people. Evaluating whether the groups meet the criteria will be carried out by our team internally (without convening a selection committee). During the group selection process, attention will be given to meeting the gender and youth minimum requirements. Each of the applications will be scored and reviewed by a few team members.

3. The trainings on organizational development options and the advantages of working in groups, will be delivered to the shortlisted groups.
4. Some groups are expected to withdraw their participation after they learn of the costs and challenges associated with participation in the project and official registration. However they will still have received the benefit of education.
5. The project team will prepare short "business cases" with those groups that remain. A business case will be a 2-3 page simplified business plan, including the following sections: (1) a description of the business; (2) a description of the market; (3) estimated revenue, costs, and a three year profit projection, shown as a simple table; and, (4) a description of the group members or leadership team. (This is different than a business plan, which is about a 20 page document with description of the business model, a market analysis, a marketing plan, a financial plan, a technical plan, and for ENPARD, a training/development plan.) The business cases template will be developed by ENPARD experts and distributed to the shortlisted groups, and they will receive support in preparing the document.
6. At this stage, a brief description of each group, including the business cases, will be submitted to the selection committee (members to be determined), and the producer groups will have the opportunity to present their business cases to the committee. The committee will then undertake the final selection of producer groups (primary producer and processor groups). More groups than necessary to meet the minimum group number requirements will be selected. Additionally, the selection process may take place over time, requiring the selection committee to meet more than once.
7. The project team will develop business plans with the selected groups. The plans will be prepared with both primary producer and processor groups, although the business plans of the primary producer groups may be simplified and shorter. The training on business skills development will include developing comprehensive business plans, based on the earlier "business cases."
8. The selection of producer groups (Activity 1.2 and 2.1) may continue until quarter two of the second year, as successful business models will be replicated in other marzes, possibly requiring a second, more targeted, call for applications.
9. The registration of the farmer groups (Activity 1.4) will begin in the last quarter of the first year, and continue through the first quarter of the third year. Producer groups will not be forced to register before their level of development, and their readiness for co-investment, has reached the stage when registration will be logical. The target registration date will be included in the development plan sub-section of the business plan, together with the other trainings, scheduled on a need-based basis.
10. From this point, the project team will continue to implement the other activities as described in the project document. During the remaining years of the project, some groups may withdraw or prove unsuccessful. The project team may choose to eliminate unmotivated groups. In this way, at the finish of the project, the required minimum number of groups will be met, if not surpassed.

Producer group selection criteria

During the assessment process proposals will be evaluated based on the following eligibility criteria.

- Project participants (farmers and processors) should already be involved in farming and/or processing;
- At least one crop/product with high market potential has been identified for cultivation/production and processing;
- Famers/processors are performing or willing to perform joint activities (as a cooperative, association, limited liability company, other legal entity) as a primary source of household income;
- Groups are comprised of a minimum of 5 farmers from different families;
- Groups have a dedicated community connection;
- Participants show self-initiative, motivation, ambition and business-orientation;
- Participants have a willingness to learn, expand, and increase profit through value addition or processing;
- Existing skills of farmers/processors will be evaluated;
- Groups have a track record of collaboration (within the group or on other projects);
- Groups have a readiness/capacity for co-financing;
- During the group selection process attention will be given to meeting gender and youth indicator targets; and,
- Additional criteria for processors include: (1) a secure source of primary products, processing premises and capacities, available working capital; (2) available skills and technology, including specialists responsible for production processes, (3) dedicated markets/buyers.

Annex 10: Comparison chart of organizational forms

Diagram 23: Comparison chart of organizational forms

Orgnanization type	Co-operation agreement of group of agricultural primary producers	Production Cooperative	Consumption cooperative	LLC	Association/NGO
Capital investment requirement (AMD)	mandatory contribution of share NO Mandatory minimum	mandatory contribution of share NO Mandatory minimum	mandatory contribution of share NO Mandatory minimum,without profit distribution	mandatory statutory capital NO Mandatory minimum	no mandatory contributions
Fee for notari services (AMD)	10,000	—	—	—	—
Fee for registration (AMD); range is due to the speed of the registration (5 days/1 day)	—	30,000-60,000	30,000-60,000	30,000-60,000	30,000-60,000
State fee for registration (AMD)	0	10,000	10,000	10,000	10,000
Required salary payments (for which positions?)	Accountant (Accounting only if has shared ownership of property)	Executive Director and Accountant. If turnover is less than 100 mln AMD, Executive director can be also the accountant.	Executive Director and Accountant. If turnover is less than 100 mln AMD, Executive director can be also the accountant.	Executive Director and Accountant. If turnover is less than 100 mln AMD, Executive director can be also the accountant.	Executive Director and Accountant. If turnover is less than 100 mln AMD, Executive director can be also the accountant.
Minimum required salary (AMD), from	—	55,000	55,000	55,000	55,000
Personal inome tax of employees (not	—	24.4	24.4	24.4	24.4
Social security tax (%)	—	5	5	5	5
Earnings amount that would require an income tax payment (million AMD), from 01.07.2015	113.4 (for each member)	113.4 (organization total)	—	113.4 (organization total)	—
Turnover Tax rate (%) with suporting documents (invoices)	1	1	1	1	1
Turnover Tax rate (%) without suuporting documents (invoices)	5	5	5	5	5
Company income tax rate (applicable for the turnover more than 113.4 mln AMD)(%)	20	20	20	20	20
VAT rate (applicable for turnover more than 113.4 mln AMD) (%)	20	20	20	20	20
Minimum number of members	2	2	5	1	2
Maximum number of members	no limitation	no limitation	no limitation	49	no limitation
With which state entities is the regstiration recorded?	1.Ministry of Finance, Taxation Committee 2. The State Committee of Real Property Cadastre of the Government of the Republic of Armenia.	Ministry of Justice Agency of the Public Register of Legal Entities	Ministry of Justice Agency of the Public Register of Legal Entities	Ministry of justice Agency of the Public Register of Legal Entities	Ministry of Justice Agency of the Public Register of Legal Entities
Objective of organizational/institutional type	for profit co-operation agreement	for profit legal entity	non-profit legal entity	for profit legal entity	non-profit legal entity

Annex 11: Issues of current producer groups related to registration

Example #1: official registration is forced on the group too early

The Oxfam supported groups aim to function with a community-oriented focus. Overall, the women have received trainings in capacity building and greenhouse management, and seem to have organized their collective use of the greenhouses effectively. However, all of the production costs, investment costs (in greenhouse construction and cold storage construction), and even the salaries of the cooperative leaders, are 100% subsidized by Oxfam. One group, in the Gomk community of Vayots Dzor, distributes the entire production to members, who individually choose to consume, gift to neighbors, or sell their share. Thus, the cooperative itself has no revenue. Another group, in the Azatek community, also of Vayots Dzor, sells all of their produce in the city, but then donates 40% to community projects, keeps 40% with the intention to support the cooperative after Oxfam withdraws support, and saves 20% for other miscellaneous expenses or causes. The women themselves purchase the produce of the cooperative, albeit at a reduced cost, and earn no income from the cooperative operations.

Although the Gomk group functions well, it will unlikely be able to transition to covering its own costs, and would be expected to collapse when Oxfam withdraws support next year. That this group has been registered as cooperatives only increases the likelihood of collapse, as the cooperative structure requires payment of a director and accountant, costs which the groups will unlikely be able to generate without revenue and a stronger business-orientation. While the Azatek cooperative is preparing to transition to self-sufficiency, it is not apparent why the group should be burdened by the higher costs of being registered as a cooperative, when its primary goal is social and member receive no benefit.

Example #2: the need for official registration emerges organically

Two groups supported by the local NGO Green Lane offer a different approach: both groups are informal groupings of women. One group, in the Gargar community of Lori has been trained in producing non-traditional vegetables in an ecofriendly manner; this group sells 5% of its production, with Green Lane's assistance, and consumes and distributes the rest to neighbors. As an informal group it has not been burdened with the salary costs associated with being a cooperative, so the low revenues pose no problem. Additionally, the group has also begun to participate in covering its own production costs. The group could continue as an informal group, designed for social and subsistence purposes indefinitely. Alternatively, it could choose a business-orientation, increasing both production and the percentage of sales.

The berry growing group in the Arayi community of Aragatsotn Marz, sells about 95% of its berry production (both from its traditional and improved Green Lane plots), generating about 30% of household agricultural earnings from berries. With its higher revenues, the berry producer group in Arayi could now transition to register as a cooperative, since its own objectives are already business-oriented. However, if selected for the program, the women deserve an explanation as to why they should become a cooperative beyond simply that it is a requirement for ENPARD support. The reason for these women to officially register would be to access loans at lower rates, as well as to issue invoices and sign contracts with institutional buyers. If this group reaches a production level sufficient that Carrefour, for example, would like to purchase its fresh berries, the group would need to become officially registered in order to sign a supply contact and issue the invoices Carrefour

requires. Similarly, if the women wish to borrow a loan to co-finance (with ENPARD) cold storage—so that they can earn higher prices during the off-season and be able to supply customers during a longer duration, for example—they would need to borrow from a financial institution. In that case, they would borrow at the interest rates for a business entity, rather than the prohibitively high rates for group lending. So as not to senselessly complicate the operations of the Arayi berry growing group, they should be left to operate as an informal group until the financing or contracting needs of the group itself create the justification that it register as a cooperative.

Example #3: the case for official registration of processing groups

In the case of processing, the project is most likely to work with existing groups which already have a business-focus, are already generating income. These groups are likely to already be registered as cooperatives, LLCs, or another business entity. However, it is conceivable that an informal producer group could be selected to receive support as a processor. An example is the informal group in the Lernakert community, which the agricultural service center in Shirak supported to produce buckwheat. Buckwheat is a high value field crop, which when the grains are cleaned, is about twice as profitable as wheat. The group is composed of capable people, who have been active in different professions. The project could support this group (in collaboration with other buckwheat producers) to launch a factory to decorticate and clean the grains—which would be a first of its kind in Armenia. Due to the high capital requirements, the group would require a loan to cover its part of the co-investment. It would thus be logical, in this case, to officially register the group from the start of its selection for ENPARD support.