Questionnaire for Business plan & market Analysis
Scale-up AgroNets in Kenya

Preliminary findings

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EXTENSION OFFICERS

- They imagine a price below 100.000 for the net house (even though I don't know how well they know market prices).
- Drip irrigation and seeds are the most important support services. This opinion is shared with Middlemen and agro dealers, who also highlight the importance of technical assistance
- They are aware of people using nethouses in their counties, although not extensively
- Green Houses are generally seen rather positively, because of the **better harvest** they can guarantee. They report **cost** as the major problem, together with technical competencies
- **About half of the Geenhouses is no longer working**
- They think that and increased production of vegetables **needs new distribution channels in order to be sold**
- Middlemen are reported to be **influent** stakeholders

AGRO DEALERS

- The sample is more representative of different counties where we want to work
- Agro dealers can be interesting counterparts: **they have usually more than 300 clients, most of them smallholder farmers.** Usually they wait for clients at their shops, but about 30% of them goes directly to the fields to look for clients
- They have exclusive contracts with suppliers, not with farmers. However, **about 25% of them offers some facilitation to purchase or credit to sell inputs**
- They have a rather positive or very positive opinion on Greenhouses, mainly because of quality and quantity of harvest. **Cost** is mentioned as the only real problem
- Net houses are not very well known, more than 50% has no idea. Who knows it, it's because demo plots or because they saw them in the field of some of their clients
- They have, however, a positive impression of the technology. they think that it could be a good investment, but most of them thinks at a subsidize to make it. about 20% thinks that a farmer could make the investment individually
- They expect a price below 150.000, better if below 100.000
- **Almost all agro dealers would like to trade net houses. They expect a margin of 20% on the sales (ranging from 5% to 100%), and they would pay in slightly less than 90 days (min. 30, max. 540**). Maybe this last figure has to be checked, because it changes a lot
- Lack of knowledge, of the agro dealer or of the client, would be the main reason for an agro dealer not to trade net houses

MIDDLEMEN

- Most of them buy vegetables from farmers and re-sell them to other stakeholders. About one third of them does contract farming
- They re-sell either to individuals or, mainly, at market places
- The number of clients they have can vary a lot, both in terms of buyers and in terms of farmers, from less than 30 to more than 100. Farmers are usually small scale farmers, even though about 30% is large scale farmers. They buy vegetables directly in the field
- **Less than half of them has some agreements with clients**. Agreements can be informal agreements to be the only purchasers, or they support farmers with **small loans when they need to buy inputs (about 40% of middlemen)**
- In their opinion, **priority for farmers is increasing quality and quantity of production, rather than reducing costs.** The most important investments are equipment and competencies, rather than seeds, pesticides or machines
- Usually farmers would be able to find a way to pay for the resources. 30% of them would have the resources themselves, 60% would look for a loan at subsidized conditions
- **They usually manage to get higher prices with higher quality, even if variation is not extremely relevant.** There's a mixed opinion on organic farming. Some middlemen think that it's good in order to get better

prices, but the same number of respondents says that it's a bad deal because vegetables are not good looking, so they are difficult to sell
- **They think that if production increases, there is enough market in :Kenya in order to sell it**. This is true especially for **tomato**, **onion** and **cabbage** and, to a lower extent, for **pepper** and **capsicum**. In general, horticulture products have their market if production increases
- If they had to find a new delivery channel to increase their sales, reaching **supemarkets and shops** would be the option, rather than reaching individuals or having access to Nairobi (on this last comment, there's of course a geographical bias)
- There's a mixed opinion of greenhouses, but rather positive in general. Better quality and quantity is the good aspect, cost and low shelfilfe of products are the bad aspects
- They have **little knowledge of nethouses**, and when they have, it's because direct observations in fields or demo plots
- It seems to them a good investment, but only if subsidized and if extension services are included. they expect the cost to be below 100.000 KSH
- Irrigation is the n.1 extension services required. Then, technical assistance and inputs like seeds, pesticides or soil analysis

FARMERS

Introduction

The selection has been random, but not randomized: **this means that information is relevant per se, but is cannot be inferred at national or county level**. However, that's the sample that has been interviewed:

- 127 people, 88 males and 39 females
- **16 counties** involved: The most represented county is Kirinyaga, with 14 farmers, followed by Nyeri and Makueni with 12, the least represented are Bungoma, Migori and Nyamira, with one only farmer, and Trans Nzoia with 2
- 37% of people were between 35 and 45 years old, 29% between 25 and 35 and 21% between 45 and 55
- The average household is 3,28 people, and in 67% of cases 2 or more people provide an income for the household
- Agriculture is the main source of income (69% of the farmers, so for 31% of them it's not the major income generator), and business is the main additional source of income other than agriculture (64% of household)
- **70 farmers have a greenhouse, and 27 have a net house**. This means that we have to consider that our sample includes several farmers who are pretty well off compared with average Kenyan smallholder farmers

Section 1 – CONTEXT, EXPERIENCE and MARKET

Plot

- *1.1* - Farmers have a **rather good access to the market (only 25% declared being isolated**, mainly in Nakuru and Makueni counties).
- *1.2* - **83% goes directly to a rural (65%) or urban (18% market), while only 9% relies mainly on middlemen**. This last data partially contradicts the information on number of crops sold to middlemen rather than directly (see further 1.15)
- *1.3* - Access to water is good or very good for 57% of farmers, do 43% of them have a problem on that side (see relevance for drip irrigation on net itself). Water costs on average 5,000 KEs monthly, with high peaks in Kajiado and Murang'a, likely due to the extension of the farms of a couple of interviewed farmers
- *1.4* - Plot dimension ranges from a quarter of acre to 400 acres. The average is almost 7 acres, but in most of the counties (11 out of 16) the average is lower than 4 acres, with Murang'a (40 acres), Bungoma (25) and Uasing Ghisu (18) influencing the data. If we consider only farmers without greenhouse or nethouse, the plot dimension falls at **2,17** acres on average, as an indicator of smaller and less mechanised farms. These are anyway big enough to host a net house

Farming

- 1.5 - Farmers are primarily horticulture growers, growing a total of about 30 different crops, and dedicating on average 1.17 acres per crop. However, the information on dimension of the crop is pretty incomplete, so aggregation is not very reliable.
- Tomato is the preferred crop (54 farmers) followed by maize (42) and then Spinach, Capsicum, Cabbage and beans (about 20 farmers). Fruit is also an important crop (more than 15 farmers)
- 1.8 - **Farmers get an average about 140.000 KES per harvest**. However with a range of 23,000 KEs on average per 700,000 in Bungoma (one only farmer). The case of Murang'a is peculiar: three crops have been excluded from the calculation because they exceed any range: Macadamia grower making 100 million revenue per harvest, a tomato grower making 50 million per harvest and cat fish for an 18 million revenue yearly). Actually, in 7 out of the 14 counties with valid data farmers, on average, have a revenue exceeding 100,000 KES per harvest, and only in four counties it exceeds 300.000KES. Anyway, **this means that, especially in some counties, there are farmers who can easily pay the investment of a net house with the revenue of one, or maximum two, harvests, of a single crop**. We should anyway consider that about 2/3 of the farmers involved in the sample already have either a net house or a greenhouse.
- If the information is broken down according to having or not a get house or a greenhouse, **greenhouse owners can have almost 200,000 KES per harvest, net house owners about 75,000 KES and open field growers about 47,000 KES.** Given the different size and mechanisation of farms, and the fact that it's impossible to get a KES/acre data, this data does not give an information on the profitability of a greenhouse or a net house compared to open field, but it gives information on the investment capacity of a typical grower owning a greenhouse or a nethouse, or none of them. The information is that greenhouse oweners, on average, have the capacity to buy a net house from the revenue of a single harvest. This is true in 5 counties (bungoma, Kiambu, Machakos, Murang'a, Trans Nzoia and Uasin GHisu – beware of n. of peole considered in each county) while in the other 11 counties the averace income per harvest ranges from 28,700 KES to 105,000. Net house owners and **open fienld growers** have much lower incomes per harvest. The latter, especially, ranges from 5,000 to 164,000, therefore it is **very likely that this kind of person will need either a loan or a subsidy in order to make an investment worth 150,000 KES**.
- Fruit is one of the most rewarding crops, generating usually more than 200.000 KES per harvest. Focussing on horticulture, average KES per **tomato** harvest is 81,000 KES, ranging from 17,000 to 200,000. **Kales**, **Cabbage** and **Spinach** generate from 15.000 to 25.000 on average per harvest, while **French beans** confirms being a good cash crop (even though there is one single growing pushing up the average value). It is important to mention the **high value generated per crop from Capsicum, about 180,000, and this is a crops highly cultivated by both Greenhouse and net house owners**. Moreover, leafy vegetables (basil, rosemary, mint, etc.), and also tea, are very valuable cash crops whose adaptability under the net might be checked. Cucumber and Pigeon Peas are other horticulture products generating an interesting value per harvest (about 40.000 KES), even though the sample of farmers is limited.
- Unfortunately, information of area dedicated for each crop is not precise enough to calculate revenues per acre. The data provided above are absolute figures, so the dimension of the plot plays a huge role in this analysis. The only rough estimate that can be done is the KES per harvest per acre at county level, with an average result of 120,000KES, ranging from 24,000 in Kisii to 450,000 in Kiambu
- 1.6, 1.7 - Most farmers rotate crops and 96% of them can count on two (60%) or more crops per year.
- 1.9 - Farmers know what Integrated Pest Management is, but only 19% actually does it, while the majority just purchases pesticide in the market. Less than half of the farmers makes soil testing

Equipment and services

- 1.12; 1.13 - 45% of the farmers rely on the government for agricultural extension services, and another 31% get services from family members, friends or peers. Labour is provides by Casual labourers (69%), family members (29%) or both (2%)
- **1.14 - Farmers spend on average 99,000KES yearly for agricultural inputs, half of them to rent, maintain or use machines**. Other relevant expenses are pesticides, seedlings and labour, costing 15-18,000 KES each yearly. The three Macadamia, tomato and catfish growers mentioned above have been excluded as well in order to have more relevant data. The cells are marked in yellow colour and figures mentioned in comments.
- **Expenses are about 180,000** (from 20,000 to 600,000) **for greenhouse owners, and 197,000 for net house owners, while open field growers face lowers expenses, less than 100,000 KES per year, the huge dfference being on the expenses for the use and maintenance of machines and equipment**. However, in the case of nethouses, apart from Kiambu the average yearly expenses vary from 30,000 to 80,000 KES yearly, which is

fairly similar to the figure of open field growers (excluding the highest figures in this latter case as well)

Market

- **1.15 - Farmers have multiple delivery channels**. 53% sell to middlemen, even if only 9% declared this being the major way to access the market. Then, 38% sells directly in the village and another 35% to individuals. **Only 9% of the interviewed famers manages to sell to supermarkets**, in 5 counties (Uasing Ghisu, Murang'a, Nakuru, Kajiado and Kiambu).
- 1.15.1 - Tomato, kales and cabbage are the crops mainly sold in the village. They need about 1 hour to reach the village, and to travel 3.5 km, every day or twice a week
- **1.15.2 - Tomato, capsicum, kales and maize are crops mainly sold to middlemen. Usually farmers sell only part of their harvest to middlemen, and without a contract**
- 1.15.4 - Tomato, kales and cabbage are also the crops mainly purchased directly by individuals, who are reached via telephone or word of mouth, or they go directly to the field
- 1.15.3 - Capsicum, Herbs, salad and tomato are the only 4 crops that farmers sell directly to supermarkets, and they managed to get the agreement by personally going to the supermarkets to propose their products
- 1.15 - Prices vary according to the delivery channel. A bit surprisingly, it seems that **the best price can be obtained selling directly to individuals, while middlemen provide the lowest price** (which was foreseeable). As an example, Tomato can be sold at 55KES to individuals, and at 41KEs in the market or 39KES to middlemen. Cabbage ranges from 24 (individuals) to 19 (middlemen), pigeon peas from 80 (individuals and village) to 50 (middlemen), or onion from 60-65 (individuals and villages) to 45 (middlemen). Supermarkets seem to provide an average price for tomatoes (about 40 KEs per kilo), while there is a good added value in the case of capsicum: 110 KES per kg compared with 45-65 KEs per kg with other delivery channels
- There's a higher variation of prices according to the county. As an example, tomato can be sold at less than 20 KES per kilo in Kisii and more than 70 in Murang'a or Machakos (notwithstanding the delivery channel). The same for cabbage, from 9 (Kisii) to 50 (Murang'a) KES per kg, and so on
- 1.16 - As a marketing strategy, 47% of farmers simply go to the market, and 41% uses word of mouth to reach customers. Contracts with dealers or buyers are used by 25% of farmers
- **1.17 - Middlemen are important actors in the market**, with high or medium-high influence for 3 out of 4 farmers. Only 6 farmers declared giving credit to middlemen, but 19% of farmers who answered mentioned having lost some money because of middlemen
- **1.20 - Farmers are convinced that an increased production would easily lead to increased sales. 69% declares that market demand is not yet satisfied, while 29% says that it would be necessary to produce in the off season to actually increase sales** (or revenues). This figure is fairly the same among people having a net or greenhouse, of growing in open field. Tomato, Kales, Onions, cabbage and capsicum are crops that would be more easily sold, according to farmers. Also French beans and potato got some mentions.
- 1.19 - Farmers (>90%) would be interested to reach directly clients, preferably through a shop (60%) or a cooperative (33%). However, having access to buyers or supermarket would be the best strategy to increase sales (in case of increased production) for 50% of the farmers, followed by having a direct contact with shops (24%) and reaching Nairobi (19%). It seems that skip middlemen would be an important aspect on this regard, given also the lower prices that they can offer (see above)

Section 2 - FINANCIAL STRATEGIES AND INVESTMENTS

- 2.1;2.2 - 90% of farmers would still invest in agriculture in order to increase their revenue. Getting a greenhouse or net house would be the preferred strategy for 44% of farmers, but this figure is **higher than 50% for greenhouse and nethouse owners, and as low as 27% for open field growers**. Then, improve irrigation would be the strategy for 27% of them (19% nethouse owners, 26% greenhouse owners, 34% open field growers), and 13% of them would like to invest in livestock
- 2.3 - 112 out of 127 farmers have a project for their farm. This means mechanizing their farm for 37% of farmers, buying more land for 33% of them, and get better seeds or other inputs for 16% of them
- **2.3.2 - 64% of farmers would make this investment starting on their own savings** (savings plan). 28% would look for money in a bank or IMF (23%) or a Chama (5%). This figure rises as high as 81% for open field growers opting for saving, since probably don't feel that they would either get, or be able to repay, a loan (option imagined by 9% of them).
- 2.4 - A bit more than half of the farmers actually know what a net house is, 69% of greenhouse owners and 26% of open field growers. Word of mouth, demo plots or experience in other fields are the three ways to get this information. About 6% heard about it from internet
- **2.4.2 - 65% of farmers think that a net house is something interesting** (78% of greenhouse owners), but this is almot 1005 of those who know what a net house is.. However 12% would get it only if subsidized, and 27% only if linked with other services. **18% declare that they would be ready to directly invest their own resources, and the figure rises up to 22% and 38% of greenhouse and nethouse owners**. For open field growers, a subsidy would be the key factor.
- 2.5 - The interesting product is the net house together with drip irrigation and other support services (87 out of 111). **Farmers imagine a price around 100,000 KES for this product**, ranging from 50,000 to 215,000 on average in each county. We can make two main considerations: several farmers can't estimate the price, or would not be ready to make a big investment for that; and some advertising is unavoidable to make the product attractive for farmers. A pretty foreseeable result, net house owners actually estimate the full package at around 155.000 KES. Greenhouse owners imagine something far cheaper than a greenhouse, at about 100,000 KES, and open field growers generally speaking imagine low prices, around 50-60,000 KES (apart from an exception in Murang'a)
- 2.5.2 - Seeds, technical assistance and pesticides are the most interesting additional services
- 2.6 - In case of buying a net house, **56% declares that it would use its own resources**, while 46% would opt for a loan. This is reasonably consistent with the figure of farmers declaring opting for a savings plan to finance new investments, in general. There's not relevant difference among people having or not a green or net house
- **36% of farmers who would look for a loan would go to a financial institution, 33% would go to a Chama, SACCO or other group, while 23% would like to get e loan directly from the supplier**
- **48% of farmers would be ready to pay less than 10% as upfront payment, and another 42% from 10 to 25%.** Actually, the experience with net house is relevant. 26% net house owners would pay more than 50% upfont payment for a new one, and only 35% let than 10%. On the contrary, 96% of open field growers would pay no more than 25% upfront payment /57% less than 10%)
- **73% of farmers think that they can pay back a loan for a net house in 6 to 18 months. They would appreciate a grace period of at least 2-3 month, and more precisely 52% would like to start paying back at the first harvest**

Section 3 - FARMER WITH EXPERIENCE IN GREENHOUSE

Introduction

- 3.1 - Greenhouses are concentrated in Machakos, Kajiado, Kisii, Kiambu, Migori and Uasin Ghisu counties
- 3.2; 3.3 - Most of farmers got a greenhouse because of their personal initiative. Only 20% got the simple greenhouse with no other services, while 3 out f 4 had an irrigation system, and half of them improved seeds
- **3.4 - The average cost of the greenhouse is 220.000 KES**, ranging from 10.000 to 600.000. The average price is influenced by those people getting part of the purchase thanks to a subvention
- 3.4.1 - The large majority of farmers (53) paid with their own money. Only 6 farmers took a loan, and 6 got it either free, or subsidized

Performance

- **3.7 - 65% is satisfied of the greenhouse, 35% is not**
- **3.7.1 - By far, the main pros of the greenhouse are a bigger harvest, and better quality of the products**
- **3.7.2The main cons are higher costs,** and need of assistance and/or difficult pest management. 8 people remark worse harvests
- 3.8; 23.6 - About half of the people had to repair the greenhouse (most have been using the green house for more than 1, or more than three years), and half of these repairs were on the polythene. This means that **if the net of the net house proves more resistant, this is a relevant aspect.**
- 3.9;3.10 - About 80% of the farmers remarks bigger harvests and longer harvest periods
- 3.11 - Regarding pest control, there is a mixed experience: 23 out of 59 farmers reduced the expenses, while 30 increased these expenses

Perspective

- 3.12 - Tomato, capsicum and, to a lower extent, kales and French beans are crops working well in greenhouse, according to the owners
- 3.13;3.14 - About 66% of farmers would buy another greenhouse, 76% of them in order to enlarge the existing one, but 24% would like to grow other crops under the greenhouse. Only 17% would buy again the same greenhouse: 33% wants a bugger one, and **35% wants a different material for the coverage (which is relevant for the net house)**
- 3.13.2 - Among those who don't want to buy a new greenhouse, exactly half and half declare that one is enough, or that it's a bad investment
- 3.15 - About 70% of the farmers would buy a net house instead of a green house. Cheaper installation and cheaper maintenance are the main reasons**, so cost is the key issue**. 17% declared knowing that the technology works well. For those who wouldn't buy the net house, bad knowledge of the technology is the reason in half of cases, but also concern about soil borne diseases (24%)

Section 4 - Agro Z CLIENTS or NET HOUSE USERS

Approach

- 4.2 - 56% of farmers having a net house got information of AtoZ from friends, 25% directly from AgroZ staff

AgroZ NET experience

- 4.3 - Net houses are concentrated in Kajiado, Kiambu and Uasin Ghisu counties. Most of them are 8x15 or 8x20.
- 4.5 - 50% got the net houses through a public programme or another sponsor (ICIPE, SNV, KALRO), 27% bought it as a personal initiative, while 23% was advised by a buyer. Most of farmers added drip irrigation, improved seeds and pesticides to the investment
- 4.7 - The average cost was 75,000 KES, from 2,000 to 240,000. However, this figure is not so relevant, considering that half of them got some kind of subsidy
- 4.7.1 - 25% got the net house for free or subsidized by a grant, 70% used its own resources and only 4% needed a loan
- 4.9 - AgroZ was the provider of half or the net houses. Other providers and KALRO or SNV. **4 people built a net house on a previous greenhouse**

Performance

- 4.10 - Only one out of 27 people declared not being satisfied.
- 4.11.1 - The **positive** aspects mentioned by the farmers are **better quality (81%), and quantity (63%)** of harvest. 30% remarked lower costs
- 4.11.2 - The **negative** aspects are higher costs (26%) and especially **need for assistance and/or difficult maintenance (40%)**. Pest control is an issue of 7% of farmers
- 4.13; 4.14; 4.15 - 19 out of 22 respondents remarked a better harvest with the net, and one only person had worse harvests. 80% of farmers saw a longer harvest period, and 2 people only a shorter harvest period. **For 21 out of 22 people expenses in pest control decreased**
- 4.16 - Tomatoes, Capsicum and Cabbage are crops growing better in the net house

Perspective

- **4.17 - All people but one would buy a new net house, half of them to enlarge the existing one, half of them to test it with other crops.** The one who wouldn't buy a new one says one is enough, and does not consider it a bad investment
- 4.18 - Training and technical assistance – on installation, crop management and pest control - are the most appreciated additional services. Only 14% of respondents mentioned irrigation as the key additional service. For 16 out of 27 people, support up to the fist harvest is unavoidable for someone installing a net house

Section 5 - FINANCIAL HABITS AND PREFERENCES

Financial habits and experience

- 6 people did not answer at any question in this section, so the overall sample is 121
- **5.1 - 73% of farmers hold a bank account for their savings,** and for almost all of them (70%out of 73%) this is the primary option to keep savings. Only in Kisii, Machakos and Migori this data is below 50% Groups (SACCOs or Chama) and mobile banking are the alternative way to keep savings, chosen 38% and 33% of farmers respectively. 17% of farmers (in Kisii especially) buy livestock as a savings, and 17% keeps some money at home.
- 5.2 - The majority of farmer can estimate their savings either per week or per month. Half of them estimates also the savings that can be generated at harvest time
- The average weekly savings is 5,600 KES, from as low as 850 KES in Nakuru or 1.150 KES in Kisumu, up to 10,000KES weekly in Kisii and Kajiado. Figures, as in all cases, are higher for greenhouse owners than net house owners, than open field growers. However, there's pretty huge variation
- The average monthly savings is 14,236 (so there's no clear proportion among the two estimates), from as low as 5000 in Kajiado to as high as 34,000 in Machakos. If we integrate the two answers into a monthly overall estimate, by multiplying by 4 the weekly estimates, the results is an average monthly savings at **17, 276**, from as low as 6,300-6,400 in Nakuru and Nyeri up to over 30,000 in Machakos and Uasing Ghisu. Breaking down data for having green or net house, greenhouse owners have an overall monthly savings of about 22,000, net house owners very similar, 20,000, while for open field growers the figure is lower, 12,000. This kind of difference can be explained pretty well by considering that farmers having had the capital, or the opportunity, to invest in a green or net house are likely to be bigger, or at least better well off, than farmers who did not make any of these investment (even though this is not the case every time)
- **5.2.1 - The average savings generated at harvest time 75,000 KES**, from as low as 12,500 in Murang'a to as high as 1,000,000 in Kajiado, or 150,000 in Bungoma. If the data is cleaned by the person in Kajiado claiming 1 million savings at harvest, the average savings is about **60,000 KES** . This information partially confirms – with lower and probably more realistic figures - the data on crop revenue: actually, **farmers should be able to pay back a 150,000 worth net house with 2 to 3 harvests.** It seems, also, that the savings at harvest for net house owners is higher that green house owners (excluding the person claiming 1,000,000 in Kajiado) : 65,000 GH owners, 76,000 NH owners, 53,000 open field growers. However, the limited number of the sample does not allow claiming
- 5.3 - 59% of farmers is member of a group, 53% of them in a Chama, 29% a SACCO and 15% a farmers group
- 5.3.1 - People put on average 700 KEs per week, or 2,500 KES per month as regular savings in Chamas. 3 out of 4 of them can take money twice a year or more, and on average the maximum available amount is 85,000 KES, but this varies from 3,000 to 500,000 according to the case. Therefore, **Chamas, probably, are a good way to cover the investment for people needing about half of the necessary amount from this source**. About 1 farmer out of 4 has lost money in a Chama at least once
- 5.3.2 - On the 29 people members of SACCO, 20 declare that the amount that they can takes as loans are appropriate with their needs, but about 40% of them can take money only once a year. The maximum amount available varies from 10,000 to 1,000,000, with an average of 161,000. This brings to the conclusion that, usually, **SACCOs are a valid option to raise the necessary money to buy a net house**. It is also a more reliable instrument than Chamas, as only 2 out of 27 people declared having lost money with SACCOs
- 5.3.3 - Farmers are members of farmers group mainly in order to get technical assistance and training. However, 7 out 9 farmers groups mentioned offered also emergency funds, and 4 offered savings and/or loan services.
- 5.4 - 53% of the interviewed farmers have applied for a loan, and 92% of them obtained it. Open field growers are less likely to look for a loan (only 30%). However, none of the people who has been refused a loan was an open field grower.

- **5.4.1 - Banks (especially Equity bank) and microfinance institutions are the first option to look for loans, followed by SACCOs and Chamas**. The tendency is actually the same for greenhouse owners, net house owners and open field growers (i.e., the latter does not have a lower tendency to rely on banks and MFIs) .
- 5.4.2 - About 55% of farmers, who took a loan, actually used it for the agricultural activity. Loans usually lasted 1 year, no more, and on average people borrowed 435,000 KES, from 45,000 in Nyeri to 1,6 million in Murang'a or 8-900,000 in Meru and Uasin Ghisu. These farmers generally have the capacity to borrow the necessary money for a net house investment (that 50% who obtained a loan)
- 5.4.3 - The main reason not to apply for a loan, apart from lack of need (39%), is the inappropriate conditions of loans for agricultural activities, mentioned by 35% of farmers. Another 18% complains of banks being too far, not them not knowing, or trusting, how banks work.
- 5.4.4 - Only 12% of farmers had some problem to reimburse the loan, and none of them did not manage to reimburse.
- 5.5 - There are pretty rare experiences of farmers getting some finance from a buyer or a dealer. This was either the possibility to pay inputs at harvest, or some support to cover expenses for the crop campaign
- 5.5.2 - The main reasons not to make this kind of arrangements with dealers or buyers are: this service is not available (29%), farmers have the necessary resources for agricultural activity (29%), farmers prefer pay cash and not have these kind of debts (20%), or prefer to use other way to get loans (7%)

Preferences

- 5.6 - Apart from better interest rate (62%), farmers would appreciate **technical assistance (21%)** as a specific feature of a net house loan. This aspect is clearer to net (27%) or green (29%) house owners, than to open field growers (76% interest rate, 12% technical assistance)
- 5.7 - If the financial product involves AgroZ, **farmers would prefer to pay the net house in instalment directly to AgroZ (72%), rather than to a financial institution (13%) or other third actor (10%).**
- 5.8 - People expect an interest rate lower than 10% on this loan. Actually, it would be further investigated if people mean a subsidized loan, because this is a figure out of market values.
- 5.9 - About 70% of the people would be ready to provide a collateral, in half of cases some of the assets, otherwise blocked savings or a moral or financial guarantee from third person. Net and green house owners can use their assets in more than half of cases, while open field growers only in 22% of cases, and they would use blocked savings as a guarantee (44%). Those who won't provide a collateral think that agriculture is risky, and they don't want to risk their assets
- **5.10 - 77% of farmers think that the appropriate reimbursement period would be between 6 and 18 months.** Even though open field growers would need more time to reimburse, still only 24% of them would imagine loans longer than 18 months.