



**LUNDS**  
**UNIVERSITET**

Department of Economics

Bachelor Thesis

August 2013

# A Blossoming Ethiopia

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Investigating the Impact of Private Standards in the Ethiopian Horticulture Sector

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## Abstract

This paper will contribute to the literature on growth and poverty alleviation, focusing on the relation between certification in the agricultural sector and development. This is an area that has received growing recognition lately, as it is suggested that agricultural diversification into high-value crops may have a poverty alleviating effect. Specifically, this study analyses how the investment decision is influenced by the presence of private standards in the Ethiopian floriculture sector. The Ethiopian Horticulture Producer Exporters Association (EHPEA) Code of Practice is used as a benchmark, a standard that is to be mandatory in order to obtain an export permit in Ethiopia. Special attention is paid to four different aspects of particular interest, all in different ways related to requirements stipulated in the Code of Practice. The aspects that are studied include environmental obligations, the lack of human capital, the potential abundance of private standards on the market, and the wage levels and their implications. The results are obtained through semi-structured interviews with managers at different levels, operative at floriculture firms in Ethiopia. The findings indicate that the overall lack of human capital and the abundance of private standards probably have a negative effect upon the investment decision, in contrast to the two other aspects. The overall effect appears to be predominantly positive though.

## Acknowledgements

I would like to direct a grateful thought to everyone who has made this thesis possible. This includes Sida (and of course Swedish taxpayers), for funding through the MFS-scholarship, Thomas Lilay and Tedla Zegeye at EHPEA, Biruk Tekle at EDRI, Mr. Wondwossen at EHDA, my assistant and translator Menor, and all 14 participants in the survey. I would also like to thank Hans Hellberg for proofreading. Very special thanks go to Mahtemeab Tadesse, who has been invaluable throughout the process. Finally, I would like to thank my supervisor Joakim Gullstrand for being a constant and outstanding source of wisdom and support.

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## 1. Introduction

When the United Nations presented its ambitious Millennium Development Goals in the year 2000, the aim to eradicate poverty and hunger in the world could be found at the very top of the declaration. This is probably the most prominent, but still only one of many examples of the emphasis put on poverty alleviation within the development community. Significant progress has since been observed in different parts of the world, with many Asian countries as frontrunners. However, on the opposite side we find an array of Sub-Saharan African (SSA) nations still finding themselves struggling against poverty, suggesting that the concept of poverty alleviation contains a great variety of aspects, many of which are yet to be determined.

Recent research has concluded that improving agricultural output could be an area with great potential in reaching poverty alleviation (von Braun et al., 2004). It is self-explaining that this is more true for an economy where agriculture plays a huge part in the production sector. An agricultural area that has received recognition lately is the horticulture sector, which in short is an umbrella term for different high-value crops, e.g. specific vegetables, flowers, and fruits. There has so far been insufficient research conducted within the area to claim its unequivocal effects on poverty reduction, but there are indications suggesting that a transition from conventional agriculture to horticulture may give significant, positive yields to the adopting country's economy. Moreover, the adoption of horticulture also has the potential of creating a commercialized market where job opportunities are created, and income levels are raised in rural parts of less-developed countries (LDCs) (Lumpkin & Weinberger, 2007).

A fundamental component for horticulture's ability to reduce poverty is investors' possibilities of establishing in the horticulture sector. This may in turn be influenced by the occurrence of regulations on the international as well as the national market. These regulations are commonly referred to as certificates, or private standards. The emergence of certificates is a recent phenomenon, succeeding the formerly prevailing trade barriers as a regulatory framework. However, contrary to the former trade barriers, the

emerging certificates are not stipulated by governments. Neither do they oblige any party to abide by international trade agreements. Consequently, private standards may have an excluding effect upon producers in LDCs. This becomes even more plausible considering the fact that the standards are formed with respect to retailer and consumer interests, and not producer interests. Another recognized problem for producers in LDCs is the burden of cost for certification, which is exclusively carried by the producer (Andersson and Gullstrand, 2009). According to empirical findings, the implementation of private standards may also have positive implications for producers in LDCs aspiring to enter the international market. Among these, the most important is the enhanced credibility on foreign markets. The certificate can vouch for a variety of concerns where there is a situation of asymmetric information, such as the consideration of the environmental aspect, but also employees' health and safety (World Bank, 2008). Altogether, the overall impact of certificates is still debated, and in order to get a clearer picture of its actual effects, more studies need to be performed.

This paper will contribute to the literature on growth and poverty alleviation, focusing on the relation between certification in the agricultural sector and development. Mainly two aspects will be considered here. The first issue that will be addressed is whether private standards work as a barrier or catalyst for exports in the agricultural sector. The second issue is the potential domestic barriers investors may have to confront, such as the potential lack of human capital.

This essay focuses on the above-mentioned issues in the specific case of the Ethiopian floriculture sector. The data has been collected through semi-structured interviews with managers operative at Ethiopian horticulture firms. The thesis is structured in a fashion where a discussion on crop diversification and economic development is followed by an overview of the horticulture sector in Ethiopia today. Further, there is a discussion on private standards and their relation to FDI (Foreign Direct Investments). This in turn leads up to a discussion on the methodology used in this study. The results and conclusions are presented in the last section.

## 2. Background

### 2.1 Economic development and crop diversification

Ethiopia has been hit by several droughts since the early eighties. A few of these droughts have caught the eye of the world community with its grave implications for the people, a people of which 30 % lived below the national poverty line in 2011 (World Development Indicators). These droughts, and the following famines plaguing particularly the rural areas of Ethiopia, have been subject to studies with the intention of trying to analyse how to prevent future catastrophes of equal magnitude. The findings indicate there might be a significant relationship between the lack of diversity in farming systems and the vulnerability to droughts. Even though most households observed had taken measures in order to diversify their agricultural cultivation, these efforts were considered to have been inadequate. In terms of preventing famines and achieving a poverty alleviating effect, they were considered a failure, mainly through the exaggerated focus on diversification to crops within the same category as those already existing. Instead, drought resistant crops were highlighted and suggested as an alternative area for the diversification in order to reduce the risk exposure of the rural areas (Webb et al., 1992).

Despite the findings two decades ago, Ethiopian agriculture still has not seen much transition from the conventional grain based production. The diversity in the agricultural sector is still very narrow, and Ethiopian farmers are yet to change their production focus from crops with an insufficient variety of properties to that of high-value crops. In a survey conducted in 2005-2006, it was concluded that three quarters of Ethiopia's crop cultivation was dedicated to different varieties of grains, with the main part still belonging to the subsistence farming area. Furthermore, whereas the entire agricultural industry accounted for almost half of the entire Ethiopian GDP, grain production only constituted an estimated 29 % of Ethiopia's accumulated agricultural GDP at the time. The accumulated value from grain production has increased over the past two decades, albeit the observed increase is mainly due to an expansion of cultivated land, suggesting that improvements within the area move forward at a low speed. As a consequence, high-value

crops have been elevated as a preferred cultivation. A transition from subsistence farming to high-value crops would also meet the change in domestic as well as world consumer preferences. Further, it would not only raise income levels for single individuals, it would likely make Ethiopia a nation less vulnerable to droughts (Asrat et al., 2011).

Today, the dominating high-value crop produced in Ethiopia is coffee. Coffee production constituted on average 2.7 % of the overall cultivated land in Ethiopia between 2004 and 2008. Despite its relatively low prevalence, it is estimated to be the main source of income for 25 % of the Ethiopian population (Weissleder, 2009). Moreover, coffee accounts for approximately 30 % of the accumulated Ethiopian export revenue, and the entire coffee sector is estimated to constitute 10 % of Ethiopia's GDP (ITC, 2012). A consequence of Ethiopia's dependence upon coffee exports is the vulnerability to price fluctuations in the world market price for coffee. Over the last 15 years, the price of coffee has been highly volatile (Indexmundi, 2013), with grave implications for the stability of Ethiopia's economy. This suggests that a diversification is necessary, not only to high-value crops but also to high-value crops.

All in all, diversification is widely known to be a vital component in a country's efforts towards becoming a stable economy. It is also widely considered that a country that has a greater dependence upon trade also experiences a greater exposure to fluctuations in the world's economic situation (UNDP). In the case of Ethiopia, which is highly dependent on a single commodity for export, it is highly advisable for it to diversify its production into a variety of high-value crops if the goal is to alleviate severe and widespread impoverishment. An emerging crop category suitable for the task is horticulture.

## 2.2 Horticulture and Ethiopia

First, in order to get a grip of what the term horticulture comprises, a definition is in place. Horticulture can be defined as "the science and art of growing fruits, vegetables, flowers and ornamentals" (Jaffe, 1995). Another, more comprehensive definition states that horticulture is "the production and

marketing of crops/products (vegetables, fruits, ornamentals) with a relatively high value per unit, a high perishability, produced under intensive use of land, labour, knowledge, financial means and other inputs, and mainly produced for a selected export market” (World Bank, 2008). It is important to notice that horticulture is not only focused on food consumption products, but also on ornamentals, such as cut flowers. This is particularly the case of Ethiopia, where the horticultural branch called floriculture is dominating among emerging high-value crops, constituting an estimated 80 % of the entire horticulture business. Floriculture is also one of the fastest growing employment creators in Ethiopia, and was projected to have reached 50,000 employees by 2013, with the entire horticulture sector making up to a total of 184,000 employees. This should be put in contrast with the fact that, in the beginning of the 2000s, the horticulture sector in Ethiopia was almost a non-existing employer. As of 2004, the horticulture sector alone contributed to Ethiopia’s GDP with \$28.55m, or 0.3 % of accumulated GDP. In the latest figures from 2012, the absolute numbers had increased to \$265.71m, whereas the contribution to the GDP was only 0.6 %. Over the same time period, the floriculture sector alone grew from \$12.6m to \$212.56 (EHDA, 2012).

The vast majority of the cropped flowers are sold to an agent in Ethiopia, who in turn ships the goods to an auction in Amsterdam where the flowers are redistributed to buyers from all over Europe. There are some obvious advantages with this system, as the need for market knowledge and linkages within the business does not become an overwhelming obstacle at an establishing phase. On the other hand, the use of intermediates will always decrease the profits for the producer, considering the fact that the selling price will remain the same regardless of the number of actors in the distribution chain. As several horticulture firms in Ethiopia have faced financial concerns in their establishment, in some cases with bankruptcy as a result, the system with a centralized auction may also have its drawbacks. As of today, only the largest and most prosperous businesses have the possibility of sidestepping this system and selling directly to the market (Lilay, 2013).

It should be mentioned that overall projections of the future of the horticulture sector in Ethiopia are mostly bright. The current recession has

had a wide negative impact on the global economy, and the Ethiopian horticulture sector is no exception. The fall in prices has seen the short-term incentives for investing in the horticulture sector diminish, with an observed decrease of expansion in the sector as a result. This is particularly the case in the floriculture sector, where the aggregated output has seen a slight decline since 2008. An aspect with the potential of boosting investors' willingness to establish a business in a high-value crop production is the recent emergence of quality assurances for entering specific markets. These assurances do, however, come with obligations, and they may consequently have a deterring effect upon the decision to invest. The assurances, or lower limit-standards, are most frequently guaranteed through a certificate.

### 3. Private standards and FDI

This section will begin with an in-depth description of private standards and certification on the international as well as on the Ethiopian market. This will be followed by a description of a selection of aspects potentially affecting the investment decision. Further, a summary of previous, similar studies and their way of conducting research will be discussed. In the final part, the method that has been chosen for this research will be explained.

#### 3.1 Private standards on the Ethiopian and the international market

The past two decades has seen a deregulation of the protectionist trade legislations prevailing earlier. WTO, the main proponent of free and liberalized trade, has been successful in pushing for the cause of David Ricardo's widely recognized theory of comparative advantage, suggesting among other things that two countries possessing an abundance of differing input-factors will benefit from trade (Krugman et al., 2012). However, the deregulation of trade barriers has also been entailed by difficulties in monitoring the increasing surge of various goods from all corners of the world, difficulties that have induced the need for standardization of commodity requirements. These standardizations are commonly taking the form of certificates (Jaffee and Henson, 2004).

Certification could be defined as a way for producers, consumers and intermediate actors on the commercial market to guarantee a pre-specified lower limit of product quality (Andersson & Gullstrand, 2009). It is also a means to reduce the information asymmetry between producers and actors higher up the supply chain. Today, the world's leading standardized framework for agricultural certification is GlobalGAP (Good Agricultural Practice). GlobalGAP was founded as a reaction to the increasing awareness and demand from consumers regarding different aspects, such as environmental issues, product safety, and the health, safety and welfare of workers and animals. An increasing number of retailers require their suppliers to comply with the GlobalGAP certificate in order to become integrated in the supply chain (GlobalGAP).

EHPEA, an organisation founded in 2002 in order to organize Ethiopian horticulture producers and address their common challenges, has in the past few years worked with the establishment of a nationwide certificate for floriculture products. The certificate, referred to as the 'Code of Practice' (CoP), has gained recognition since its inception in 2007, and, as of today, almost 80 domestic producers of floriculture comply. The CoP consists of three different levels from bronze to gold, where the bronze level aims at securing minimal environmental impact, taking workers' health and security into consideration, and providing assurances of the product quality. The silver level could be described as an extended version of the bronze level, where the main requirements are the same, but even more comprehensive. Further, the silver level is to be considered equal to the GlobalGAP, but it should be emphasized that complying with CoP's silver level does not imply the holder has complied with the GlobalGAP. The gold level aims at encouraging the flower firms to take a greater social responsibility, in the form of e.g. school construction and water security projects. As a testimony to the CoP's legitimacy, it has been proclaimed by the Ethiopian Authorities that compliance with the CoP at bronze level is to become mandatory in order to get an export permit (Lilay, 2013).

The emergence of private standards and their effect upon individual farmers has lately obtained increasing attention from a variety of development institutions. A range of studies suggest smallholders are excluded from the market in favour of larger farmers through the introduction of certificates and the costs it induces (Dolan and Humphrey, 2000; Hatanaka et al., 2005; Reardon et al., 2003; VanDerMeer, 2006). The costs of complying with standards at a producer level can be divided into non-recurrent and recurrent costs (Chemnitz, 2007). The latter are costs arising in conjunction with a rising output, including costs associated with maintenance of capital goods and administering human capital. The former, however, imply there is a need for initial investments in order to comply with the standards. These investments, which to a large extent consist of sunk costs, could be a potential threshold to smallholders, suggesting economies of scale would be favoured (World Bank, 2005). In Ethiopia, an investor with the ambition to establish in the horticulture sector has to provide proof of an investment of at least €200,000 in order to

be granted a loan from the state-owned Development Bank of Ethiopia. Hence, it goes without saying that the vast majority of the Ethiopian population is excluded from starting an exporting business within the horticulture sector (Wondwossen, 2013). Consolidating the situation, statistics tell the story of a foreigner-dominated industry, with non-Ethiopian investors represented in 84 out of the 120 active horticulture firms in Ethiopia (EHDA, 2012).

However, the findings on the implementation of standards have also indicated positive implications. When the market is reached, there are several potential benefits for producers complying with standards. The chief advantage gained is the access to a larger market following the enhanced credibility from the certification. In addition, there is a potential of obtaining higher product prices when complying with a private standard. Certification could further induce a reduced cost of production following the improved production methods and higher degree of human capital. This is gained through the mandatory training programs stipulated by most private standards. This, in turn, could potentially have the benefit of increased crop yields and a higher per unit profit (Chemnitz, 2007).

The overall findings on private standards' impact on development are thus mixed. It is clear that people living in the rural areas have the possibility of getting employment at a horticulture firm, and thereby raising their income level. Considering the fact that most workers do not have any employment prior to the one at the firm, horticulture can unambiguously be considered a poverty alleviating means (Tekle, 2013). The obvious problem in a developing country like Ethiopia, though, is the constant lack of capital direly needed in the establishing process. This is where foreign direct investments (FDI) enter the picture, providing for the missing component in the equation.

### 3.2 The relationship between FDI and private standards

After being disputed for a long time, the concept of FDI has now reached a position where it is widely recognized as a desirable element in a developing country's effort to reach economic growth, and thereby evade poverty. Many LDCs today are stuck in what is often referred to as a 'poverty trap'. This

implies a catch 22-like situation, where a low savings rate leads to a low investment rate, ultimately giving a low per capita growth rate. The well-recognized solution to the problem is to try and attract capital from foreign investors (Hayami, 2001). What role the recent emergence of private standards plays in this context is still uncharted territory, and it may in theory effectively function as a catalyst as well as an obstacle.

The prevailing theory when discussing FDI flows is the OLI framework, first presented by John H. Dunning in 1977. According to the OLI theory, three requirements need to be fulfilled for international capital flows to occur: Advantages in ownership (O), internalization (I), and localization (L). The two former requirements could be said to be firm dependent, whereas the last depends on the host country. With the OLI framework, Dunning intended to amend the Heckscher-Ohlin (H-O) model. According to Dunning, the H-O framework focused too much on the relative endowments of input factors, and forgot to pay attention to peripheral, but still relevant real world events. Thus, the OLI framework was developed in order to make way for potentially missing variables. Accordingly, when a firm evaluates potential countries for establishment, the decision-making will be based upon a variety of different aspects (Dunning, 1977). The subsequent literature has discoursed several of these potential aspects, such as differences in countries' input factors and the effect of legislative dissimilarities. However, considering the inherent heterogeneity of LDCs, it is difficult to predict what obstacles related to Dunning's localization aspect an investor is to face when establishing in a specific country.

Despite the heterogeneity, a recurring characteristic among LDCs is the lower cost of labour. This is widely considered to be the main reason for enterprises to locate their production in an LDC. In line with Dunning's criticism, the establishment of a plant in a developing country may not be as beneficial to the low-wage country as to the investor. Starting off from a low-wage situation does not automatically imply that a high-wage situation looms around the corner. On the contrary, low wages tend to be sticky, and not a solution to create high-wage occupations. This fact may have negative implications for the labour force, particularly in case the low-wage levels are not sufficiently high at an initial stage (Schmitt, 2012). Moreover, low wage

levels could also prove to be disadvantageous to the employer. According to the wage efficiency hypothesis, there are four incentives for the employer to keep the wage above the market-clearing level. First, it reduces the occurrence of shirking, due to the higher cost of losing the job. Second, as a consequence of the higher opportunity cost of losing the job, employees stay longer in their positions. This in turn reduces the turnover-induced costs to the company. Third, a higher wage may on a psychological basis enhance the loyalty towards the employer. Finally, offering a higher wage tends to increase the average competence among the job applicants, and thus also the average competence level in the firm (Katz, 1986). It seems to be clear that, under certain conditions, too low wages are undesired by all parties. In order to avoid this situation, a growing number of private standards include employee's collective bargaining rights as a requirement for the certificate to be granted. In what direction this effort has affected investments in the horticulture sector is still unclear. In theory, it should enhance the prospects of attracting FDI. In practice, however, it is uncertain whether the requirement has a sufficiently wage-raising effect. Another possibility is that collective bargaining rights may raise the wages too high, eliminating the cost-reducing incentives to establish a business in the country.

Closely related to the wage level is the educational attainment, or, as an economist would put it, the human capital. The causality where an initial enhancement of human capital triggers an increase in capital flows is today considered to be conventionalized theory. In addition, it is also suggested that the chain of events runs in the opposite direction, with an increased stock of capital leading to an augmented human capital level in the host country (Noorbakhsh, 2001). The latter causality is likely to be one of the reasons why many certificates today integrate induction programs as a requisite to achieve full compliance. However, empirical evidence indicates that human capital spillovers from firm-specific training may be overestimated. The knowledge received is observed to only raise the production level, and not the general level of knowledge among the employees (UNCTAD, 1999). This fact in itself may not serve as a deterring factor for the foreign investor's investment decision. However, the long run indirect effects of a stagnated human capital stock may have negative implications for both country and investors.

Consequently, the failure of private standards to raise the level of human capital may potentially have subsequent effects on FDI flows into the country.

Another potential obstacle for any potential investor is the jungle of different certificates on the market. The decision of establishing in an LDC is mainly a trade off between the prospects of reducing the production costs versus the institutional deficiencies in the potential host country. There are, however, also disadvantages and costs related to this decision, of which the most obvious ones are the increasing transportation and tariff costs. There are also more lurking drawbacks, related to the private standards. A previous study of 29 flower-producing firms worldwide (no Ethiopian participant) suggests that the compliance process could constitute a potential disincentive to investors. The mere quantity of certificates, with both the cost this induces and the frequent auditing involved, was considered a nuisance by particularly the interviewed African firms. Another inconvenience was the lack of coordination between the certificates, often resulting in duplication of work. Although it was considered an annoyance, it should be mentioned that 94 % of the interviewees did not consider standards a deterring factor for the overall establishment decision. On the other hand, two thirds of the respondents declared they had encountered difficulties related to requirements by the private standards (Drogué and Gozlan, 2007). However, the survey may not provide a perfect blueprint for the Ethiopian case. In contrast to many of the included countries, Ethiopia has a negligible domestic market. In addition, Ethiopia also requires compliance with CoP's bronze level in order to obtain an export permit. These two aspects in conjunction may possibly result in an outcome where Ethiopian investors' view upon private standards is considerably more sceptic compared to the managers in Drogué and Gozlan's research.

The last aspect of private standards' impact on the establishment to be examined in this paper is the one concerning environmental regulation. Considering the amounts of pesticides and fertilizers used in the floriculture sector, the relevance of the existing environmental legislation cannot be underestimated. The early literature discussing the impact of lax environmental regulations on international capital flows suggests that capital is predicted to move from countries with a strict legislation to those with a

more lax regulatory framework. This phenomenon is often referred to as a 'race to the bottom', indicating a dismal view on multinational corporations and their alleged lack of environmental awareness in their quest for profit (Baumol and Oates, 1988). This is intuitively a reasonable result, and likely to be a strongly contributing factor for the environmental aspect included as a requirement in most private standards today. However, as data eventually became available and more elaborate research could be performed, this theory appeared to lack support from the empirics (Levinson, 1996). Further, in stark contrast to the early literature, a more recent study suggests that there is no element deterring investments when adopting a more stringent environmental legislation (Dijkstra, et al., 2011). Moreover, the most recent study shows that if the home market is sufficiently large, a stringent environmental legislation may have an outcome diametrical to what the earliest theories suggested. Instead of being a deterrent, it is suggested that a strict legislative framework in fact could have an appealing effect to investors (Elliot and Zhou, 2013). Considering the ever-growing recognition of environmental issues among consumers, the demand for environmental-friendly products is bound to increase. This will inevitably put further pressure upon producers' to comply with environmental regulations. How, whether, and to what extent this affects the investment decision is still unclear though.

Starting off from these above-mentioned studies and assumptions, this study will aim at getting a deeper understanding of how Ethiopian horticulture firms are affected by the presence of private standards. The research will chiefly try to find an answer to the private standards' possible impact in different areas, starting with environmental regulations, followed by the level of human capital, the abundance of certificates, and finally the wage regulation aspect. It will also assume an open-minded approach, leaving space for firm managers to bring up what certificate-related difficulties they encounter in their daily as well as long-term running of the firm.

## 4. Methodology and Data

### 4.1 Previous studies and methods

As a direct consequence of the relatively recent emergence of the horticulture market, but also the even more recent occurrence of standards within that sector, finding literature dealing within this subject is difficult. Having the scope to narrow down this subject to a few specific topics does not help. Consequently, to try and find any academic research on private standards' impact upon investments in the Ethiopian floriculture business is to be considered futile. The need for a benchmark or some form of guidance still exists though. Hence, in order to find previous work that can offer a base for this research, studies dealing with slightly different issues will be considered. It should, however, be mentioned that this study is not particularly reliant upon any previous work; it is an independent study, exploring a comparatively new area. Thus, the studies used as benchmarks here will mainly have the purpose of enhancing the legitimacy of this study. Employing a similar methodology to previous studies does not ensure performance in an adequate manner, but it could be argued that the chances increase.

A study performed in the Kenyan bean sector investigated how rural farmers met the challenge of sunk costs, and also how they acquired the necessary human capital in order to be able to comply with private standards. The sample of this study consisted of as little as two farms. According to the authors, this is a preferred method when more elaborate, in-depth answers are desired. However, it goes without saying that, as a consequence of the narrow sample, any analysis of the quantitative data collected is of no use (Okello and Swinton, 2005). A French study intended to analyse the impact of private standards on the floriculture market in 17 developing countries. In order to get sufficient data on the influence of regulations on product quality, employment, and sustainability, a questionnaire was sent to a large number of firms, of which 29 replied. As a benchmark the authors of this study used several recognized private standards, e.g. Milieu Programma Sierteelt (MPS), EurepGAP (GlobalGAP's predecessor), and the International Code of Conduct for the Production of Cut Flowers (ICC) (Drogué and Gozlan, 2007).

It should once again be stated that the method of this study will be guided by the above-mentioned studies, rather than using them as a blueprint. The methodology of this study will be a compromise between the two studies in trying to utilize a selection of advantages with both studies' methods. The former of the two studies provides legitimacy to a study conducted on a small sample of firm owners. Although it could be questioned whether only two samples are sufficient, it has some advantages over the latter study. To be able to ask follow-up questions is most likely a superior way to receive information on aspects that go below the radar. This is also likely to be a less resource-consuming method, which, considering this study's limited resources, is an aspect that cannot be neglected. The latter study, however, does in turn provide legitimacy to the usage of private standards as a benchmark. The strength of this approach is obviously the coverage of most of the certification-related issues owners of horticulture farms face, whereas the most important drawback is the lack of detailed information. A further disadvantage with this way of approaching an issue may be the response frequency, as respondents do not have any incentive to fill in the form. There is also an obvious risk of the questionnaires being completed in a negligent manner.

#### 4.2 Methods and data

With a starting point in the discussion of the advantages and disadvantages of the two previous studies, the approach of this study is to use a semi-structured questionnaire to be filled in during interview sessions in cooperation with the author of this thesis, and the benchmark for the questionnaire will be EHPEA's Code of Practice. There are several reasons to use the CoP ahead of e.g. GlobalGAP. First, the imminent adoption of the CoP's bronze level as a part of the Ethiopian legislation makes it relevant to every floriculture farm in Ethiopia. Consequently, all farms have faced, or will have to face difficulties related to compliance with the CoP. This leads us to the fact that the GlobalGAP is not applicable to all varieties of flowers. Neither is the GlobalGAP adopted by all countries subject to exports. Finally, the

availability of EHPEA's staff may be a relevant factor, considering the potential question marks that may arise over the CoP in the process.

As a consequence of the limited resources this study is endowed with, collection of data sufficient for a regression analysis would almost be impossible. Hence, the main focus will be upon the qualitative part of the interviews, even though there will be some complementary questions where only a quantitative answer will be asked for. The purpose of these questions is mainly to obtain a more elaborate picture of the problems related to the establishing of a firm.

Over the course of the study, 14 farms were visited, and interviews with managers at different levels were held. The farms were selected in terms of size, location, and on the nationality of the farm's owners, all in order to get a comprehensive picture. Of the 14 interviews, 12 were conducted with the questionnaire using the CoP as a benchmark. The remaining two interviews were held in an informal manner, in an attempt to obtain the information on standards that the questionnaire failed to elicit. In addition, several informal interviews were held with various individuals operative in the Ethiopian horticulture sector, including a Researcher at the Ethiopian Development and Research Institute (EDRI), the GM of the Ethiopian Horticulture Development Agency (EHDA), and the Senior Trainer at the Ethiopian Horticulture Producers and Exporters Association (EHPEA).

#### 4.3 Weaknesses

All studies and all methodologies have their deficiencies, and this study does not provide an exception. The first weakness is the selection procedure. In order to obtain a sample without any bias, a stratified selection is usually preferred. Unfortunately, chiefly following the location of some of the farms, this was not possible. Another problem with mainly the quantitative part of the answers was the divergence between the gradations. Even though the qualitative answer indicates that two respondents consider the problem an equal burden, they may rate it differently in the quantitative part. Further, related to this problem is the, from time to time, perceived reluctance to admit that there are problems in the firm. This reluctance varied a lot among the

interviewees, potentially skewing the results. Moreover, another potentially result-biasing aspect perceived during the interview sessions was the occasionally lacking interest from the respondent. The reasons for this behaviour may have varied, but the fact is that it may have influenced the interviewee to avoid elaborate answers, potentially giving an incorrect answer. Finally, a general problem with conducting semi-structured interviews is the potential occurrence of leading questions over the course of the conversation. A leading question is of course something that should be avoided, but its influence cannot be fully disregarded.

## 5. Results and Findings

As previously discussed, the main focus will be upon the qualitative parts of the findings, as a direct consequence of the narrow sample, but also uncertainties in the answers obtained. Although the qualitative answers will not be entirely neglected, they will chiefly be included when the answers are relatively unambiguous. Further, the results obtained are in most cases difficult to relate to one specific requirement. In hindsight, this should have been an expected outcome, considering the close relationship between the aspects studied.

It should also be mentioned that, despite all dismal answers below, all interviewees apart from two had a positive view upon the overall occurrence of private standards. It was also suggested that the presence of CoP enhances the perception of an established sector, with sufficient knowledge for establishment.

### 5.1 Awareness and experience

An issue raised by all interviewees to some extent, was the lack of education among employees. The most frequent complaint was the employees' lack of understanding of how to deal with issues related to running a firm in compliance with good practice, but also in compliance with private standards. Considering the preconditions for any employee, this should come as no surprise. It is a fact that the vast majority of the staff never have been engaged in any form of commercial business before, apart from at a very basic, small-scale level. There are mainly two reasons behind this; first, few large-scale industries existed in the Ethiopian countryside prior to the horticulture firms' establishment. Second, as a consequence of the struggle to make a living, most Ethiopians have not had the possibility of engaging in any other activity, including schooling activities, apart from cultivating their own lot. Consequently, the employees have never had the opportunity of obtaining any of the desired knowledge. Some of the managers do, however, assert that the issue is mainly a mentality problem, and related to inherent cultural traits among the Ethiopian people. Whether this statement is true, or whether it is to

be considered an educational-related issue or not is difficult to tell. The truth may lie somewhere in between, even though it is a convention that managers always want their employees to work harder.

#### 5.2.1 Lacking competence

Another aspect that is indisputably related to education is the lack of sufficient competence available on the labour market in the form of trainers primarily teaching the new employees, but also filling the function of being intermediate managers at the firm. This issue was elevated by several managers, but was considered to be less of a concern today than during their establishment-process. The reason for the improvement is partly a consequence of the recent establishment of horticulture degrees at university level in Ethiopia. In addition, an even more important aspect is the increase of knowledge among employees, making internal promotion a more plausible option. Despite the improvements, there is still a lack of competence within the Ethiopian borders, inducing an occasional need for hiring foreign personnel, something that could prove to be difficult. In one of the informal interviews, the respondent expressed indignation regarding this issue, feeling that “foreigners are being discriminated against when making business in Ethiopia”. What the interviewee alluded to was primarily the difficulty in obtaining a work permit when trying to bring in a human resource from abroad to provide a solution to the lack of competence in the firm and country. There was also a perceived scepticism towards foreign investors in general. The respondent sometimes had the impression of Ethiopians viewing investors as criminals, present only to exploit the country. It should be mentioned that despite the harsh rhetoric, this particular investor has been successful in establishing a business in Ethiopia, and is a highly respected figure within the horticulture sphere in the country.

#### 5.2.2 Exodus of women

Another issue brought up during five of the twelve regular interview sessions as well as in one of the two informal interviews was the problem with

employees constantly leaving. With a large turnover of personnel, the aforementioned problem with maintaining a sufficient knowledge level at the firm becomes even worse. This fact induces several issues; first, the need for personnel with the knowledge to train others becomes even greater. Further, the expenditures of the firm will rise. To educate people is expensive, not only in terms of the qualified personnel needed, but also in terms of opportunity costs. To have employees who are not contributing to the production on the payroll is not very desirable for obvious reasons. The last issue is the undesired fluctuations in product quality that entails a high turnover of personnel, potentially causing distrust among the retailers buying from the firm. So why did people leave? Even though the destinations where employees left for varied, they all had the financial aspect as the common denominator. The wage level for an employee differed slightly between firms, but it stretched from about \$30 to an estimated \$45 per month, amounts that place many employees below the international poverty line. Consequently, a number of resigning people left to work at other farms in quest of a small wage raise. The predominant reason for leaving was to become housemaids in the Middle East. One of the interviewees suggested that the government is running an unofficial program, where they send a large number (the interviewee suggested 200,000) of Ethiopian women abroad each year. It is easy to observe potential motives behind an action like this, considering the remittances expatriates send back to Ethiopia, and the financial advantages that brings. It is a very harsh allegation though, and before any legitimate proof is presented, the claim cannot be taken into consideration. The government's involvement may be disputed, but the fact that a large quantity of Ethiopian women leave for the Middle East is undisputable. One of the interviewees would even go as far as calling the negligent behaviour in the case 'human trafficking', alluding to all parties passively accepting the occurrence.

#### 5.4 Environmental obligations

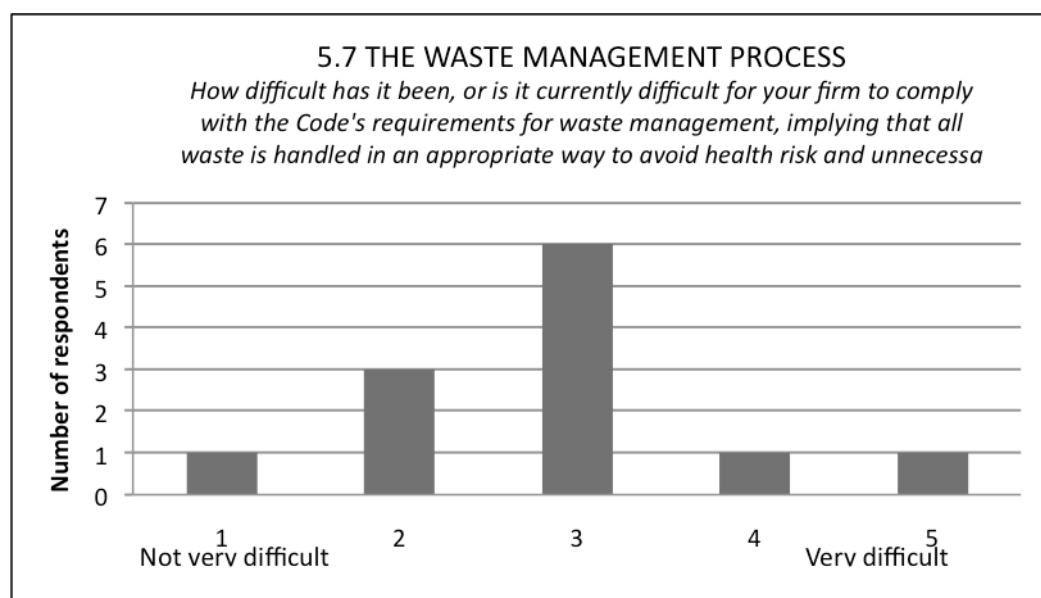
So far, the lack of human capital has been the focal point of the results. The increasingly important environmental aspect was never to be an exception,

and the lack of awareness is once again the main concern. This takes expression in negligent behaviour in the waste management process, including recycling, the composting of organic waste, and the handling of residual chemicals. Chemicals are further a major concern to most firms. All firms in the study did use pesticides to some extent, but neither the government nor any private actor offered a satisfying solution to the issue of residual chemicals. Whether this caused a concern for the compliance with private standards was disputed though. Many of the firms considered it one of their biggest issues, whereas one firm had a diametrical view, regarding the question an issue for the government to solve.

Another environmental-related obstacle was the implementation and maintenance of a water treatment system. Once again, the lack of available knowledge within the borders of Ethiopia caused the firms to fail in their quest for compliance. In particular the firms who were not a subsidiary to a parent company suffered from this fact, and many firms had to hire competence from abroad, inflicting substantial additional costs to the firm. Moreover, if the system happened to fail, it could take weeks for the maintenance personnel to arrive in Ethiopia, forcing the firm to close down parts of the production during the waiting process.

All in all, the problems mentioned seem to have caused difficulties for most firms in the compliance process, but it does not appear to be a huge impediment, judging from the quantitative results provided below.

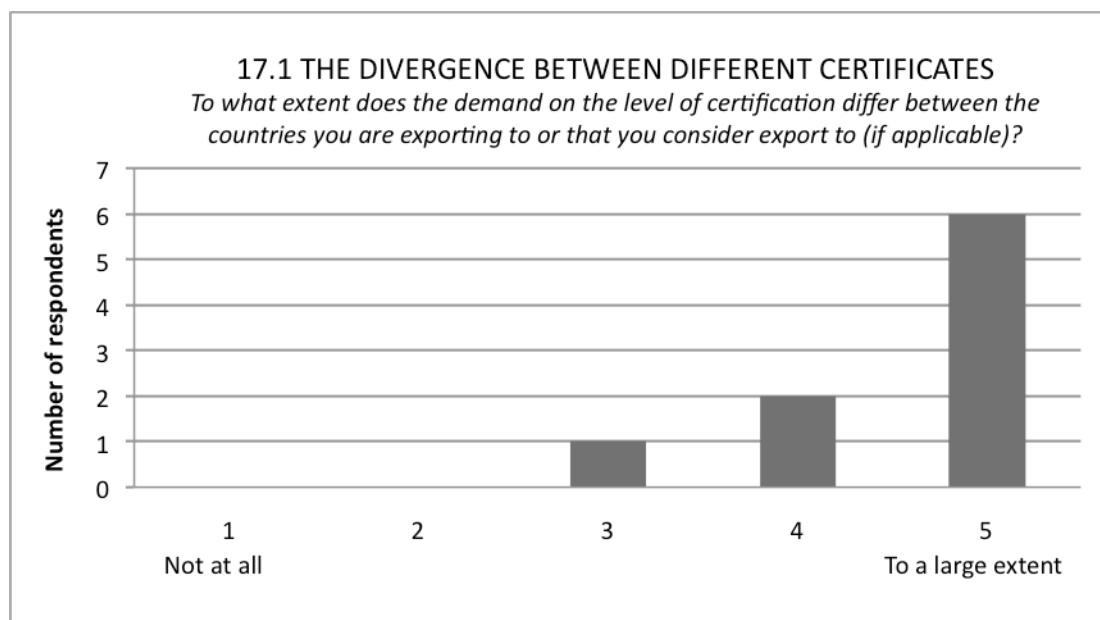
Figure 1.1



### 5.5 The abundance of standards

The final part of the results up for discourse is the potential issue with an abundance of private standards on the market. The question asking for the interviewee's opinion on the divergence between plausible export markets' certificates showed a unanimous view. The average of 4.6 on a scale from 1-5, where '5' was given if the divergence was large, consolidates the view. Despite this strong indication of a potential problem, only one respondent mentioned the problem in the questionnaire-based interviews. In one of the informal interviews, however, it was suggested to be one of the largest impediments the firms encountered. The certificate business was considered to be far too commercial. New certificates were constantly emerging, making life difficult for firms trying to penetrate several markets simultaneously. The mere cost of complying with a certificate, including frequent auditing, the initial payment, and the adaptation costs, was considered to be the largest stumbling blocks.

Figure 1.2



## 6. Conclusions

First of all, it once again has to be reiterated that the general opinion on private standards is principally positive. From the majority's perspective, the emergence of certificates has contributed to the optimistic progress observed in the horticulture sector in Ethiopia. It is said to provide a good benchmark for new participants in the business, and hence encourage potential investors to get involved in the business. However, drawbacks and obstacles are always likely to occur when trying to introduce new rules in any business, and the question is if, and to what extent, they affect the investment decision.

The qualitative results tell the story of an undivided view on the lack of available human capital. The absence of competence on the Ethiopian labour market may indeed have a big role to play in the investment decision. For basically any enterprise, the work force is the greatest asset. As a consequence, it also has the biggest potential of failing the firm. The issue is not a problem exclusively related to the compliance with private standards, however, even though some requirements are likely to add to an already existing problem. Another issue that is likely to add to the scarcity of labour is the large numbers of the work force leaving the firms. The main problem does not seem to be to replace the lost labour; the people leaving are usually uneducated, apart from the firm-specific training they have obtained. The problem lies in constantly re-educating personnel, and the resources this process consumes in order to keep up with the requirements stipulated by the private standards. It also causes problems to keep a consistent level of product quality for the firm, potentially failing to live up to the quality requirements in the certificates. Hence, both the lack and the loss of personnel may have a deterring influence on the decision to invest.

The solution for keeping employees at the firm is of course to raise their wages. The financial situation for the majority of Ethiopians living in the countryside is in most cases precarious. The wage paid by the firms unfortunately does not suffice for more than very basic needs, and to support a family on the small income is unthinkable. Private standards are likely to have a positive impact on this problem, considering the requirement of collective bargaining. In addition, it is for now highly unlikely for the union-

requisite to be a disincentive for potential investors through raised wage levels. A reason for this is the abundance of unskilled labour available, which keeps depressing the wage levels. This is in line with the empirical studies, which do not find it likely for wages to soar in an LDC. Consequently, the low wage is, and will be the main reason for the decision to establish at a specific location for a foreseeable future. Another effect of the implementation of collective bargaining may be the potential of raising the wages to levels where employees do not longer find it necessary to leave the country in order to obtain a sufficient wage. This may in turn solve the human capital-issue. The current situation is, however, far from that point, and there is still a long way to go before that is achieved.

The results of whether the environmental-related requirements stipulated by the private standards are deterring for new establishments in the horticulture sector show a negative correlation. The shortage of awareness among the labour force is certainly a disturbing element, but it is not likely to be a decision-changing factor. Neither is the lack of competence in Ethiopia to internally deal with the issue regarding water treatment systems. The problem could be solved if the organisation assigned by the government to solve such problems started to focus on solving problems in the horticulture sector, and not only concentrated on attracting new investors. In general, the firms appear to do what is asked from them regarding the environmental aspect and not more than that. As long as the firms' efforts satisfy the external auditors and the requirements are met, the firms are likely to be content. Hence, private standards appear to play the role of a minimum benchmark of environmental standards in the floriculture sector. Considering the growing awareness regarding the sustainability-issue among the ultimate consumers, the impact private standards have on the investment decision is predominantly positive.

A major issue with the presence of certificates in the floriculture sector appears to be the abundance of the same. Many firms struggle financially, and in order to surpass the sunk as well as fixed costs related to the establishment, a firm needs to reach a certain production level. Of course, only producing is not sufficient, but the produce has to be sold. Today, there are too many different certificates for a newly established farm to afford compliance with more than a handful. The consequence is that firms do not

have any choice but to sell by auction through an agent, losing profit in the process. Thus, the abundance of private standards may both directly and indirectly cause financial predicaments for firms.

All in all, private standards in the Ethiopian floriculture sector appear to have a predominantly positive influence upon the investment decision. If the issues derived from this study are solved, the sector is likely to appear even more appealing to potential investors.

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## Appendix I

Name of farm:.....

Interview #: .....

Location:.....

Date:../../...

Position of interviewee:.....

1. 1 What is the main horticultural crop that you cultivate?

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2.1 Do you comply with any international standard or certificate?

☐ YES ☐ NO

2.2 If YES to 2.1, which?

☐ Global GAP ☐ ETI ☐ MPS ☐ Other:.....

2.3 If NO to 2.1, is your reason for not desiring to comply with EHPEA's 'Code of Practice' that you don't find it achievable/within your reach?

☐ YES ☐ NO

2.4 If NO to 2.1, is it your desire to comply with an international standard?

☐ YES ☐ NO

3.1 Do you comply with EHPEA's 'Code of Practice' for Sustainable Flower Production'?

☐ YES ☐ NO

3.2 If YES to 3.1, at what level are you currently certified?

☐ Bronze ☐ Silver ☐ Gold

3.3 If NO to 3.1, is your reason for not desiring to comply with EHPEA's 'Code of Practice' that you don't find it achievable/within your reach?

☐ YES ☐ NO

3.4 If NO to 3.1, is it your desire to comply with EHPEA's 'Code of Practice'?

☐ YES ☐ NO

4.1 If the answer is NO to both questions 3.4 & 4.4, why is it not desirable for you to comply with a standard or certificate?

- ☐ Too much risk involved
- ☐ Too costly
- ☐ Incentives not strong enough
- ☐ Insufficient competence in the area
- ☐ Insufficient premium

☐ Other:.....

☐ Other:.....

Motivation:

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*In the following questions (5-7) your opinion is asked on how difficult it is/has been for you to comply with different aspects of EHPEA's 'Code of Practice' (within parenthesis, the reference/s to EHPEA's 'Code of Practice' is provided).*

### BRONZE LEVEL

#### 5.1 FARM MANAGEMENT AND ADMINISTRATION (1.1-1.7)

*Compliance with the Code's requirements for farm management and administration, implying that there is a development and documentation of an internal auditing system, a development of a complaints procedure, the mapping of the farm facilities, a development of a system for soil maintenance, and an implementation and upkeep of the Code.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?:

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#### 5.2 THE HANDLING, USAGE AND STORAGE OF INPUTS (2.1-2.5)

*Compliance with the Code's requirements for input usage, implying that there is a monitoring and evaluation of input usage, (water, electricity, pesticides, fertilizers etc.) a compliance with the restrictions of which inputs to use, that there is sufficient and adequate storage facilities for fertilizers, and that the farm complies with the regulations relating to the usage of acid and inorganic fertilizers, if applicable.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?:

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### 5.3 THE CROP PROTECTION PROGRAMME (2.6-2.7)

*Compliance with the Code's requirements in crop protection, implying that there is an effective crop protection programme implemented, that crops are sufficiently scouted, and that the levels of pest and disease inoculums are minimized.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.4 THE HANDLING, USAGE AND STORAGE OF PESTICIDES (2.8-2.14)

*Compliance with the Code's requirements for pesticide usage, implying there is a keeping of a register of the pesticides used at the farm, safe storage of pesticides, adequate providing of measuring and mixing facilities, documentation and implementation of a protection and handling policy, adequate providing of equipment, and that transportation of pesticides to and around the farm are done in the accordance with 'good practice'.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.5 THE HANDLING AND USAGE OF POST HARVEST CHEMICALS (2.15)

*Compliance with the Code's requirements for post harvest chemicals, implying that all the post harvest chemicals used are permitted in Ethiopia, and the usage is recorded.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.6 THE PACKAGING PROCESS OF THE FLOWERS (2.16)

*Compliance with the Code's requirements for packaging, implying that the packaging of the flowers is fit for the purpose, and the packaging process is conducted in clean, dry conditions, free from vermin.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.7 THE WASTE MANAGEMENT PROCESS (2.17)

*Compliance with the Code's requirements for waste management, implying that all waste is handled in an appropriate way to avoid health risk and unnecessary environmental impact.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.8 THE ADMINISTRATION OF EMPLOYEES (3.1-3.6)

*Compliance with the Code's requirements for the administration of staff, implying that all staff have a contract, the hours of work & handling of overtime are in accordance with the law, that the workers have the right to join a union, that there is a documented process of how to handle disciplinary matters, and that staff recruitment and promotion are based on merit.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.9 THE HANDLING AND MANAGING OF EMPLOYEES (3.7-3.10)

*Compliance with the Code's requirements for employee managing, implying that there shall be no use of forced labour, that females are not to be discriminated against and employed for hazardous tasks, that the farm distances itself from all forms of harassment, and that the farm doesn't use any child labour.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.10 THE TRAINING AND EDUCATION OF EMPLOYEES (3.11-3.12)

*Compliance with the Code's requirements for training the personnel, implying that there is a procedure for the induction of new personnel in place, and that all farm staff receive job specific training.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.11 THE SAFETY AND HEALTH OF EMPLOYEES (3.13-3.21)

*Compliance with the Code's requirements for the health and safety for all staff, implying that all staff receive appropriate training for their specific task, that a policy for the safety and health procedure is in effect, that protective clothing is provided, that there is a HIV/Aids policy in place, that there is first aid equipment and staff to handle it, that there is a procedure of medical check-up for staff handling pesticides, that there is a developed procedure for the occurrence of accidents and emergencies, that there are facilities for hygiene and ablution, and that there are eating and drinking facilities in place.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 5.12 THE COMMITMENT TO CONTINUOUS IMPROVEMENT (3.22)

*Compliance with the Code's requirements for continuous improvement, implying that the farm has established a forum for dialogue, that the management is actively monitoring standards at all levels, and that the farm is working to improve the standards of the farm every year.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## SILVER LEVEL

*Only additional requirements from Bronze level*

### 6.1 THE COMMITMENT TO DEVELOP AND SHARE GOOD PRACTICE (1.5)

*Compliance with the Code's requirements for sharing good practice, implying that the farm is proactive in helping and sharing good practice with other farms.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 6.2 THE TRACEABILITY SYSTEM (1.9)

*Compliance with the Code's requirements for traceability, implying that a system is in place for traceability, and that there is a quality control of the traceability system.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 6.3 THE SYSTEM FOR PRODUCE RECALL OR WITHDRAWAL (1.10)

*Compliance with the Code's requirements for produce recall, implying there is a system in place for withdrawal or recall of the produce, and that there is a systematic documentation of all nonconformities.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 6.4 THE AUDITING OF SUBCONTRACTORS (1.11)

*Compliance with the Code's requirements for the auditing of subcontractors, implying that all subcontractors involved in activities are included in the internal auditing process, and that all subcontractors are informed of the requirements for complying with the code.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 6.5 THE MANAGEMENT AND AUDITING OF SOIL AND ENVIRONMENT (2.1-2.4)

*Compliance with the Code's requirements for management and auditing of soil and environment, implying that the farm has undertaken environmental auditing, is proactively protecting the environment, is aware of what soil type is handled, including substrates, and that fumigation is conducted in accordance with 'good practice'.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 6.6 THE HANDLING OF VARIETIES AND PURCHASE OF PROPAGATION (2.5-2.8)

*Compliance with the Code's requirements for handling with different rootstocks and the purchase of propagation, implying that the farm complies with UPOV or confirms that there are no issues with the variety of crops, documents the certification of the quality and the health of the seed, that propagation practices are in accordance with all relevant legislations and specifications, and that the usage of genetically modified planting material is in accordance with laws and done under supervision.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 6.7 THE USAGE OF ORGANIC GROWTH PROMOTERS (2.14)

*Compliance with the Code's requirements for the usage of all organic growth promoters, implying that organic manure and organic fertilizer are stored and used responsibly, that the use is recorded, and that the substances used are permitted.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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### 6.8 THE USE OF CHEMICALS POSTHARVEST – EXTENDED (2.25-2.26)

*Compliance with the Code's requirements for the use of chemicals postharvest, implying that the use of pesticide chemicals for disease control is in accordance with good hygiene practices and with respect to its environmental impact, and that the usage is recorded.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## 6.9 THE WASTE MANAGEMENT PROCESS – EXTENDED (2.29)

Compliance with the Code's requirements for waste management, implying that the farm will use a national disposal system when implemented, that the management of waste is done in order to prevent the spreading of diseases, that farm is kept reasonably clean, and that organic crop waste is composted and reused.

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## 6.10 THE HEALTH AND SAFETY ON THE FARM (3.22-3.24)

Compliance with the Code's requirements for safety and health, implying that the farm provides for transport to and from work when necessary, that living quarters are provided for, and that there is a procedure implemented for visitors of the farm's safety and health.

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## GOLD LEVEL

### 7.1 THE FARM CSR PROJECT (1.1-1.2)

Compliance with the Code's requirements for the farm to implement a CSR project, implying that the farm is actively implementing a CSR (Corporate Social Responsibility) project that is of direct benefit to the community or the environment, committed to engaging with the local community, and that this engagement and its targets are recorded and communicated.

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all                      Very difficult                      Don't know                      Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## 7.2 THE COMMITMENT OF SOCIAL DIALOGUE (2.1)

*Compliance with the Code's requirements for the farm to have established a forum for social dialogue, the farm management is actively working to achieve cooperation with all stakeholders in the workplace.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## 7.3 COMMITMENT TO PRODUCT QUALITY MANAGEMENT (2.2)

*Compliance with the Code's requirements for product quality management, implying the farm has documented and established a system of Product Quality Management.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## 7.4 THE PARTICIPATION IN SECTOR ACTIVITIES AND CAPACITY BUILDING (3.1)

*Compliance with the Code's requirements for the farm to participate in sector activities, implying that the farm participates actively in a range of sector activities and is a significant contributor, and that the farm is making a significant contribution in capacity building for the sector.*

What is your perception of the difficulty of the compliance process in this specific area?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

Not difficult at all

Very difficult

Don't know

Don't want to answer

Motivation/Any part that was/is particularly difficult to comply with? Why?

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## Additional information on the EHPEA certificate

### 8.1 Additional comments on the Bronze Level

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### 8.2 Additional comments on the Silver Level

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### 8.3 Additional comments on the Gold Level

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**9.1** How desirable is it for you to comply with the next level (if complying with bronze, how strong are your incentives to comply with the silver or even gold level)? N/A if complying with gold level.

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
 Not desirable at all                                      Very desirable    Don't know    Don't want to answer

**10.1** Have your expectations been met following your compliance?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
 Not at all                                      Beyond expectations    Don't know    Don't want to answer

**11.1** How long did the compliance process take?

☐ 3 months or less                      ☐ 6 months or less                      ☐ 9 months or less  
☐ 12 months or less                      ☐ More than 12 months

Comments:

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**12.1** To what extent has the adoption of EHPEA's certificate increased your income (if applicable)?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
 Not at all                                      To a large extent    Don't know    Don't want to answer

### Additional information on standards

**13.1** *How important are standards for you in order to be able to export your produce?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
 Not at all                      Very important                      Don't know                      Don't want to answer

**14.1** To what extent does the compliance with standards and/or certificates increase the profit margin on your produce?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**15.1** *To what extent does compliance with a higher rated level of certification lead to greater exporting possibilities?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**16.1** *To what extent does compliance with a higher rated level of certification lead to a higher price on your produce?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**17.1** *To what extent does the demand on the level of certification differ between the countries you are exporting to or that you consider exporting to (if applicable)?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

### Additional information on establishment and engagement

**18.1** *To what extent has the lack of infrastructure affected your will/ability to establish in the horticulture sector?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**19.1** To what extent has the need for marketing affected your will/ability to *engage* in the horticulture sector?

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**20.1** *To what extent has the need of large scale production affected your will/ability to engage in the horticulture sector?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**21.1** *To what extent has the need of financial means affected your will/ability to engage in the horticulture sector?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐

*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**22.1** *To what extent has the need of “networking channels” affected your will/ability to engage in the horticulture sector?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

**23.1** *To what extent has the need of market knowledge affected your will/ability to engage in the horticulture sector?*

☐ 1    ☐ 2    ☐ 3    ☐ 4    ☐ 5    ☐    ☐  
*Not at all*                      *To a large extent*                      *Don't know*                      *Don't want to answer*

### Additional information of the farm

**24.1** *How many people are currently employed at the farm?*

..... people

**25.1** *How many hectares of land do you currently cultivate?*

..... hectares

**25.2** *Are you currently planning any expansions of your farm?*

☐ YES ☐ NO

*If yes, with how much:.....*

## Appendix II

| Answer/<br>Question | 1  | 2 | 3 | 4 | 5  | Avg | N/A | Don't<br>know |
|---------------------|----|---|---|---|----|-----|-----|---------------|
| 5.1                 | 5  | 3 | 3 | 1 | 0  | 2.0 | 0   | 0             |
| 5.2                 | 5  | 2 | 4 | 1 | 0  | 2.1 | 0   | 0             |
| 5.3                 | 6  | 3 | 3 | 0 | 0  | 1.8 | 0   | 0             |
| 5.4                 | 4  | 4 | 1 | 3 | 0  | 2.3 | 0   | 0             |
| 5.5                 | 3  | 1 | 1 | 0 | 0  | 1.6 | 7   | 0             |
| 5.6                 | 10 | 1 | 1 | 0 | 0  | 1.3 | 0   | 0             |
| 5.7                 | 1  | 3 | 6 | 1 | 1  | 2.8 | 0   | 0             |
| 5.8                 | 9  | 3 | 0 | 0 | 0  | 1.3 | 0   | 0             |
| 5.9                 | 9  | 2 | 0 | 0 | 0  | 1.2 | 0   | 0             |
| 5.10                | 5  | 3 | 4 | 0 | 0  | 1.9 | 0   | 0             |
| 5.11                | 2  | 5 | 4 | 1 | 0  | 2.3 | 0   | 0             |
| 5.12                | 4  | 3 | 4 | 1 | 0  | 2.2 | 0   | 0             |
| 6.1                 | 9  | 1 | 0 | 0 | 0  | 1.1 | 2   | 0             |
| 6.2                 | 5  | 4 | 2 | 0 | 0  | 1.7 | 1   | 0             |
| 6.3                 | 8  | 0 | 0 | 0 | 0  | 1.0 | 3   | 0             |
| 6.4                 | 1  | 1 | 0 | 2 | 0  | 2.8 | 8   | 0             |
| 6.5                 | 4  | 4 | 1 | 0 | 0  | 1.7 | 3   | 0             |
| 6.6                 | 6  | 0 | 0 | 1 | 0  | 1.4 | 5   | 0             |
| 6.7                 | 1  | 0 | 0 | 1 | 0  | 2.5 | 10  | 0             |
| 6.8                 | 1  | 0 | 3 | 0 | 0  | 2.5 | 7   | 0             |
| 6.9                 | 1  | 2 | 6 | 1 | 1  | 2.9 | 1   | 0             |
| 6.1                 | 4  | 3 | 3 | 1 | 0  | 2.1 | 1   | 0             |
| 7.1                 | 1  | 1 | 6 | 0 | 3  | 3.3 | 1   | 0             |
| 7.2                 | 6  | 3 | 1 | 0 | 0  | 1.5 | 2   | 0             |
| 7.3                 | 6  | 2 | 3 | 0 | 0  | 1.7 | 1   | 0             |
| 7.4                 | 2  | 3 | 6 | 2 | 0  | 2.6 | 1   | 0             |
| 9.1                 | 1  | 0 | 0 | 1 | 9  | 4.5 | 1   | 0             |
| 10.1                | 1  | 0 | 1 | 1 | 6  | 4.2 | 1   | 2             |
| 12.1                | 3  | 2 | 3 | 0 | 1  | 2.3 | 1   | 2             |
| 13.1                | 1  | 0 | 0 | 0 | 11 | 4.7 | 0   | 0             |
| 14.1                | 3  | 2 | 2 | 1 | 1  | 2.4 | 0   | 3             |
| 15.1                | 2  | 0 | 2 | 3 | 5  | 3.8 | 0   | 0             |
| 16.1                | 6  | 0 | 0 | 0 | 2  | 2.0 | 0   | 4             |
| 17.1                | 0  | 0 | 1 | 2 | 6  | 4.6 | 2   | 1             |
| 18.1                | 2  | 1 | 4 | 1 | 3  | 3.2 | 0   | 1             |
| 19.1                | 4  | 1 | 2 | 1 | 0  | 2.0 | 3   | 1             |
| 20.1                | 6  | 1 | 1 | 2 | 1  | 2.2 | 0   | 1             |
| 21.1                | 4  | 0 | 2 | 1 | 4  | 3.1 | 0   | 1             |
| 22.1                | 5  | 0 | 3 | 0 | 2  | 2.4 | 1   | 1             |
| 23.1                | 4  | 1 | 1 | 3 | 1  | 2.6 | 1   | 1             |

All quantifiable results from the questionnaire. The left hand column shows which specific question in the questionnaire is referred to. N/A replaces 'don't want to answer' in the questionnaires.