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Tagungsband zum 1. Symposium für Ökonomie im Gartenbau
am 27. November 2013 in der Paulinerkirche Göttingen

Walter Dirksmeyer, Ludwig Theuvsen und Maike Kayser (Hrsg.)

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Value Chain Analysis of Potted Phalaenopsis: A Case Study from the Netherlands and Germany

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Abstract

The market for potted Phalaenopsis – the most common orchid genus sold in Europe – has steadily increased in volume and value over time. This paper aims to identify the value chain of potted Phalaenopsis. The governance of the value chain is investigated along with the possibilities of upgrading the chain through certification. The analysis is based on qualitative data from interviews with important actors involved in the value chains of potted Phalaenopsis in the Netherlands and in Germany. The results reveal that the value chains of potted Phalaenopsis in the Netherlands – the EU's biggest producer – and Germany – the EU's biggest consumer market – are strongly interlinked. Dutch growers, however, dominate the supply of the European market due to their well-organized marketing system, relatively low risk aversion and great flexibility in adjusting their production patterns quickly to the latest trends. Imports of potted Phalaenopsis from developing countries are not considered to be a threat. Currently there is little demand from retail customers for business-to-consumer certification in potted Phalaenopsis. For the present moment and the near future only business-to-business quality management systems are considered to be important in the potted Phalaenopsis value chain.

Key words: Phalaenopsis, value chain, governance, cluster structure, certification

JEL-Codes: Q13, Q17

Zusammenfassung

Der Markt von Phalaenopsis im Topf – der meistverkauften Orchideengattung in Europa – ist in den letzten Jahren wert- und volumenmäßig weiter gewachsen. Ziel dieses Artikels ist es, die Wertschöpfungsketten von Phalaenopsis im Topf zu identifizieren. Die Machtverhältnisse der Akteure in der Wertschöpfungskette und die Möglichkeiten, die Kette durch Zertifizierung aufzuwerten, werden untersucht. Die Analyse basiert auf qualitativen Daten von Interviews mit Akteuren entlang der Phalaenopsis-Wertschöpfungskette in Deutschland und den Niederlanden. Die Ergebnisse zeigen, dass die Wertschöpfungsketten von Phalaenopsis im Topf in den Niederlanden – dem größten Produzenten der EU – und Deutschland – dem größten Endkonsumenten der EU –

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stark miteinander verzahnt sind. Die niederländischen Produzenten dominieren das Angebot auf dem europäischen Markt aufgrund ihres gut organisierten Vermarktungssystems, ihrer relativ geringen Risikoaversion und ihrer großen Flexibilität, die Produktion schnell auf neuste Trends umzustellen. Importe von Phalaenopsis im Topf aus Entwicklungsländern werden momentan nicht als Bedrohung wahrgenommen. Ebenfalls werden Business-to-Consumer-zertifizierte Phalaenopsis im Topf nicht nennenswert von Endkonsumenten nachgefragt. Sowohl heute als auch in der näheren Zukunft werden nur Business-to-Business-Zertifizierungen eine zunehmende Bedeutung zugeschrieben.

Schlüsselwörter: Phalaenopsis, Wertschöpfungskette, Governance, Clusterstruktur, Zertifizierung

JEL-Codes: Q13, Q17

1 Introduction

Potted Phalaenopsis have the highest share in the market for flowering potted plants, with a significant distance to any other potted indoor plant (AMI, 2012; Floraholland, 2013a). Among the countries in the European Union (EU), the Netherlands is by far the biggest Phalaenopsis producer. Out of 120 million potted orchids produced in Europe in 2009, 95 million, or 80 %, were potted Phalaenopsis from the Netherlands (ICOGO, 2009; FloraHolland, 2010). Germany, on the other hand, is the largest consumer market for potted Phalaenopsis (ICOGO, 2008). Rapid changes in the consumption patterns of potted Phalaenopsis, from luxury plants to off-trade goods in the mass market, have occurred during the last five years. According to AIPH (2010), more than 100 million Phalaenopsis plants were sold in 2009, and the average price per plant dropped to 3.4 €. The rapid upward trend in production and the downward trend in prices have occurred faster than expected.² This development has led to a shift in the European value chains of potted Phalaenopsis.

The literature on these specific value chains, however, is still scarce. Research on European ornamental value chains suggests that Dutch growers are organized in a well-integrated cluster with a highly specialized supporting industry (Tavoletti and te Velde, 2008). Collective learning combined with a knowledge management system within the chain have led to innovations on all levels of the value chain, and thus increased their competitiveness (Sporleder and Peterson, 2003; Porter and van der Linde, 1995). The Dutch model is so successful that growers around the world try to copy it (Wei, 2010). Today, however, this advantage is being jeopardized both by the effects of the increased scale in production of many pot plants (including Phalaenopsis) and by the upscaling and buy-outs of smaller family-owned businesses. This has led to a gap between a few large, increasingly integrated firms and many smaller-sized enterprises (Tavoletti and te

² The International Commercial Orchid Growers Organization (ICOGO) had estimated in 2008 that more than 60 million potted Phalaenopsis plants would be sold from the Netherlands in 2009 and prices would drop to 4.3 € per plant.

Velde, 2008). As Hughes (2000, 2001) has demonstrated, big retailers have also increased their buying power in the European pot plant chain. In the case of the United Kingdom (UK), retail chains took over more functions in the value chain, while at the same time requiring the commitment of Swedish growers to quality assurance systems (Ekelund and Axelson, 2008; Ekelund et al., 2008). Den Hertog and Kern (2007, as cited in Tavoletti and te Velde, 2008) claims that the gap between large and small firms has negative effects on the development of innovations and that intellectual property rights increase in importance as a result.

Van Plaggenhoef (2007) sees certification as one way to upgrade the whole value chain by providing intangible values (e. g. traceability) that a single business cannot provide alone. Business-to-business (B2B) communicated schemes in international horticultural chains are seen as a sign of chain governance by large retail chains (Ekelund et al., 2008). Business-to-consumer (B2C) communicated schemes, however, can be used to communicate an added value directly to the retail customer and thus allow for higher prices. There is high potential for implementing standards that promote social responsibility in the flower sector because the high sensitivity of the product makes it vulnerable to negative publicity (Jørgensen, 2004; van Dam et al., 2004; Balas et al., 2009). But retail customers need to be able to recognize the added value.

The aim of this paper is to identify the value chains for potted Phalaenopsis in Germany and the Netherlands. The governance of the value chain is investigated along with the possibilities of upgrading the chain through certification. The structure of the paper is as follows: Following the motivation and literature review, Chapter 2 provides some background information on the markets for potted Phalaenopsis in Germany and the Netherlands. Chapter 3 describes the data and the methods used, and Chapter 4 presents and discusses the results concerning the value chains, their governance structure, and the role of certification. Chapter 5 summarizes and concludes.

2 Background on the Dutch and German Phalaenopsis Market

The value of the overall market of indoor potted plants tops off at around 300 million € in the Netherlands and 2,200 million € in Germany (FloraHolland, 2013a). According to CBI (2009b), the Dutch and the German indoor plant markets are saturated. This is also supported by the observed marginal changes in per capita consumption over recent years (Table 1).

Table 1: Per capita consumption of potted indoor plants in the Netherlands and Germany (in €)

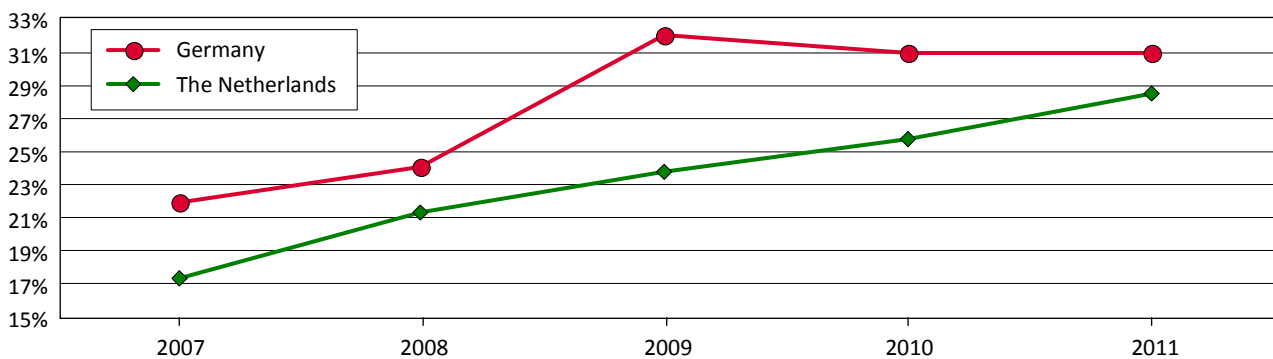
Year	2009	2010	2011	2012
Germany	26.9	27.4	28.4	27.3
The Netherlands	17.4	16.8	17.0	17.8

Source: Own calculation based on data from FloraHolland (2013b) and Worldbank (2013a, 2013b).

In Germany, potted orchids – of which *Phalaenopsis* makes up the vast majority – have a constant share of about 30 % of flowering indoor plants since 2009 (Figure 1). In the Netherlands, this share has been a bit lower, but it has steadily increased in the last few years to a level equivalent to the German one.

The production of potted orchids in Germany still remains negligible. Less than 5 % of all growers of indoor plants in Germany produce potted orchids, amounting to about 3.3 million plants in 2012 (Statistisches Bundesamt, 2012).

Figure 1: Share of potted *Phalaenopsis* from indoor plant sales



Source: FloraHolland (2009, 2010, 2011, 2012) und AMI/ZMP (2012).

In Dutch indoor plant production, on the other hand, potted *Phalaenopsis* is the industry leader both in terms of sales volume and value. The cultivation of potted *Phalaenopsis* in the Netherlands experienced enormous growth rates in recent years: in 2006, 71 growers reportedly produced about 38 million *Phalaenopsis* plants on 99 ha of greenhouse area (LEI/CBS, 2009). This amount more than doubled in just three years, with a reported production area of 215 ha of potted *Phalaenopsis* in 2009 (Table 2). Although there was a significant reduction in acreage by 2010, the turnover in number of plants still increased from 95 to around 100 million. In 2012, around 117 million *Phalaenopsis* plants worth 448 million € were sold by Netherland's biggest cooperative FloraHolland, which accounted for almost 80 % of all sales (FloraHolland, 2013a; CBI, 2009b; VBN, 2012). It seems that the efficiency in domestic production increased, since imports from other countries remained marginal. In the Netherlands, the average acreage per grower producing potted *Phalaenopsis* increased by more than 90 % from 2005 to 2010, meaning that businesses increased in size. However, the share of growers producing *Phalaenopsis* on more than five ha decreased from 2009 to 2010, indicating that a certain number of bigger growers discontinued the production of *Phalaenopsis*. These numbers indicate a fast structural change and an upscaling in size and efficiency in *Phalaenopsis* production in recent years.

Table 2: Number and acreage of Dutch Phalaenopsis growers

Year	No. of producers	Production area (PA)	Average PA	Share of producers with >5 ha PA
		ha	ha	%
2005	61	76	1.25	0.0
2006	71	99	1.39	1.4
2007	85	148	1.74	5.9
2008	97	188	1.94	8.2
2009	91	215	2.36	13.2
2010	69	168	2.43	11.6

Source: Own presentation based on data from LEI/CBS (2009 and 2012).

3 Data and Methods

Expert interviews were conducted with different actors involved in the value chains. The interviewed participants belonged to the groups of i) growers, ii) wholesalers and iii) retailers. Growers are defined as persons who produce potted Phalaenopsis, but do not sell them directly to retail customers. In the case of wholesalers, businesses were chosen, which buy from growers of potted Phalaenopsis and sell to retailers of the plant. Retailers are businesses that sell potted Phalaenopsis to retail customers and are not involved in production. In total, four growers, four retailers and five wholesalers were interviewed in 2012 in Germany and the Netherlands.

In order to obtain specific information on the value chains, semi-structured questionnaires were designed with five major sections. The first section asks for basic data, which can be used to evaluate the type of business and its position in the market. The other three sections include questions on buying, selling, certification and the prospects for Phalaenopsis market development and changes affecting trade channels in the future. Interviews were performed via telephone or, if possible, face-to-face, in English or German according to the preference of the expert. They were recorded, transcribed and anonymized. The transcriptions were then categorized into different topics and analyzed according to the method of Gläser and Laudel (2010).

For the value chain analysis, the gaps of statistical data have been filled and triangulated with the results from the expert interviews. When depicting the value chains in a figure (Figure 2), the size of the players at producer and retail level represents the percentages of overall turnover for potted Phalaenopsis. At the retail level, these numbers are taken from Productshap Tuinbouw (2012). At the producer level, the share of German growers was calculated in two steps: first the number of potted Phalaenopsis sold in Germany was estimated from prices given in the interviews at retail level, weighted according to the importance of the sales channels in question; and second, this number was related to the amount of orchids produced in Germany in 2012. At the wholesale level, the box sizes of different wholesale channels represent their importance relative

to one another. The arrows indicate product flows, while the thickness of the lines shows the relative importance of the flow for the participating members of each trade channel.

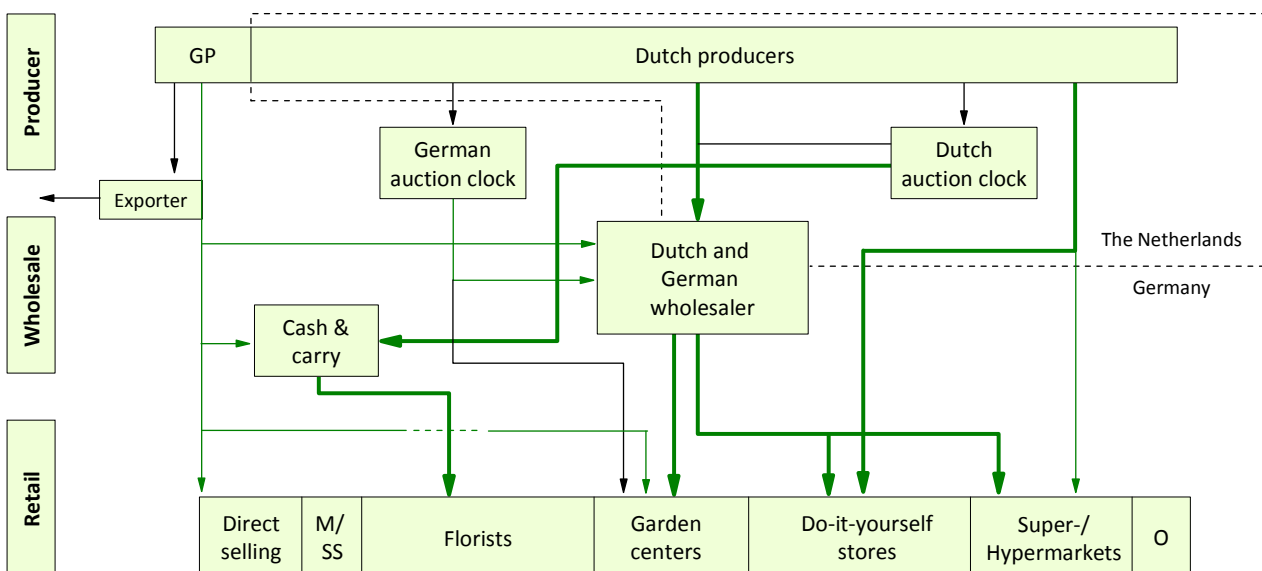
Governance of potted Phalaenopsis value chains refers to inter-firm relationships and institutional mechanisms, which coordinate the activities in the chain (Humphrey and Schmitz, 2001). According to Kaplinsky and Morris (2001), the share of added value indicated by the percentage of the final price contributed to the end product by different levels of the chain, reflects the share of chain activities. Furthermore, the interviews provide important information on the relationship between buyers and sellers. They describe how the trading parties come together, who makes the first move, and which special requirements need to be met by the suppliers. The underlying idea is that the power of a retailer in the chain is assumed to be rather strong if he can demand extras without paying additionally for them (Kaplinsky and Morris, 2001).

4 Results and Discussions

4.1 Value Chains in Germany and the Netherlands

Figure 2 shows the value chain for potted Phalaenopsis in Germany based on the methods described above.

Figure 2: The value chain of potted Phalaenopsis in Germany



The thickness of the lines indicates the relative importance of the flow for participating members.

GP = German producers, M/SS = markets/street sales, O = others

Source: Own presentation.

German producers satisfy less than 10 % of the potted Phalaenopsis demand in Germany. The estimations made by the experts interviewed indicate an even lower self-sufficiency rate. This is explained by the fact that a portion of the German production is exported. Furthermore, the above-mentioned numbers apply to the overall potted orchid market and not merely to Phalaenopsis — although Phalaenopsis is by far the most important orchid genus in Europe. In Germany, however, many orchid growers specialize in the high price sector, producing a higher proportion of genera, which are not Phalaenopsis.

There is significant trade between wholesalers in Germany and the Netherlands, as is summarized in the central box in Figure 2. Every interviewed wholesaler sells or buys at least part of his or her potted Phalaenopsis to or from other wholesalers. Dutch and German ornamental growers are often organized in cooperatives. The most important Dutch one is *Coöperatieve Bloemenveiling FloraHolland U.A.*, and the most important German one is *Landgard Blumen und Pflanzen GmbH*. FloraHolland has a share of about 80 % of the entire potted plants trade (CBI, 2009a). 20 % of all potted Phalaenopsis traded via FloraHolland are sold via the auction clock and the rest via contracts with wholesalers and retailers all over the world. In Germany, FloraHolland and Landgard jointly established an auction for flowers in 2010—but potted Phalaenopsis is not the most important cultivar in this young auction (Veiling Rhein-Maas³, 2012). In total, 590,000 plants have been sold there, which is just a small share of the German supply of potted Phalaenopsis. At Landgard, potted Phalaenopsis is mainly traded via Cash and Carry (C & C) markets (Landgard, 2012). German growers who are members of the cooperative are allowed to supply their flowers to one of Landgard's logistic centers. From there, they are shipped to the 32 existing C & C markets throughout Germany. Any plants that are additionally required are imported by the C & C markets from the auction in Aalsmeer. Small retailers such as florists, direct-selling gardeners or indoor services need only small quantities of plants and search for special cultivars and special qualities for their customers. In C & C markets, self-service allows them to create their own assortment of pot plants and cut flowers. Both FloraHolland and Landgard add a margin onto the growers' price to finance their infrastructure.

At the retail level in Germany, florists sell almost a third of all potted orchids, followed by do-it-yourself stores with 22 %. The remaining half of orchid sales in Germany reaches the retail customers via supermarket/hypermarket chains (15 %), garden centers (13 %), direct selling growers (13 %), and others (9 %). Under "others", all small businesses are grouped together, including kiosks, petrol stations and market or street sales. The shares of trade channels in orchids are similar to the ones in all potted indoor plants (Productshap Tuinbouw, 2012).

To describe the trade channels in Phalaenopsis, it is important to differentiate between the trade strategies that are followed at the retail level with the ready for sale product. Retailers with a cost leadership strategy in Phalaenopsis will try to shorten the value chain to get the Phalaenop-

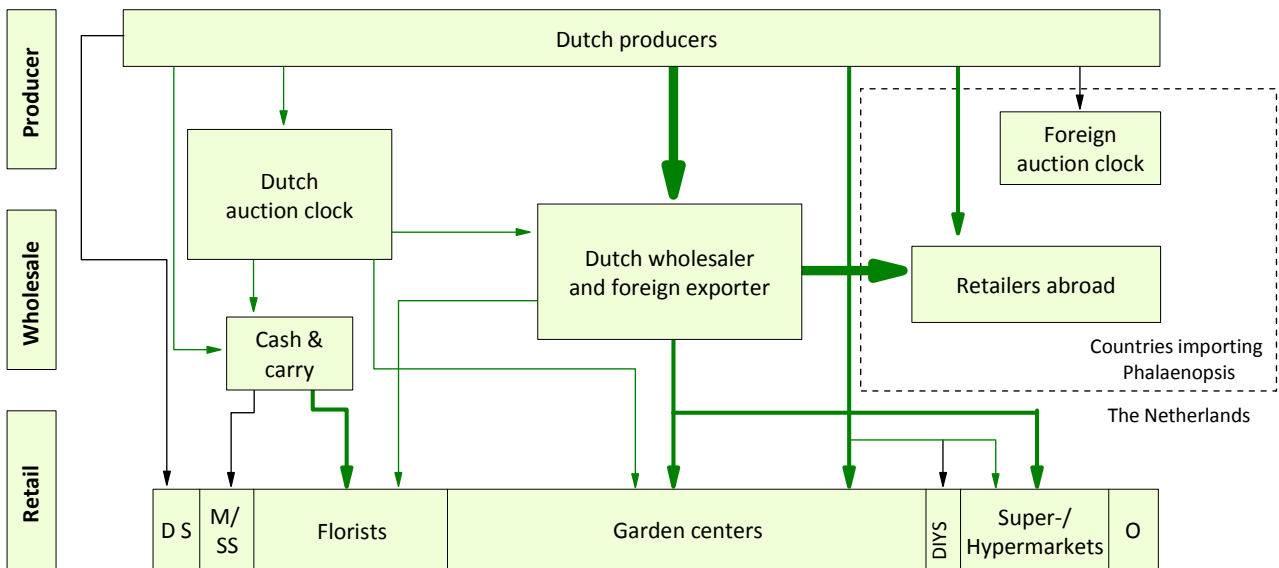
³ Veiling Rhein-Maas is the only auction for flowers and ornamental plants in Germany.

sis for a lower price. They will buy rather large amounts of homogenous plants directly from a few growers or, more commonly, from a wholesaler who has previously bought them from one or a number of growers. Typically, this strategy is pursued by big retail chains with an annual turnover of several hundred thousands of plants, as they have the infrastructure to handle such amounts and the buying power to work with relatively few large suppliers. Average retail prices of potted *Phalaenopsis* range between 6 and 8 €, and the *Phalaenopsis* being sold in this manner come exclusively from the Netherlands and usually have one or two flowering stems. Growers from other countries are generally considered to be too expensive.

Retailers selling specialty *Phalaenopsis*, such as florists, direct selling gardeners or many garden centers, will need a variety of different *Phalaenopsis* usually not grown by any single grower or even in any single country. While small specialist retailers usually use C & C markets, bigger specialist retailers get their plants delivered by wholesalers. *Phalaenopsis* acquired in the latter manner might have already gone through two or three sales on the wholesale level. They can be bought at the Dutch auction, from wholesalers in the Netherlands specialized in import/export, or from a German wholesaler. Since every wholesaler has a margin of 10 to 15 %, these plants are correspondingly more expensive, with retail prices in Germany usually ranging from 17 to 20 € per plant, and sometimes more. The advantage of this, however, is the ability to offer a special assortment of plants from several origins. The German auction, furthermore, may enable wholesalers to skip one step by excluding the exporter from the Netherlands.

The export of German potted *Phalaenopsis* is very small and mainly restricted to higher priced specialties. These are sold via a wholesaler to countries such as Switzerland, Austria or Italy. The higher transport costs from the Netherlands make German growers more competitive in this market.

In Figure 3, the Dutch value chain for potted *Phalaenopsis* is depicted. It is evident that potted *Phalaenopsis* sold to Dutch retail customers come exclusively from Dutch producers. The auction plays a more important role in the trade of potted *Phalaenopsis* here than it does in Germany. Overall, the potted *Phalaenopsis* trade in the Netherlands is strongly export-oriented. The biggest share of all potted *Phalaenopsis* leaves the Netherlands, and usually does so via one or two wholesalers. As already mentioned above, some big retailers have direct contracts with Dutch growers, but this does not seem to be the most common form of trade. In general, both growers and wholesalers in the Netherlands sell their potted *Phalaenopsis* at least partly to a wholesaler abroad or a Dutch exporter.

Figure 3: The value chain of potted Phalaenopsis in the Netherlands

The thickness of the lines indicates the relative importance of the flow for participating members, DS = Direct selling gardeners, M/SS = markets/street sales, DIYS = do-it-yourself-stores, O = others

Source: Own presentation.

The channels through which potted Phalaenopsis are traded in the Netherlands are somewhat different than in Germany. Garden centers with a 42 % share of turnover dominate sales in the Netherlands. Florists with a share of 26 % are the second most important group, while supermarket chains account for another 16 % (Productshap Tuinbouw, 2012). In contrast to Germany, garden centers in the Netherlands need to be differentiated into discount garden centers and specialty garden centers. Because of shorter distances, logistic costs are much lower in the Netherlands. Thus, more relatively small retail businesses buy directly from the growers or auction clock.

4.2 Governance in potted Phalaenopsis value chains

In Germany and the Netherlands alike, producers of potted Phalaenopsis contribute a relatively high share of 30 to 45 % to the end value of the product. According to Kaplinsky and Morris (2001), this can be interpreted as an indicator of high chain activity. Especially in direct grower – retailer relationships, there is a rather even distribution of shares (50/50) in final prices. One-year contracts between growers and retailers are common. None of the interviewees had ambitions to change their contracted trading partners – and, if so, only in order to expand by having more suppliers or customers. In addition to this relational stability, contracts provide a stable price and security with which to plan the amounts of Phalaenopsis to grow or to buy. Growers, as well as bigger retail chains in need of large numbers of plants, benefit from this security. Spontaneous selling or buying of plants might sometimes lead to higher margins, but this is rather difficult to do in potted standard Phalaenopsis and might more likely apply to poorer qualities.

Very big retail chains exercise strong power in the value chain by directly approaching the growers and skipping the traditional wholesalers and cooperatives. In addition, they require very detailed standards for the products they buy (e. g. certain labels attached to the final product). This observation is supported by Ekelund and Axelson (2008). The introduction of quality management schemes on the producer and retailer levels has been pushed by the big retail chains, though they themselves do not need to be certified.

If a wholesaler is involved in linking the producer and retail levels, certain activities are outsourced from growers and retailers. The burden of dealing with numerous customers or suppliers is thus alleviated, which is evident from the answers obtained in the interviews. Wholesalers generally create rather little added value in the chain. They nevertheless seem to be the most actively communicative group along the potted *Phalaenopsis* value chain, which shows that the share of the final price is insufficient as the sole tool for determining chain activity (Kaplinsky and Morris, 2001). They usually address suppliers according to the needs of their customers, but they often actively sell their plants as well. A distinction needs to be made between the different levels of communication as well, since wholesalers, being specialized, seem to sell their products more actively to retailers, while big retailers seem more often to contact the wholesalers.

Cooperative C & C markets constitute a special case. As a producer organization, their main aim is to market the growers' production at prices favorable for the growers (Landgard, 2012). The manager of every C & C market is responsible for his or her assortment and calls the growers for supplies. The number of *Phalaenopsis* a grower is allowed to supply, and the price he or she can achieve, depends on the local demand of retailers in each market, and thus may vary strongly. Retailers can place orders at the C & C market as well. Some retailers even order directly from the growers, who then deliver via the C & C infrastructure. This way of marketing might not be appropriate for *Phalaenopsis* growers following a low price strategy, because the quantities sold are too small and the transaction costs involved are too high to realize attractive retail prices. However, for growers producing specialty *Phalaenopsis*, this can be a rather profitable strategy, since prices seem to be higher on average than at wholesale level.

In contrast to the Netherlands, selling via the auction clock does not seem to be the preferred marketing method for the German producers. As Claro and Omta (2005) point out, the reduced logistical costs for the growers do not outweigh the disadvantages entailed, such as unexpected fluctuations in prices and volumes, and the lack of direct contacts between producers and buyers. The auction clock as a selling tool reduces the effort involved in maintaining business contacts (Claro and Omta, 2005), but the grower's control of the price received and the quantities sold is much lower than it is in trading contracts with wholesalers or retailers. Prices at the auction do not seem to be high or stable enough for producers in either of the two countries, which is why they sell only 15 to 20 % of their *Phalaenopsis* via this trade channel.

4.3 Certification and competitiveness on the potted Phalaenopsis market

At EU level, the Dutch position as the most competitive Phalaenopsis producer and trader remains thus far untouched. As studies on the subject confirm, their strong marketing system and organization as a tight cluster with lively exchange of information helps them to maintain this position (e. g. Claro, 2004; Belussi and Sedita, 2009). According to Tavoletti and te Velde (2008), however, this cluster structure is currently endangered by the increasing gap between the few big firms and the many smaller ones, as it may hinder the development of innovations in the long run. Dutch producers and wholesalers alike see a growing market in Eastern Europe and Russia that could absorb excess quantities of potted Phalaenopsis left over from the European market.

Many Phalaenopsis breeds originate in Thailand, which has a position in orchid production worldwide comparable to the one of the Netherlands in Europe. The favorable climate and 40 years of export experience make it a very competitive country for orchid production (Supnithi et al., 2011). Its export volume amounted to 62.5 million € in 2009 but less than 10 % of its exports are derived from potted orchids. The main orchid genus exported is Dendrobium, and major export shares are made up of fresh cut orchids and seedlings.

As was confirmed by the interviews, it is doubtful that ready-for-sale potted Phalaenopsis from developing countries such as Thailand will be competitive in the European market any time soon. This is mainly due to logistical problems, since ship transport takes too long for the perishable product and air cargo shipments of the more bulky potted plants is too expensive – as compared to fresh cut orchids.

The imports of Phalaenopsis raw material to the EU accounts for only 2 to 3 % of all imported potted plants. According to the Thai Customs Department (2013), in 2012 Thailand exported orchid seedlings worth 2.2 million € to the Netherlands and 1.8 million € to Germany. Nevertheless, Dutch and German producers alike indicated in the interviews that they would not trust young plant material coming from somewhere other than the Netherlands. However, it has to be noted that these interviews are not necessarily representative.

One way to create trust and upgrade the value chain is through certification. To ascertain the importance of certification in the potted Phalaenopsis value chain, all experts along the chain were asked whether or not they are certified and why. The producers were found to be certified according to at least one scheme—mainly involving the GAP-standards (MPS-GAP or GLOBAL-GAP). The wholesalers and retailers serving the specialty market did not find certification to be important, but traders serving the mass market considered it to be important. When asked about the reasons for being certified, the producers and wholesalers on the one hand indicated that their customers demand it — this is especially true for those who trade with bigger retail chains. On the other hand, however, only a few retailers and wholesalers stated that they consciously buy certified potted Phalaenopsis. All retailers — regardless of their price strategy in potted

Phalaenopsis — stated that for the retail customers, certification in potted Phalaenopsis is not an important criterion for their decision whether or not to buy.

There are also other aspects of certification which have been raised by the experts. Some of them stated that certification improves the product quality and process management, and that it can reduce the share of businesses not complying with national legislation. A problem mentioned about certification schemes in potted Phalaenopsis is that there is still no established B2C-certification label to communicate a plant's origin. In general it was pointed out that there are already too many labels, which makes B2C-communication, in particular, difficult. A harmonized trans-European label was mentioned as a promising approach in the interviews. Another problem of certification is the high costs of getting certified and the need to establish a second supply channel for certified products, both of which can be a burden, especially for small retailers. These findings go along with Deneux and Lutén (2001) and van Dam et al. (2004).

The answers given by the experts concerning the future importance of certification in the potted Phalaenopsis market ranged from “it already is really important now and will be even more important in the future”, to “it is completely unnecessary”. Table 3 provides an overview of the future importance of selected certification schemes for the potted Phalaenopsis market. The Milieu Project Sierteelt (MPS) scheme and GLOBALGAP have been found among the interviewed experts to be the most important and best known certification schemes. Rikken (2010) confirms that the MPS scheme is by far the largest in terms of the number of certified producers. While the largest market is still the Netherlands, where the scheme was initially developed, MPS is also active worldwide in more than 50 other countries. According to the experts' estimations, GLOBALGAP will also have some importance in the trade of potted Phalaenopsis.

Table 3: Importance of certification schemes in trade with potted Phalaenopsis

Certification schemes	Importance	1	2-3	4-5	Don't know this scheme
GLOBALG.A.P. (Flowers and ornamentals)		1	3	5	4
Milieu Project Sierteelt (MPS)		1	1	9	2
Ethical Trade Initiative (ETI)		1	-	1	11
Fair Flower Fair Plants (FFP)		5	5	2	1
Fairtrade Labeling Organization Max Havelaar, (FLO)		6	2	3	2
Flower Label Program (FLP)		5	2	-	6
EU Organic Label		6	6	1	-
Others, please specify ISO 9000		-	1	-	12

Answer code from 1 = not important to 5 = very important. Accumulated data.

Source: Expert interviews; n = 13.

The Fair Flower Fair Plants (FFP) label, followed by the Flower Label Programme (FLP) and the EU Organic Label are considered to be less important. With respect to the latter, only the retailers of specialty Phalaenopsis were optimistic about the possibility of having organically grown potted

Phalaenopsis in the future. FFP is a label designed especially for B2C-communication on the origin and sustainability of flower and plant production in Europe (FFP, 2012). FLP, which applies to German imports from developing countries, was also not well known, especially among the Dutch actors. The certification scheme of the Ethical Trading Initiative (ETI) is only demanded by British retailers for cut flowers from developing countries, and was therefore also not well known among the interviewees.

It needs to be emphasized that the interviewees were asked about their perceptions of the importance of the labels in the potted Phalaenopsis market. Since imports of potted plants from developing countries are not expected to increase significantly in the future, it is also not surprising that the FLP and ETI labels are expected to remain comparatively unimportant. Nevertheless, it has been suggested by Jørgensen (2004), that measures such as Fairtrade certification could be suitable for raw material and young plants from developing countries.

5 Summary and Conclusion

The value chains of potted Phalaenopsis in the Netherlands – the EU's biggest producer – and Germany – the EU's biggest consumer market – are strongly interlinked. The Dutch potted Phalaenopsis industry is a worldwide operating business dominating the European market. Germany, even though it is the second largest producer in the EU, contributes only a comparatively small share to the overall trade volume. The strong competitiveness of the Dutch growers can be explained by their cooperatives' very strong marketing organization, and by their flexibility in adjusting to new supply and consumption trends in the market.

There is a high degree of variation in value chains for potted Phalaenopsis. While some actors pursue a cost leadership strategy, others pursue specialty strategies in retail. While Dutch growers supply plants for both types to the Dutch and German market, German Phalaenopsis are considered unsuitable for the cost leadership strategy, mainly due to a lack in economies of scale in production. The auction clocks in the Netherlands and Germany are of minor importance in the trade of potted Phalaenopsis, because most of the trading is done by wholesalers or through direct contracts between growers and retailers. Wholesalers play a vital role in connecting the two countries' trading activities. For smaller retailers, and for those focused on specialty varieties of potted Phalaenopsis, the C & C markets are important points of trade – especially in Germany. Very big retail chains exercise strong power in the value chain by directly approaching the growers and skipping the traditional wholesalers and cooperatives. In addition, they have pushed the introduction of quality management schemes on the producer and retailer levels.

Mainly due to logistical problems and transport costs, imports from developing countries are not considered as a threat to the European market in the nearer future. Imports of orchid seedlings from Thailand has slowly but steadily increased, but Dutch and German Phalaenopsis producers seem to be rather reluctant to use raw material from somewhere other than the Netherlands.

There is a chance, however, that this result might be biased since the responses are based on only a few expert interviews.

Certification is considered as a way to upgrade value chains. Producers tend to be certified according to at least one scheme – mainly involving the GAP-standards (MPS-GAP or GLOBALGAP). The wholesalers and retailers supplying the specialty market did not find certification to be important, whereas traders delivering to the mass market considered it to be important. Currently there is no importance for B2C certification in potted Phalaenopsis, mainly because the final customers do not demand certified potted Phalaenopsis. The lack of demand could be based on the final customers' trust in the given value chains. An increase in importance for B2C certification in potted Phalaenopsis is only expected for retailers following the specialty strategy in potted Phalaenopsis. B2B-communicated standards are already important for many flowers in trade with large retail chains, and it is estimated that this will become more important for potted Phalaenopsis as well.

Need for further research could be identified: First, a more dynamic view on the value chains is required, as it is not clear how the currently strong competitiveness of the Dutch potted Phalaenopsis sector will be affected by the growing gap in the Netherlands between a few large and many small enterprises. As pointed out by others, in such conditions innovations are expected to decline, which is likewise likely to lower the competitiveness of the Dutch sector over the long run. At the same time, the growing gap between big and small enterprises is assumed to increase the importance of intellectual property rights, which is related to the implementation of certification schemes at the national scale. Second, and closely related to this, it remains unclear to what extent international certification of seedlings or of ready for sale plants could help developing countries such as Thailand to upgrade their value chains and increase their integration in the EU market. Third, the expert interviews conducted in the context of this study only provide a first estimation on some important issues related to the value chain analysis. To allow for more robust and in-depth results a representative survey needs to be conducted.

References

- AIPH/Union Fleurs (20102) International Statistics Flowers and Plants 200911, Leiden
- AMI (2012) Top 10 2011 in Deutschland. Agrarmarkt Informationsgesellschaft mbH, Bonn
- AMI/ZMP (2012) Zeitreihe des Anteils von Phalaenopsis im Topf an Zimmerpflanzen. Agrarmarkt Informationsgesellschaft mbH, Bonn, statement via phone
- Balas J, Vessel S, Fassler M (2009) Eco-Social Certification in International Floriculture; A War of Labels?, *Acta Horticulturae* 817, ISHS 2009
- Belussi F and Sedita SR (2009) Local systems playing globally, Padua University, Italy
- CBI (2009a) CBI Market Survey: The plants and young plant material market in the EU. Centrum tot Bevordering van de Import uit ontwikkelingslanden, Den Haag, The Netherlands

- CBI (2009b) CBI Market Survey: The plants and young plant material market in the Netherlands. Centrum tot Bevordering van de Import uit ontwikkelingslanden, Den Haag, The Netherlands
- Claro DP (2004) Managing business networks and buyer-supplier relationships. Wageningen Unversiteit, Netherlands
- Claro DP, Omta O (2005) Building Collaborative Relationships with Distributors in the Dutch Potted Flower and Plant Industry. *Journal of International Food & Agribusiness Marketing*, Vol. 17(2), p. 15-38
- Den Hertog P, Kern S (2007) Innovatie in de glastuinbouw
- Deneux SDC, Luten JH (2001) A closed-chain concept for application in the floristry sector. Agricultural Economics Research Institute, The Hague
- Ekelund L, Axelson J (2008) Product Development and Value Migration in the Horticultural Value Chain for Pot Plants. *Acta Horticulturae 807 ISHS 2008*, p. 777 to 782
- Ekelund L, Fernqvist F, Furemar S (2008) Experiences of quality in the horticultural value chain – The case of Sweden. *Acta Horticulturae 794, ISHS 2008*, p. 107 to 114
- FFP (2012) Fair Flowers and Plants, was bedeutet das für mich?,
URL: www.fairflowersfairplants.com/de/zuchter.aspx, date: 2012-10-15
- FloraHolland (2009) Facts and Figures 2008. Aalsmeer
- FloraHolland (2010) Facts and Figures 2009. Aalsmeer
- FloraHolland (2011) Facts and Figures 2010. Aalsmeer
- FloraHolland (2012) Facts and Figures 2011. Aalsmeer
- FloraHolland (2013a) Facts and Figures 2012. Aalsmeer
- FloraHolland (2013b) Consumption of indoor plants per capita based on consumer panel. Aalsmeer, statement via email 2013-11-20
- Gläser J, Laudel G (2010) Experteninterviews und qualitative Inhaltsanalyse, 4. Auflage. VS Verlag für Sozialwissenschaften, Springer Fachmedien Wiesbaden GmbH, ISBN 978-3-531-17238-5
- Hughes A (2000) Retailers, knowledges and changing commodity networks: the case of the cut flower trade. *Geoforum* Vol. 31, p. 175-190
- Hughes A (2001) Global commodity networks, ethical trade and governmentality: organizing business responsibility in the Kenyan cut flower industry. *Transactions of the Institute of British Geographers* Vol. 26, p.390-406
- Humphrey J, Schmitz H (2001) Governance in Global Value Chains. *IDS Bulletin* 32.3 2001, Institute of Development Studies, Oxford
- ICOGO, International Commercial Orchid Growers Organization (2008) The State of Orchid Production in China, Holland, and the EU. *ICOGO Bulletin* Vol. 2 No. 1 2008
- ICOGO, International Commercial Orchid Growers Organization (2009) The Desirable Traits for Oncidium and Its Intergeneric Orchids. *ICOGO Bulletin* Vol. 3 No. 1 2009
- Jørgensen B (2004) Sustainable Trade in Ornamental Horticulture. *Acta Horticulturae* 630, ISHS 2004
- Kaplinsky R, Morris M (2001) A Handbook for Value Chain Research. International Development and Reserach Center, URL: www.prism.uct.ac.za/Papers/VchNov01.pdf, date: 2013-12-10
- Landgard (2012) Potted Phalaenopsis in Cash & Carry Markets in Germany. Straelen-Herongen, statement via phone

- LEI/CBS (2009) Land- en Tuinbouwcijfers 2009. L E I Wageningen UR, Centraal Bureau voor de Statistiek, Den Haag/Heerlen
- LEI/CBS (2012) Land- en Tuinbouwcijfers 2012. L E I Wageningen UR, Centraal Bureau voor de Statistiek, Den Haag/Heerlen
- Porter ME, van der Linde C (1995) Green and Competitive: Ending the Stalemate. *Harvard Business Review* 73, no. 5 (September–October 1995), p. 120-134
- Productschap Tuinbouw (2012) MB Nieuws 2012-40 - Marktbeeld Orchidee. Zoetermeer
- Rikken M (2010) The European Market for Fair and Sustainable Flowers and Plants. ProVerde/BTC, Belgian development agency
- Sporleder TL, Peterson HC (2003) Challenges to Future Agrifood Corporate Strategy: Knowledge Management, Learning, and Real Options, in: IAMA World Food & Agribusiness Symposium Papers and Presentations. Cancun, p. 1-31
- Statistisches Bundesamt (2012) Fachserie 3, Reihe 3.1.6 2012: Landwirtschaftliche Bodennutzung - Anbau von Zierpflanzen. Wiesbaden
- Supnithi T, Paiboonrat P, Buranarach M, Kawtrakul A, Lekawatana S, Intalak A, Sangtien S, Chophtham W (2011) Ontology based Orchid Knowledge Platform for Knowledge Services in Orchid Cluster. IEEE, Annual SRII Global Conference 2011
- Tavoletti E, te Velde, R (2008) Cutting Porter's Last Diamond: Competitive and Comparative (Dis)advantages in the Dutch Flower Cluster. *Transition Studies Review*, Vol. 15, p. 303-319
- Thai Customs Department (2013) Thai Exports of Orchid seedlings, URL: www.internet1.customs.go.th/ext/Statistic/StatisticIndex2550.jsp, date 2013-10
- Van Dam YK, van der Lans IA and Zimmermann KL (2004) Environmental labelling as marketing concept to create added value for flower chains: How to create a horticultural chain based on responsive consumer information. *Acta Horticulturae* 655 ISHS 2004, p. 135 to 141
- Van Plaggenhoef W (2007) Integration and self regulation of quality management in Dutch agri-food supply chains. Wageningen University and Research Center
- VBN (Vereniging van Bloemenveilingen in Nederland) (2012) Market information, URL: www.vbn.nl/en-US/Marketinformation/Pages/default.aspx, date: 2012-04
- Veiling Rhein-Maas (2012) Germien freuen sich über das Joint-Venture zwischen Landgard und Floraholland, URL: www.veilingrheinmaas.com/nc/news/browse/2/detail/gremien-freuen-sich-ueber-das-joint-venture-zwischen-landgard-und-floraholland/, date: 2012-09-12
- Wei S (2010) Value Chain Dynamics in the Taiwan Orchid Industry. *Acta Horticulturae* 878, ISHS 2010, p.437-442
- Worldbank (2013a) Germany – Country at a glance, URL: www.worldbank.org/en/country/germany, date 2013-10
- Worldbank (2013b) The Netherlands – Country at a glance, URL: www.worldbank.org/en/country/netherlands, date 2013-10