Kingdom of the Netherlands

# Factfinding

# Horticulture Peru


July 2016 - Michel Peperkamp - Assigned by the Royal Dutch embassy in Lima

ICI Business ACCESS LATIN AMERICA FCE Fruit Consultancy Europe B.V. Netherlands Enterprise Agency Kingdom of the Netherlands

# Contents

## Executive summary

Over the last decade Peruvian export of fresh fruit and vegetables and other high value crops experienced a strong growth. A suitable climate, favourable geography and positive economic circumstances contributed to a fast upscaling and professionalization in production. Peru nowadays has a diversified offer of agricultural export products among which are asparagus, avocados, grapes, mangoes, mandarins, (organic) bananas, blueberries, quinoa, coffee and cocoa. The country also expects further development in new products such as cherries, kiwis and pistachios. Peru's progressing integration in the world trade as well as its national market growth and a professionalizing agricultural sector generate opportunities in the upcoming years.

The supply chain for exportable products is relatively well developed, although there are notable differences in the level of development between the top agricultural exporters, SME companies and a great number of small and microscale farmers. While the largest corporations have invested in valuable irrigation technology, their own nurseries and highly automated sorting and packing, a vast majority only has access to part of this type of technology or none at all. However, the leading companies set the example and inspire other businesses to improve their standards according to their capacities. Current and future challenges that the sector faces can be identified in water resources, institutional development, knowledge & education, informality, human resources and infrastructure/logistics.

The government policy focuses on the competitiveness and sustainable development of the agricultural sector, with an emphasis on the small agricultural producer. There are several decentralized programmes and funds available with the objective for small producers to gain knowledge, adapt new technologies and improve their economic position. In reality the majority of the government spending goes to large infrastructure and irrigation projects to create new arable land. Public investment in innovation and R&D is still minimal and mostly left to the private sector. Ambitions of public institutes, however, are high and organisations such as INIA, Senasa and Concytec welcome foreign cooperation.

Despite of the government's ambition, their reach is limited and NGOs and micro-finance organisations maintain an important role to fill in the gap. In terms of Corporate Social Responsibility (CSR) there are still important issues to tackle in informal labour, land rights and environmental consequences due to lacking water resources, mismanagement of soil and poor agricultural practices.

Many of the Dutch fresh trading and sourcing companies have found a reliable partner in Peru, and the same goes for a selection of Netherlands-based NGOs and suppliers of logistical services, seeds and agricultural technologies. The Netherlands has a solid reputation in Peru concerning agricultural and logistical knowhow.

Unfortunately, the Dutch experience in horticulture does not always match with the products and environment in Peru (which consists of mainly tropical and semi-tropical products cultivated in a warm and dry climate). Other horticultural products are often cultivated for the national market which is less dynamic due to a high informality rate and lower quality standards. The expansion of more demanding supermarkets could change the perspective of local horticultural products.

International competition in horticultural technology and supplies is significant. Among important suppliers are, for example, Spain (sorting and grading equipment), Israel (irrigation technology), China and the USA (agricultural machinery and agrochemicals), but also various Peruvian companies that are specialised in mechanical and metal engineering.

To do business successfully suppliers need to demonstrate their product and show proof of concept. Peruvian entrepreneurs value local presence and service. In addition, training is considered crucial due to the low educational level of workers.

Financial facilities, such as Dutch Good Growth Fund (DGGF) and DHI (Demonstration, Feasibility and Investment preparation) can help Dutch companies to finance projects or investments in Peru. There are international and Peruvian support finance tools as well, but the access depends on the economic power of the applicant or its ability to organize small and medium-sized farmers.

For an emerging market, it is relatively easy to set up business in Peru, which holds a 50$^{th}$ place in the Worldbank index Ease of Doing Business. The country maintains an open policy towards trade and foreign investments, providing equality and investment protection. Weak points are poor education, complex labour market and the low capacity for innovation. Informality is a major issue which the whole sector has to deal with and can be a factor in slowing down some of the technological progress.

Concrete opportunities for NGOs, knowledge institutes and the private sector:

- Knowledge development in agricultural practices and crop management;
- Seed and plant breeding technology;
- (Alternative) agrochemicals and agricultural inputs;
- Irrigation technology;
- Precision agriculture;
- Post-harvest technology (e.g. sorting, grading, packing);
- Logistics & cold chain management;
- Food processing technology;
- Opportunities in related industries (e.g. dairy, fishery, poultry, food, feed or floriculture).

## Resumen ejecutivo

Durante la última década la exportación peruana de frutas y hortalizas frescas y otros cultivos de alto valor han experimentado un fuerte crecimiento. Un clima adecuado, geografía favorable y las circunstancias económicas positivas contribuyeron a un escalamiento rápido y a la profesionalización en la producción. Perú hoy en día cuenta con una oferta diversificada de productos agrícolas de exportación entre los que se encuentran los espárragos, aguacates, mangos, uvas, mandarinas, plátanos (orgánicos), arándanos, quinua, café y cacao. El país también espera un mayor desarrollo de nuevos productos, como las cerezas, kiwis y los pistachos. La integración del Perú avanza en el comercio mundial, así como su crecimiento en el mercado nacional y la profesionalización en el sector agrícola generan oportunidades en los próximos años.

La cadena de suministro de los productos exportables está relativamente bien desarrollada, aunque hay notables diferencias en el nivel de desarrollo entre los principales exportadores agrícolas, empresas PyME y un gran número de pequeñas y micro escala agricultores. Mientras que las grandes corporaciones han invertido en tecnología de riego valioso, sus propios viveros y la clasificación y embalaje altamente automatizada, una gran mayoría sólo tiene acceso a parte de este tipo de tecnología o ninguno en absoluto. Sin embargo, las empresas líderes dan el ejemplo e inspiran a otras empresas para mejorar su nivel de acuerdo con sus capacidades. Retos actuales y futuros que enfrenta el sector se pueden identificar en los recursos hídricos, el desarrollo institucional, el conocimiento y la educación, la informalidad, recursos humanos e infraestructuras / logística.

La política del gobierno se centra en la competitividad y el desarrollo sostenible del sector agrícola, con énfasis en los pequeños productores agrícolas. Existen varios programas y fondos descentralizados disponibles con el objetivo de que los pequeños productores adquieran conocimientos, adapten nuevas tecnologías y mejoren su situación económica. En realidad, la mayor parte del gasto público se destina a grandes proyectos de infraestructura de riego y a la creación de nuevas tierras cultivables. La inversión pública en innovación e I + D es todavía mínima y en su mayoría en manos del sector privado. Ambiciones de los institutos públicos, sin embargo, son altos y organizaciones como el INIA, Senasa y Concytec apoyan la bienvenida de la cooperación externa.

A pesar de la ambición del gobierno, su alcance es limitado y las ONG y organizaciones de micro-financiación mantienen un papel importante para llenar el vacío. En cuanto a la Responsabilidad Social Empresarial (RSE) todavía hay cuestiones importantes para abordar en el trabajo informal, derechos sobre la tierra y las consecuencias ambientales debido a que carecen de los recursos hídricos, el mal manejo de los suelos y las malas prácticas agrícolas.

Muchas de las empresas holandesas en el comercio y abastecimiento de productos frescos han encontrado un socio fiable en el Perú, y lo mismo pasa con una selección de las ONG y los proveedores de servicios logísticos, semillas y tecnologías agrícolas con sede en Holanda. Los Países Bajos tienen una reputación sólida en el Perú en relación a conocimientos agrícolas y logísticos. Lamentablemente, la experiencia holandesa en la horticultura no siempre coincide con los productos y el medio ambiente en Perú (que consiste principalmente productos tropicales y semi-tropicales cultivados en un clima cálido y seco). Otros productos hortícolas a menudo se cultivan para el mercado nacional, lo cual es menos dinámico debido a una alta tasa de informalidad y de menor calidad. La expansión de los supermercados más exigentes podría cambiar la perspectiva de los productos hortícolas locales.

La competencia internacional en tecnología y suministros hortícola es significativa. Entre los proveedores importantes están, por ejemplo, España (aparatos de clasificación), Israel (tecnología de riego), China y los EE.UU. (maquinaria agrícola y agroquímicos), sino también diversas empresas peruanas que están especializados en ingeniería mecánica y metal.

Para hacer negocios con éxito los proveedores tienen que demostrar su producto y mostrar prueba del concepto. Empresarios peruanos valoran presencia y servicio local. Además, la capacitación se considera crucial, debido al bajo nivel educativo de los trabajadores

Facilidades financieras, como el DGGF (Fondo Holandés de buen crecimiento) y DHI (Demostración, estudio de factibilidad y preparación de inversiones) pueden ayudar a las empresas holandesas para financiar proyectos o inversiones en el Perú. Existen entidades de apoyo financiero internacionales y Peruanos, pero el acceso depende de la potencia económica del solicitante o de su capacidad para organizar a los pequeños y medianos agricultores.

A pesar de ser un mercado emergente, es relativamente fácil de establecer un negocio en el Perú, que ocupa un lugar número 50 en el índice de facilidad para hacer negocios del Banco Mundial. El país mantiene una política abierta hacia las inversiones comerciales e internacionales, proporcionando la igualdad y protección de la inversión. Los puntos débiles son la educación deficiente, mercado de trabajo complejo y la baja capacidad de innovación. La informalidad es un problema importante, que implica todo el sector y puede ser un factor en el retraso de algunos de los avances tecnológicos.

Oportunidades concretas para las ONG, institutos de conocimiento y el sector privado:

- El desarrollo del conocimiento en las prácticas agrícolas y de manejo de los cultivos;
- Semillas y tecnología de cultivo de plantas;
- Agroquímicos (alternativos) e insumos agrícolas;
- Tecnología de riego;
- La agricultura de precisión;
- Tecnología pos-cosecha (por ejemplo, selección, clasificación, embalaje);
- Logística y gestión de la cadena de frío;
- Tecnología de procesamiento de alimentos;
- Oportunidades en las industrias conexas (por ejemplo, productos lácteos, la pesca, aves de corral, alimentos, ganado o la floricultura).

# 1. What is the scale of agribusiness in Peru?

### Peru's potential in agriculture: Size and climate

Peru has an area of 128.5 million hectares (in comparison: The Netherlands has 3.4 million hectares), of which approximately 7.6 million hectares is suitable for agricultural crops and 5.4 million is actually used.

With 2400 kilometres from north to south and a well-defined coast, mountains and jungle, Peru is able to produce a great variety of crops in many different climate zones. The main advantages for Peruvian agriculture are:

- The diversity of climates
- The contra-seasonal production with the northern hemisphere
- Extended harvest seasons

### Corporative agribusinesses are upscaling commercial production

As a result of land reforms in the late 60s, most of Peru's farmers today are smallholders. Small farmers generally produce for self-subsistence and the local market. But land ownership is changing again. In the past 20 years big companies have been able to acquire large quantities of land for commercial development, particularly in the coast area. This growth can be contributed to the creation of new arable land, land expropriation and acquisition from small land owners.

Lots of this land is used for industrial production of biofuel crops (sugar cane), but it has also provided an excellent opportunity for the production of non-traditional exportable fruit and vegetables. The economic development of land use has been supported by governmental policies and is expected to continue under the newly elected president Kuczynski.

### Concentration in top segment

The concentration in the agricultural top has resulted in a decreasing number of large companies. Instead, these companies grow bigger. Meanwhile many of the cooperatives of smallholders fall apart and increase the number of micro-level farmers. The technological distance between smallholders and large agricultural companies is increasing.

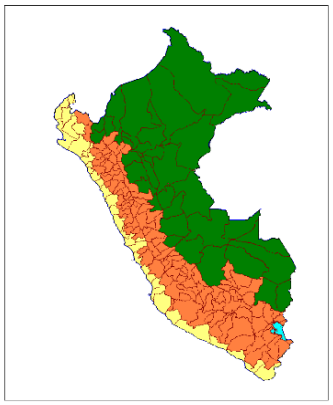
### Facts

**Geography of Peru**

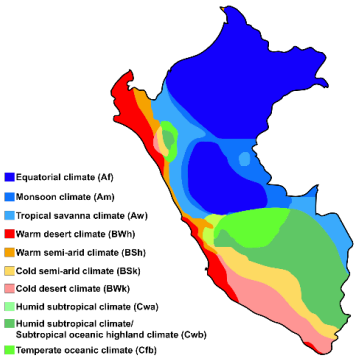
Total size:
128.5 million ha

Suitable for agriculture:
7.6 million ha

Currently used for agriculture:
5.4 million ha



Peru map of Köppen climate classification




**There are 2.2 million farmers in Peru:**

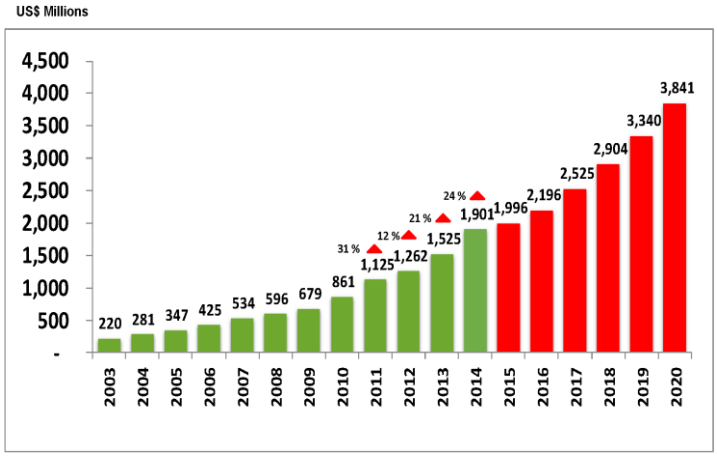
- 0,6% are legal entities
- 91% manage up to 10 ha
- 0,9% own 100 ha or more
- 64% work in the mountains
- 10% of the agricultural land is used for export

Source: IV Censo Nacional Agropecuario 2012

## Agricultural exports continue their growth

In the last decade Peru continuously increased the production of 'non-traditional' exportable products. The export value of fresh fruit and vegetables reached almost 2 billion euros in 2015. The fresh fruit sector has been very successful in particular and around 25% is traded via the Netherlands. Export in vegetables consists for 80% of asparagus. AGAP, the association of Peruvian agrarian producer guilds, expects the export to continue growing with the same speed.

Necessary developments such as professionalizing packaging, cold chain management, logistics and export promotion support the aggressive export growth.




Source: AGAP

## Peru improves on world ranking agro export

Compared to neighbouring countries Colombia, Ecuador and Chile, the highest potential for growth in fresh agricultural products is in Peru.

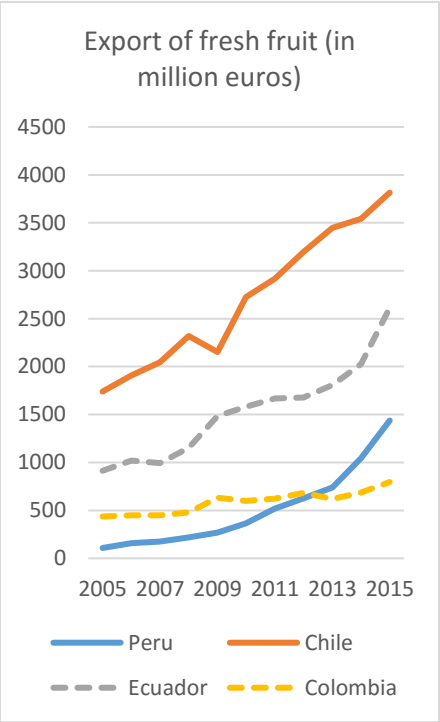
Peru – Colombia - Ecuador: The fresh fruit export in Peru has been developed to a more professional level than in Colombia. Logistical challenges in Colombia are even greater than those in Peru. Ecuador is much smaller and does not have access to the same amount of arable land. Like Peru, the exports of fresh fruit from Colombia and Ecuador are increasing, but 90% consists of banana trade.

Peru – Chile: Both Peru and Chile have managed to diversify their offer of fresh products. In technology Chile is more advanced, but Peru is catching up quickly, taking their neighbour often as an example. Knowledge transfer takes place as Chilean companies are actively looking into production opportunities in the south of Peru (Ica). Crops and technologies that are being adopted in Chile, are likely to be implemented in Peru short time later. Peru is able to produce the same crops as in Chile, but also has the advantage of more arable land and extended production seasons.

## Facts

**Export value fresh fruit:**
2005: 108 million euros
2015: 1437 million euros

**Export value fresh vegetables:**
2005: 156 million euros
2015: 469 million euros




Soure: ITC Trademap

| World ranking in export | 2005 | 2015 |
|---|---|---|
| Asparagus | 1 | 1 |
| Quinoa | 2 | 1 |
| Avocados | 6 | 2 |
| Table grapes | 20 | 5 |
| Mangoes | 5 | 5 |
| Ginger | >30 | 6 |
| Mandarins | 14 | 7 |
| Cocoa beans | 19 | 8 |
| Blueberries | - | 9* |
| Onions | 19 | 9 |
| Coffee | 10 | 9 |
| Bananas | 18 | 10 |
| Pomegranate | 57 | 12* |

*data blueberries and pomegranates concerns 2014

Soures: ITC Trademap, AGAP

## Most promising products

A whole range of products have been developed over the past years and are now exported worldwide. This way Peru has become one of main suppliers of fresh produce, the largest exporter of asparagus and the second largest exporter of avocados.

### Copying as a strategy

Numerous crops such as grapes, avocados, mandarins and asparagus have shown strong growth and include some of the largest companies in Peru. These producers are continuously analysing new opportunities. When new potential crops are identified, many companies copy the same example. Developing and upscaling new products not only require skill but also the flexibility to adapt, for example:

While the choice of producing Hass avocados continues to be an export success, the massive orchards of red globe grapes have put producers in a financial downfall because international markets grew a preference for seedless grapes. Similarly many of the old asparagus fields in the south are replaced by new high value crops that need less water such as blueberries. Blueberries are now one of the new crops that are quickly expanding in production.

### Need for organization and knowledge

Some of the successful crops in Peru are more related to small producers such as bananas, coffee and cocoa. The success of these particular products is contributed to niche specifications: organic, fair trade and special qualities (handpicked coffee, aromatic cocoa).

The main challenge in these crops is improving organization and knowledge. Small producers organize themselves in cooperatives, but it is not unusual for farmers to drop out due to suspected corruption or lack of trust. Without a level of organization it is difficult to get access to technical assistance and face challenges in climate and quality. Organizations such as Solidaridad and Agriterra help small farmers to organize themselves, and specialized companies contribute to the commercial development, which is the case with Agrofair and Fairtrasa in bananas.

For detailed information on different products, see annexes.

### What will Peru produce in the next decade?

In 2009 the Ministry of foreign trade and tourism (MINCETUR) executed a study for the selection of exportable products that are adaptable to the Peruvian territory. These products were: Physalis (golden berry), blueberry, pomegranate, quinoa, dates, granadilla, figs, tuna, ají amarillo (yellow chili peppers), camote (sweet potato) and snow peas. In fact, many of these products have already proven their potential in Peruvian production.

The next products we can expect to develop in Peru, mentioned by producers, are for example:
- cherries
- kiwi
- raspberries
- pistachio nuts

Other interesting products that are promoted from Peru:
- Ancient grains: besides quinoa also cañihua and kiwicha (amaranth)
- Health ingredients: camu camu, lúcuma, maca
- Exotic fruit and vegetables: kaki (Sharon fruit), cherimoya, purple corn, ginger
- Flowers: roses, bromeliads, orchids, hortensia's

The flower industry in Peru is underdeveloped. Flowers are a luxury product but the demand for them is growing stronger with an increasing middle class population. Export however will be difficult due to logistical reasons.

**Flower production in hectares:**

| | |
|---|---|
| Colombia | 6,500 ha |
| Ecuador | 2,500 ha |
| Peru | 300 ha |

Source: El Comercio

The drivers for the development for new products include:
- The focus on higher value products
- The demand or the potential growth in demand
- Climate circumstances (fitting the climate and irrigation systems)
- Seasonal advantage compared to other producing countries

## Level of technology & innovation

The production of fresh products for international markets is a relatively young sector in Peru. To comply with international requirements of the main export markets in North America and Europe producers have invested in quality production and processes. The difference in technology level is significant.

### Large companies

The top agricultural companies are the most advanced in terms of technology and organization, although size is not always a guarantee for technological success. These front-runners generally offer a diverse assortment of fresh and/or processed products and often have an integrated production, packing and export supply chain. They have the means to acquire knowledge enabling them to experiment in their own plant nurseries, instead of importing young plants from other countries. In their facilities you can encounter palletisers, food processing technologies (IQF) and even precision sorting and grading systems. A Dutch-Peruvian joint venture introduced near-infrared (NIR) spectroscopy in the processing plant T&T Fruit that was inaugurated in 2014.

### Medium-large companies

The technology level among medium-large companies varies from low to semi-advanced. For medium large companies low tech is considered affordable, effective and understandable. Many

companies have not fully integrated their supply chains and depend on the relation with farmers or independent packing houses. Some only source and export fresh products from farmers, others have their own fields or packing station. They are accustomed to having manual labour around and every process they automatize is carefully calculated. On the fields they rent machinery of larger companies, although replacing manual labour is complicated due to the specific characteristics of the products. In the packing plants automation is common. Most are certified and use mechanical sorting, weighing, packing and labelling systems. Medium-large companies are aware of their need to improve so they can remain competitive in the future. They follow the leading companies.

### Small companies

Small farmers and informal packing houses have little chance on the international market. They depend on larger companies or they sell their crop to the local market. A majority lacks the means to invest in expensive orchards such as blueberries, grapes or asparagus. They have a high level of informality and are mostly dedicated to local wholesalers. Certification related to agricultural practices (GlobalGAP) or HACCP are not common for suppliers to the national market.

In typical export products such as coffee and cocoa the production and post-harvest is artisanal - few technologies are being used. The roasting of coffee for export is increasing, but it is still a fraction of the large volume of unroasted coffee that is exported.

The reality and challenges of small farmers is very different from those of export companies.

### Overview of technological development and innovation

| | | |
|---|---|---|
| **Protected horticulture** | Basic | ▪ Some crops such as blueberry and grapes are sometimes protected with nets (avoiding birds and insects)<br>▪ Plastic is used on the ground against weed<br>▪ Local vegetables crops are mostly on open field<br>▪ Estimated surface of greenhouses: 500ha (mostly nets)<br>▪ Net houses (*'casa de malla'*) are often used as nurseries<br>▪ Glass greenhouses are rare due to favourable climate<br>  <br>*Net greenhouse* |
| **precision horticulture** | Upcoming | ▪ Drip irrigation is common<br>▪ Hydroponic technology is present, but mostly experimental<br>▪ Drones have been introduced very recently<br>▪ Peru has also a high definition satellite (also for potential agricultural use), but knowledge still has to be improved |
| **Plant breeding** | Basic | ▪ In general: Plant breeding is 'old-fashioned' / lack of knowledge<br>▪ More common for large scale professional growers<br>▪ Young plants are often imported from countries with crop experience (blueberry from USA, avocado from Chile) |

| | | |
|---|---|---|
| | |  <br>  <br>*University test facilities* |
| **Seed technology** | Basic | ▪ Basic testing facilities by government (high ambitions)<br>▪ Seed production of local growers informal and low quality<br>▪ Lack of knowledge on biogenetics<br>▪ International seed companies are active in Peru for exportable seed production (in Ica, Piura, Cañete)<br>  <br>*INIA Donoso facility* |
| **Agrochemicals** | Import | ▪ Agrochemicals are controlled by few international companies, therefore very expensive. Local products are low quality.<br>▪ Coastal farmers use most insecticides (67%), herbicides (55%), fungicide (52%). In mountains and jungle percentages vary between 14 and 37% |
| **Materials** | Import | ▪ Plastic, nets, mostly imported from e.g. China, Chile<br>▪ Tubes and pumps make dripping irrigation possible |
| **Packaging** | Good |  (*old) packing station*<br>▪ According to professionals, there are 5-7 professional suppliers of export packaging (example: Trupal)<br>▪ Exporters have their own packaging systems in packing houses.<br>  <br>*Packing house with weighing system and box folding machine* |

| | | |
|---|---|---|
| **Certifiers & Laboratories** | Good | ▪ For export GlobalGAP is common certification<br>▪ CNTA, ControlUnion, SGS, Bureau Veritas are all active in Peru |
| **Cultivation / crop management** | Manual | ▪ In export products automation in cultivation is difficult. In (open field) cultivation of local products, financial resources are often less.<br>▪ Machinery: tractors for fruit collection, weeding machines.<br>▪ Average 22,7% of farmers use tractor and percentage increases.<br>▪ Often tractor is rented from a larger company. On the coast tractor use in highest (52%). |
| **Post-harvest** | Increasing automation | ▪ Very common: manual labour<br>▪ Common: Mechanical sorting, automated weighing and packing, conveyors, cool storage<br>▪ Early adopters: Infrared grading (NIR), palletisers<br>▪ Lack of experience in advanced technology and not applicable to all products:<br>- Avocado: Too dark for infrared technology (hard to spot flies). Also little saving on human resources.<br>- Asparagus, coffee: Remains labour-intensive; automation is not always desired<br>- Mango: Level of automation is lower because plants exclusively focused on mango and period of operation is short. |
| **Cool chain & monitoring** | Good | ▪ Cooling houses almost standard for larger companies and packing stations.<br>▪ Monitoring present, but not fully automated. |
| **Logistics & supply chain** | Basic | ▪ Alternative ports are in development<br>▪ Low availability of trucks in peak season<br>▪ Limited adoption of ICT and logistical software |
| **Irrigation** | Advanced | ▪ Use of irrigation systems and rain (mostly combination)<br>- 88% surface gravity irrigation;<br>- 12% other irrigation systems, of which 127,000ha drip irrigation, 87,000 ha sprinkling systems, 4,000 ha exudation<br>▪ Large companies have their own water resources: water reservoirs, pumping installations, tubes.<br>▪ Table grapes boosted the implementation of drip irrigation systems. Technique also common for citrus and blueberries on central coast. |
| **Food processing** | Increasing | ▪ Equipment for frozen products (IQF), pulp, juice and concentrates (example: http://www.viru.com.pe) |

Sources: IV Nacional Agropecuario 2012; interviews

## R&D institutes and sector organizations

| Organisation | Description | website |
|---|---|---|
| INIA | Instituto Nacional de Innovación Agraria<br>*National Institute of Agracultural Innovation* | http://www.inia.gob.pe/ |
| Concytec | Consejo Nacional de Ciencia Tecnología e Innovación Tecnológica<br>*National Council of Science, Technology and Technological Innovation* | https://portal.concytec.gob.pe |
| UNALM "La Agraria" | Universidad Nacional Agraria La Molina<br>*National Agricultural University La Molina* | http://www.lamolina.edu.pe |
| AGAP | Asociación de Gremios Productores Agrarios del Peru<br>*Association of agricultural producer guilds in Peru* | http://www.agapperu.org |
| ▪ ProHass | Asociación de Productores de Palta Hass del Perú<br>*Association of producers of Hass avocados* | http://www.prohass.com.pe |
| ▪ ProCitrus | Asociación de Productores de Cítricos del Perú<br>*Association of producers of citrus* | http://www.procitrus.org |
| ▪ Provid | Asociación de Productores de Uva de Mesa del Perú | http://www.providperu.org |

| | | |
|---|---|---|
| | *Association of producers of table grapes* | |
| ▪ IPEH | Instituto Peruano del Espárrago y Hortalizas<br>*Peruvian institute of asparagus and vegetables* | http://www.ipeh.org.pe |
| ▪ Apem | Asociación Peruana de Productores y Exportadores de Mango<br>*Association of producers and exporters of mango* | http://www.peruvianmango.org |
| ▪ ProArandanos | Asociación de Productores de Arandano del Perú<br>*Association of producers of blueberries* | |
| ProMango | Asociación Peruana de Productores de Mango<br>*Association of producers of mango* | http://www.promango.org |
| CAC | Cámara Peruana del Café y Cacao<br>*Peruvian chamber of coffee and cocoa* | http://www.camcafeperu.com.pe |
| Central Café & Cacao | Asociación La Central Café y Cacao del Perú<br>*Association 'La Central' coffee and cocoa* | http://www.centralcafeycacao.org |
| Junta del Café | Junta del Café<br>*Council of Coffee* | http://juntadelcafe.org.pe |
| APP Cacao | Asociación de Productores Peruanos de Cacao<br>*Association of Peruvian cocoa producers* | http://appcacao.org |

## What are the main challenges of the sector for the coming 10 years?

### I - Lack of water is the principle reason for not cultivating

According to the Peruvian National Agricultural Census of 2012, the lack of water is in 48,9% the main reason why agricultural land is not cultivated. The second most important reason is the lack of financial resources.

| **Coast** | **Mountains** | **Jungle** |
|---|---|---|
| 1. Lack of water | 1. Lack of water | 1. Lack of financial resources |
| 2. Lack of financial resources | 2. Lack of financial resources | 2. Lack of water |
| 3. Erosion or sanitation | 3. Lack of human resources | 3. Lack of human resources |
| 4. Lack of human resources | 4. Lack of seeds | 4. Lack of seeds |
| | 5. Erosion or sanitation | 5. Natural disaster |
| | | 6. Erosion or sanitation |

The dependence of irrigation is 100% in coastal agriculture and 40% in the mountain area. It is calculation that coastal agriculture uses 80% of the water resources. According to an analysis by the Peru Opportunity Fund there are 300 thousand hectares on the coast with salinity problems. The costs of irrigation technology is high compared to the average costs of cultivation, but necessary, and only few have access to financial services.

Water issues

- Low awareness of the value of water
- Poor water management resulting salinization and drainage problem
- Low maintenance in existing irrigation canals resulting in water loss
- Climate change (melting glaciers, El Niño) resulting in changing water availability and sub-climates

### II - Institutional development

Institutional development is one of the big challenges in Peru. The fast economic growth in Peru requires a coherent policy, efficient and transparent institutions and improved cooperation with the private sector. Peru, traditionally an extremely centralised country, also has started an important process of decentralisation with the intention to increase economic development nationwide.

### III - Knowledge and education

Knowledge is key in the success of the agricultural sector. Many of the commercial farmers argue that the low education level and unskilled labour is a weakness in the sector. Training and increasing agricultural knowledge of farmers and agricultural workers will be one of the main challenges to bring the sector on a higher level.

### IV – Informal sector

The informality in agribusiness slows down the professionalization of the sector as a whole. Inequality in the agricultural sector favours the position of the larger enterprises that have the financial power and knowledge to become successful exporters. This unequal relationship put small farmers in a disadvantaged position, causing them to think short term and provoking an informal relation. Informal farmers and service providers are not bound to the same rules as formal businesses. Sourcing in these conditions becomes difficult as farmers do not always respect supply contracts and services are not always the best of quality. The mentality within informal agriculture is destructive for the international trade.

### V - Human resources

Labour costs are gradually increasing and people increasingly prefer to work in the city than in the periphery. Finding workers for the field is probably most challenging.

### VI – Infrastructure & logistics

Infrastructure remains challenging for Peruvian producers. Poor roads and heavy traffic make transport very inefficient and expensive. For farmers in the mountains and further east it is nearly impossible to supply fresh products for export. But also in the coastal area improvements in infrastructure are necessary to maintain a competitive position.

# 2. What are current government policies and activities in the sector?

## Policy goals and dilemmas

The goals and dilemmas of the National Agricultural Policy are well documented in the Supreme Decree approving the national agricultural policy – or Decreto supremo No. 002-2016-MINAGRI.

| General objective | Specific objectives | Focus areas in Agricultural policy: |
|---|---|---|
| "Achieve sustained income growth and livelihood of agricultural producers, giving priority to family farming, on the basis of higher capacities and more productive assets, and sustainable use of agricultural resources in the context of processes of growing social and economic inclusion of the rural population, contributing to food security and nutrition." | ▪ Increase agricultural competitiveness and market integration, with emphasis on the small agricultural producer.<br>▪ Managing natural resources and biodiversity sustainably in the competition of the agricultural sector. | ▪ Human rights<br>▪ Territorial (decentralisation)<br>▪ Gender<br>▪ Intercultural<br>▪ Social inclusion |

**1. Use of land (degradation)**

The National Institute of Natural Resources (INRENA) identified high percentages of degraded land by erosion (99%), desertification (26.8%) and salinization (0.24%), especially in the mountains and coastal areas.

- Policy: Improving water management for agricultural use. Recover, preserve and expand the quality and quantity of soil for agricultural use.

**2. Water resources**

Territorial distribution of water and poor utilization are major challenges for Peru. Use of pollutants and lack of water treatment generate a limiting factor for efficient use of resources, compromising both the quality and quantity of water supply.

- Policy: see irrigation infrastructure

**3. Forest resources and wildlife**

Increasing deforestation is a worrying trend, but at the same time forestry contributes little to Peru's economy (1.1%).

- Policy: Improve conditions for the development of activities of forest management, exploitation, processing and trade, as well as the use of wildlife and biodiversity, with profitability and social, environmental and territorial sustainability.

**4. Irrigation infrastructure**

The agricultural area under irrigation has shown a steady increase over the past 50 years, but the efficiency of irrigation water is only around 35% due to the poor condition of distribution networks, uncoated water channels and the massive use of gravity irrigation.

- Policy: Increase efficiency and provision of irrigation infrastructure, through for example the modernization of farm irrigation and investment in irrigation infrastructure nationwide, giving priority to small and medium agriculture.

### 5. Agricultural innovation and investigation

The agricultural sector counts with little technology and low level of investment in R&D, resulting in an underperformance and a lower productivity in agriculture than Chile and Ecuador.

- Policy: Increase innovation and modernization, with an impact on agricultural productivity and profitability.

### 6. Agricultural heath and sanitation

Peru has made progress in establishing zones free of fruit flies and many varieties of pests, but there is little detailed information about the pest status and risks in Peru. Also malpractices have been observed in production, processing, distribution and hygiene in food and feed. According to the National Agricultural Survey (ENA) in 2014, 76% of the farmers do not perform good agricultural practices to prevent soil degradation and 79% of the farmers do not have an adequate use of pesticides. Only 1% of the farmers comply with Good Manufacturing Practices.

- Policy: Protect, strengthen and expand the sanitary and phytosanitary patrimony as well as the food safety practices.

### 7. Access to finance

The agricultural sector has a poor penetration in the financial sector due to

- low financial education;
- absence of loan guarantees;
- lack of property rights;
- failure in previous payments;
- lack of connection to (inter)national markets.

The access of farmers to formal credit is calculated at only 8%. This low rate prevents farmers to access working capital and technological improvements that could increase productivity and competitiveness of their crops, but also reflects the perception of the financial institutions in the agricultural market: high risk, high informality and low profitability.

- Policy: Strengthen and expand the credit markets and agricultural insurance for small and medium farmers nationwide.

### 8. Process of land ownership

The sector still counts with a problem of informality in rural property, leading to low incentives from producers to invest in improvements of their asset (land) and reduced access to credit, which impacts in terms of productivity of agricultural units.

- Policy: Increase legal certainty of land in the agricultural sector.

### 9. Technical assistance and training

According to CENAGRO (2012) only 8% of farmers have received some form of technical assistance and only 5% have received some type of training. In business management and advice this is less than 1%.

- Policy: Increase productive and entrepreneurial capacities of agricultural producers, with particular attention to rural women and youth.

### 10. Development of market and value chains

The commercial performance has increased with a diversifying offer of agricultural products and improved access to international markets thanks to various trade negotiations. However, the majority of farmers are smallholders with a low level of organisation.

- Policy: Strengthen and expand the access of products of small and medium farmers to local, regional and national markets as well as export markets.

**11. Agrarian institutions**

Limited coordination and communication within and between sectors make it difficult to build and implement an integrated sectoral development model. In addition, there are deficient management capabilities of institutions, inadequate management of human resources, limited management information systems, among others. At a sector level relevant aspects are:
a. Vulnerability and climate change
b. Change in production patterns and technological needs

- Policy: I) Strengthen governance in the national agricultural sector.
- II) Implement processes for disaster risk management in agriculture, ensuring the continuity of productive farmers and their livelihoods in a context of climate change.
- III) Promote processes of change and crop diversification, generating favorable social, economic and environmental impacts.

## Support programmes in detail

### Programa Nacional de Innovación Agraria (PNIA)

http://www.pnia.gob.pe/es/fondos-concursables/convocatoria-2016.htm

Call for proposals (competitive funds)

| STRATEGIC INVESTIGATION | ADAPTIVE INVESTIGATION | EXTENSION SERVICES | SEEDS AND LIVESTOCK REPRODUCTION | TRAINING COMPETENCY |
|---|---|---|---|---|
| Research to generate knowledge to capacity building for agricultural innovation and competitiveness, with high impact on the national policy (e.g. inclusion, sustainability) | Research focused on solving specific problems that limit productivity and competitiveness involving an adjustment or upgrading of existing technologies. | Providing technical assistance and training in production, post-production and marketing of agricultural products. | Provision of goods and professional services for the production, post-production and marketing of seeds. | Education (grants) for leading producers and professionals who interact in the market for agricultural and forestry services. |

### AgroIdeas

http://www.agroideas.gob.pe

AgroIdeas is a non-reimbursable fund, varying between 30 and 70% of costs to increase agricultural competitiveness, utilized for the constitution, management or technical improvement of the business.

### AgroRural

http://www.agrorural.gob.pe

AGRO RURAL is the executing unit attached to the Vice Ministry of Development and Agricultural Infrastructure and Irrigation, which aims to promote rural agricultural development through financing of public investment projects in rural areas of minor degree of economic development.

### Programa Subsectorial de Irrigaciones (PSI)

http://www.psi.gob.pe/programa/mi-riego/

The Subsector Irrigation Program (PSI) contributes to increasing agricultural production and productivity in the highlands, promoting sustainable change in traditional agriculture with a higher profitability through modernization of irrigation systems and associativity of small farmers.

| MiRiego | PSI - Sierra | Programa Presupuestal 0042 | Fondo Empleo | Valles Vulnerables |
|---|---|---|---|---|
| 2011-2015 | 2011-2015 | permanent | 2014 – 2017 | 2016 – 2020 |
| 1 billion Peruvian Soles | 12.8 million Peruvian Soles | 1.75 millon Peruvian Soles | 5.4 million Peruvian Soles | 180.3 million Peruvian Soles |
| Fund for public investment projects in water infrastructure and irrigation technology to improve conditions in highland Peru. | Increasing agricultural production and productivity in the mountains, through modernization of irrigation systems and association of small farmers. | Increasing production and productivity of irrigated agriculture, improving utilization of water resources and efficiency in the use of arable land. | Improve economic employment through crop production of yellow corn, cowpeas and organic bananas of small farmers in the old valley of Olmos. | Provide comprehensive and permanent treatment of riverbeds to reduce the risk of flood disasters of vulnerable valleys. |

In addition to the programmes above PSI also has regular resources (Recursos Ordinarios) to apply directly.

### Sierra Exportadora

http://www.sierraexportadora.gob.pe

Sierra Exportadora is the public executing agency that seeks to promote and develop an exportable offer of quality products. They articulate the Peruvian highlands in national and international markets and encourage local entrepreneurship and innovation, converting the Andean region into a competitive region.

### Fondo de Cooperación para el Desarrollo (FONCODES)

http://www.foncodes.gob.pe

The Cooperation Fund for Social Development (FONCODES) is a national program of the Ministry of Development and Social Inclusion (MIDIS) working on generating more sustainable economic opportunities of the extreme poor rural households.

### Fundación para el Desarrollo Agrario (FDA)

http://fdaunalm.com/

The Foundation for Agrarian Development is a private, nonprofit organization created by the National Agrarian University (UNALM) to support its research, training, advocacy and outreach, contribute to the national development and improving the quality of life of farmers.

### InnóvatePerú

http://www.innovateperu.gob.pe

The National Innovation Program for Competitiveness and Productivity (InnóvatePeru), is one of the main executors of the National Productive Diversification Plan of the Ministry of Production.

| FINCyT | FIDECOM | FOMITEC | MIPYME |
|---|---|---|---|
| Fund for Innovation, Science and Technology | Research and Development Fund for Competitiveness | Framework Fund for Innovation, Science and Technology | Fund to strengthen the productive development of micro, small and medium enterprises |

### ProInversión

www.proinversion.gob.pe

The Agency for private investment (ProInversión) offers various ways for companies to participate in public projects.

| Asociación Público-Privada (APP) | Iniciativas Privadas Autofinanciadas (IPA) | Obras por impuestos |
|---|---|---|
| Public-private partnerships for self-financed or co-financed projects by the government | Private self-financed initiatives for public projects | Work for tax – public projects by private companies through advance payment of their income tax |

## Planned public investments

### A large budget share goes to irrigation infrastructure:

| Interventions in infrastructure in agriculture 2016 | Million Peruvian Soles | Share in % |
|---|---|---|
| Irrigation | 1719 | 71.1 |
| Agricultural | 143 | 5.9 |
| Science and technology | 140 | 5.8 |
| Fishery | 81 | 3.4 |
| Risk management and emergencies | 80 | 3.3 |
| Other | 255 | 10.5 |

Source: Ministry of Economy and Finance (MEF)

### The public budget for agriculture is regionally oriented:

| Division of agricultural budget (2013) | Million Peruvian Soles | Share in % |
|---|---|---|
| **Local governments** | **923** | **38.4** |
| **Regional governments** | **763** | **31.8** |
| **National governments** | **718** | **29.8** |
| - Ministry of agriculture (MINAGRO) | 589 | 24.5 |
| - National Agricultural Health Service (Senasa) | 99 | 4.1 |
| - National Water Authority (ANA) | 26 | 1.1 |
| - National Institute of Agricultural Innovation (INIA) | 4 | 0.2 |

Source: Ministry of Agriculture and Irrigation

### Investment in infrastructure

Public investments that are relevant for Peruvian agricultural sector are focused on:

1. Logistical infrastructure
2. Agricultural infrastructure (irrigation projects)

#### Logistical infrastructure

Infrastructure is extremely important for the further growth of fresh export. Efficient logistics to nearby ports and beyond contributes to its quality and competitiveness. Plans in infrastructure are executed under supervision of the Ministry of Transport and Communication.

- From 2011 to 2016 the length of paved roads incremented from 12,500 km's to 20,000 km's.
- The planned investment in improving ports in Peru exceeds 2 billion USD, of which 25% will be executed between 2015 and 2017.

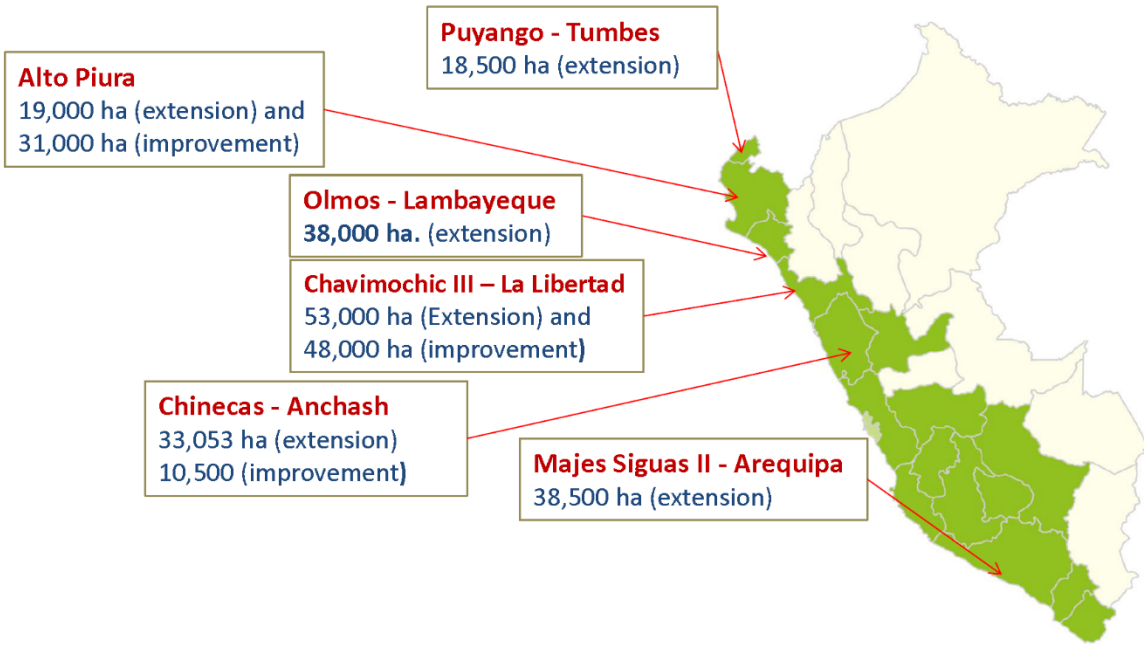
According to the National Port Authority, there are 7 concession projects in port development, of which 4 relevant for the horticultural export:

| Project / port | Place | Concession holder | Start date & period |
|---|---|---|---|
| Port terminal of Paita | Piura | Terminales Portuarios Euroandinos (TPE) | 09/2009 (30 yrs) |
| Container terminal Callao – southern zone | Callao (Lima) | DP World Callao | 07/2006 (30 yrs) |
| North terminal (multipurpose) | Callao (Lima) | APM Terminals | 05/2011 (30 yrs) |
| Port terminal General San Martin | Ica | Terminal Portuario Paracas (TPP) | 07/2014 (30 yrs) |

#### Agricultural infrastructure

With a portfolio of several large irrigation projects (among other types of projects), Peru aims to increase the amount of irrigated agriculture from 989 thousand hectares in 2012 to 1,408 thousand hectares in 2016.

| Principle agricultural projects 2016 | Location | Peruvian Soles |
|---|---|---|
| Majes – stage II | Arequipa | 196 million |
| Proyecto Chavimochic – stage III | La Libertad | 181 million |
| Improvement of strategic services of agricultural innovation | Lima | 61 million |
| Improvement of irrigation and generation of hydropower in highland Piura | Piura | 55 million |
| Cadastre, titling and registration of rural land in Peru, 3rd stage | Loreto, Madre de Dios, San Martin and Ucayali | 47 million |
| Extension of support for rural productive partnerships in Highland Peru - Partners II | Apurimac, Ayacucho, Huancavelica, Huanuco, Junin and Pasco | 39 million |
| Consolidation of Agricultural Innovation | Lima | 38 million |
| Water consolidation of the basin of Tambo river basin for the improvement and Expansion of the agricultural frontier | Moquegua and Arequipa | 30 million |
| Strengthening local development in highland and high jungle areas of Peru | Amazonas, Cajamarca, Lima and San Martin | 29 million |




Source: AGAP 2014, ProInversión

## Investment opportunities

### Independent investment opportunities

- Joint ventures in sourcing and/or processing
  *(Production, processing and packing of fresh fruit, cocoa or coffee)*
- Innovative projects in horticulture
  *(Precision agriculture, protected horticulture in high value crops or flowers)*
- Private knowledge and innovation centres
  *(Plant breeding, seeds, agricultural practices, post-harvest)*

### Tenders

Tenders by the Peruvian government can be found on the website of Peru Contrata (www.perucontrata.com.pe), the portal for public contracts. Tenders are published according to the Legislation 30225 for State Contracts. Most information is in Spanish.

Alternative international sources:

- Tenders Info - www.tendersinfo.com
- Global Tenders - www.globaltenders.com
- DgMarket - www.dgmarket.com

Investment Agency Peru:

- Invest in Peru - www.proinversion.gob.pe

## Regulatory requirements

### Phytosanitary requirements

| | Phytosanitary permit | Sanitary inspection on entrance | Phytosanitary certificate | Subject to quarantine on entrance |
|---|---|---|---|---|
| Processed products of plant origin without the potential of containing plagues | No | No | No | No |
| Processed products of plant origin with potential of plagues | No | Yes | No | No |
| Semi-processed products of plant origin, fresh or dry, for direct application or use and with potential of plagues | Yes | Yes | Yes | No |
| Seeds, plants or their parts for propagation, reproduction or sowing | Yes | Yes | Yes | Yes |
| Other products with potential phytosanitary risk | Yes | Yes | Yes | Yes |

Source: Senasa

### Import duties

| **Import duties** | |
|---|---|
| **Duty Rates** | 0% to 11% (Some products can be imported free of duty) |
| **Sales Tax** | 16% VAT on import (Sum of CIF value, duty, and excise and tariff surcharge if applicable) |
| **Minimum thresholds** | Up to USD 200 (FOB, by courier) are exempt from duties and taxes |
| **Other taxes and custom fees** | |
| Additional fee | 0% - 5% on the sum of the CIF value and duty |
| Excise (ISC) | for some products: 0% - 50% on the sum of the CIF value and duty |
| Tariff surcharge | various rates, calculated on the sum of the CIF value, duty and excise if applicable |
| Municipal tax | 0% - 2% on the sum of the CIF value, duty, excise and tariff surcharge if applicable |

Source: DutyCalculator, SUNAT

### Competent authorities

- **Senasa**, *Agricultural Sanitary* - www.senasa.gob.pe
- **Digesa,** *Food safety and Sanitary* - www.digesa.minsa.gob.pe
- **SUNAT**, *Tax office and customs* - www.sunat.gob.pe

## Examples of bilateral cooperation

- **Netherlands:** Memorandum of Understanding (MoU) between the Peruvian 'Servicio Nacional de Sanidad Agraria' (SENASA) and the Dutch Food and Goods Authority (NVWA) regarding the digitization of phytosanitary certificates for the trade of agricultural products (2015)
- **Spain:** Call for bilateral cooperation on technical development and innovation by CONCYTEC (through FONDECYT) and the Spanish Centre for Industrial Technological Development (CDTI)
- Israel: The National Water Authority (ANA) and Israel signed a cooperation for the management of water resources (2013)
- **India:** Agreement between Indian Council of Agricultural Research (ICAR) and the national Institute of agricultural Research of Peru (INIA) (1997)
- **Japan:** Agreement between the National Institute of Agricultural Research and Promotion (INIPA) and the International Cooperation Agency of Japan (JICA) to design the infrastructure of a Center for Research and Training Horticulture (1987)

# 3. What are the risks and opportunities regarding CSR?

Many exporting producers have already adopted CSR policies and have certified their production and processing (GlobalGAP, BRC). Other companies will follow this development in order to become attractive international suppliers. Meanwhile, Peruvian government has put their focus on large infrastructural projects but also on the competitiveness and inclusion of small farmers. Great effort is needed to organise and formalise the agricultural sector and to face serious challenges in labour practices, environment and equality.

## Labour

In the agricultural sector the level of informality is high. For many small farmers it is not common to have workers on the payroll *(planilla)* and, especially in family farms, children are often helping on the field. There is a risk of child labour, although in recent years serious efforts have been made to encourage children to go to school, increase labour inspection and strengthen penalties for human trafficking. Although Peru has made a long term strategy on labour practices, labour inspection remains underfunded.

Modern agribusinesses supplying export markets cannot afford to have informal labour practices and many of them pay special attention to the well-being of their workers. They even indicate it is difficult to find skilled workers. Expanding agricultural export companies are expected to double formal employment in the sector. Nevertheless, there are also concerns in the unlimited short-term contracts and difficulty for workers to organize themselves in unions.

Source: FCE

Further reading:

www.producebusinessuk.com/supply/stories/2015/09/09/peru-takes-serious-csr-strides-but-more-support-is-needed

www.dol.gov/ilab/reports/child-labor/findings/2014TDA/peru.pdf

www.laborrights.org/releases/us-labor-dept-finds-labor-rights-abuses-peruvian-export-industries

## Environment

The main environmental issues in Peruvian agriculture can be found in:

- Water conflicts
- Depletion of soil and natural resources
- Agrochemicals effecting health and environment

### Water conflicts

Water availability and efficient water management is a severe problem in Peru. In Ica it has reached a point that companies are implementing more precise irrigation systems or are changing to less water-consuming crops. It is one of the reasons why the asparagus production has been reduced over the past years. Meanwhile ground water levels are going down and farmers with less financial resources are not able to reach water resources, which sometimes result in conflicts between large producers and smaller farmers.

### Depletion of soil and natural resources

In Peru the problems affecting soil and natural resources are serious. The coastal area is a challenging environment where wind, excessive irrigation and poor drainage lead to salinisation and unproductive fields. In highland Peru land there are risks of over-exhaustion and landslides of land through grazing, burning grassland and poor soil management. In the jungle deforestation through logging and slash & burn monoculture are threats for both the region's biodiversity and fertility. Although (illegal) goldmining is the biggest influence on deforestation, large scale oil palm and (recently also) cocoa plantations reduced primary forests with 30,000 hectares since the year 2000.

In the end, the depletion of soil and natural resources will increase the gap between well managed agribusinesses and smaller farmers that lack resources, knowledge and efficiency.

### Agrochemicals effecting health and environment

The successful growth of the horticultural sector also means an increase of the use of agrochemicals. In Peru some of the very toxic pesticides are still allowed and often used in excess, with related consequences for its effectiveness and the local ecosystem. Poor information and training also frequently cause health problems. According to Peruvian sources the waste (such as packaging) of agrochemicals is often buried or burned in pits.

The Action Network on Alternative use of Agrochemicals (RAAA) attempts to generate initiatives to reduce the use of pesticides and promote sustainable farming.

Further reading:

www.ecologyandsociety.org/vol21/iss2/art35/ES-2016-8512.pdf

www.producebusinessuk.com/supply/stories/2015/09/16/the-irrigation-projects-transforming-peru-s-produce-prospects

www.peruthisweek.com/news-water-shortages-threaten-agriculture-in-southern-peru-103584

www.oecd.org/environment/country-reviews/16-00313%20Evaluacion%20desempeno-Peru-WEB.pdf

www.peruviantimes.com/19/toxic-pesticides-still-allowed-in-new-agriculture-regulations/23786/

www.agriculturesnetwork.org/magazines/global/finding-common-ground/pesticides-in-perus-highlands

http://maaproject.org/2015/maap-synthesis1/

## Land rights and land claims

The ambition of current governmental policies is to increase competitiveness with an emphasis on sustainable income growth and social inclusion of the small farmer. However, this policy is not consistent with the economic reality. Larger companies have the best means for technical development and are considered important contributors to Peru's economy. It makes them more powerful in relation to small farmers. With their financial resources they are better equipped to acquire new fertile land or even incorporate farms into their organisation. Likewise many small farmers decided to sell their land, for various reasons:

- Lack of capital
- Increasing costs of production
- High cost of accessing ground water or maintaining irrigation infrastructure (for example in Ica)
- Climatic difficulties (mainly the effect of El Niño)
- Debts with credit entities

Instead of farmers benefitting from social incentives, their land is transferred to large producing firms. But the other way around also occurs: Private land that is not looked after is being occupied for informal cultivation, which is often followed by a long and slow legal process. A large quantity of farmers do not have official land rights. This inequality in the sector withholds smallholders to escape poverty.

Further reading:

www.landcoalition.org/sites/default/files/documents/resources/PERU_ENG_web_21.06.11%202.pdf

**Opportunities for Dutch companies and organisations**

- Provide technical assistance or training through government aid incentives;
- Help with certification and compliance for the EU market (e.g. GlobalGAP);
- Provide knowledge transfer on IPM and precision horticulture;
- Help organize small farmers (NGOs);
- Help develop farmers to deliver a quality and competitive product for the local market. Not all small farmers can become export farmers and cooperatives do not always work out.

# 4. Opportunities and challenges for Dutch companies

## Dutch companies in Peru

For many years Peru has not been a primary focus for Dutch companies. Until the late 90s traditional exports such as mining products and a few commodity crops dominated Peru's economy. Horticultural and agro food exports were minimal.

In the last decade Peru's export has made a radical shift. The fast emergence of large commercial farmers gave way to economic and technical development, not only attracting the interest from Dutch companies, but also from Brazil, Chile, China, Spain, Israel, the United States and several other countries.

Dutch companies that are active in Peru often operate through a representative, some are able to have direct clients and only few have local offices.

**Examples of Dutch companies and NGOs in Peru:**

| | | | |
|---|---|---|---|
| KLM | Logistics | Local office | www.klm.com |
| APM Terminals | Logistics | Local office | www.apmterminalscallao.com.pe |
| Seatrade | Logistics | Local office | www.seatrade.com |
| Greefa | Sorting-packaging | Representative | www.greefa.nl |
| Rijkzwaan | Seeds | Representative | www.rijkzwaan.com |
| Enza Zaden | Seeds | Representative | www.enzazaden.com |
| Anthura | Young plants | Direct | www.anthura.nl |
| ControlUnion | Inspection / laboratory | Local office | www.cuperu.com/portal |
| Triodos | Finance | Partners | www.triodos.nl |
| Agriterra | NGO | Local office | https://agriterra.org |
| SNV | NGO | Local office | www.snv.org |
| Solidaridad | NGO | Local office | www.solidaridad.nl |
| PUM | NGO | Local office | https://pum.nl |
| CBI | Public agency | Partners | www.cbi.eu |

In the past several PSI and PSOM projects have been approved in Peru. Among the applicants are Hillfresh, Van Ooijen Citrus, La Flecha Import-Export, Chocolatemakers, Jarwo, Handelsmaatschappij Demeter, Van der Staaij, Agrofair Europe, Delidor Delicatessen and Machinehandel Lekkerkerker.

Most of the Dutch importers of fresh fruit and vegetables are familiar with Peru and have established trade relations. They can be an interesting source of information for suppliers elsewhere in the value chain such as horticultural technology or logistical services.

**Examples of importers with experience in Peru**

| | | |
|---|---|---|
| Eosta | import | www.eosta.com |
| Hillfresh | import | www.hillfresh.eu |
| Nature's Pride | import | www.naturespride.nl |
| Van Ooijen | import | www.vanooijencitrus.nl |
| Hagé | import | www.hage-international.nl |
| Van der Staaij | import | www.staayfoodgroup.com |
| Fairtrasa | import | www.fairtrasa.com |
| Jaguar | import | www.jaguarfreshcompany.com |
| BUD Holland | import | www.bud.nl |
| Verdi Import | import | www.verdiimport.nl |
| Agrofair | import | www.agrofair.nl |
| OTC Holland | import | http://otcholland.com |
| Zoutewelle | import | www.zoutewelle.nl |

## Funding opportunities in Peru

Financial facilities from the Netherlands

### DGGF

*The Dutch Good Growth Fund*
DGGF supports Dutch SME that do business in developing countries and emerging markets with tailored financial service. Services are related to financing export of capital goods or an investment in a developing country.
More about DGGF

### DRIVE

*Development Related Infrastructure Investment Vehicle*
DRIVE is a flexible financial instrument that contributes to the realisation of public infrastructural projects that is are relevant for the development of low and mid income countries.
More about DRIVE
Factsheet

**FDOV** (currently inactive)
*Facility for Sustainable Entrepreneurship and Food Security*
The Facility for Sustainable Entrepreneurship and Food Security (FDOV) encourages public-private partnerships in the field of food security and private sector development, in developing countries.
More about FDOV

### DHI

*Subsidy for demonstration projects, feasibility studies and investment preparation studies*
The objective of DHI is to increase the number of Dutch companies that internationalize successfully in emerging markets and developing countries, and making a positive contribution to sustainable local development. The DHI scheme consists of three modules.
Demonstration projects: demonstration of your technology, capital goods or services.
Feasibility studies: research into the feasibility of a foreign investment in your product. A feasibility study will increase the likelihood that your potential customer want to invest in your technology, capital goods or services.
Investment preparation studies: study of the technical and commercial feasibility of your investment in a company.
More about DHI

### G2G, K2K and NMTP

*Government-to-government | Knowledge-to-knowledge | Netherlands Management Training Programme*
The aim is to create favorable conditions for doing business with countries that are interesting for Dutch entrepreneurs. In these projects, Dutch government organizations and research institutes exchange knowledge with their foreign counterparts.
More about G2G, K2K and NMTP

## International funding facilities

| | | |
|---|---|---|
| Rabobank & Rabobank Foundation | Banking | www.rabobank.com |
| Triodos | Impact finance | www.triodos.com |
| Root Capital | agricultural impact investor | www.rootcapital.org |
| Oiko credits | Microcredit | www.oikocredit.nl |
| Impact Finance Fund | Impact finance | www.impact-finance-fund.com |
| Common Fund for Commodities | intergovernmental financial institution | http://common-fund.org |
| FMO | Development bank | www.fmo.nl |
| LAAD | Latin American Agribusiness Development Corporation | www.laadsa.com |
| IDB | Inter-American Development Bank | www.iadb.org |
| CAF | Development Bank of Latin America | www.caf.com |
| IFC | International Finance Corporation (Worldbank) | www.ifc.org |
| Coface | Export credit insurance | www.coface.nl |
| Atradius | Export credit insurance | https://atradius.nl |
| Seaf | Small Enterprise Assistance Fund | http://seaf.com |

## Funding facilities in Peru

| | | | |
|---|---|---|---|
| COFIDE | Development Bank of Peru | | www.cofide.com.pe |
| Agrobanco | Governmental Bank | | www.agrobanco.com.pe |
| Peru Opportunity Fund | Fund for small producers | | www.peruopportunity.org |
| Concytec | National Council for Science, Technology and Technological Innovation | Calls for proposal | https://portal.concytec.gob.pe |
| Innóvate Peru | Manages different funds for innovation | Calls for proposal | www.innovateperu.gob.pe |
| AgroIdeas | Programme for compensation in competitiveness | Calls for proposal | www.agroideas.gob.pe |
| PSI | Subsector programme for irrigation projects | Calls for proposal | http://www.psi.gob.pe/programa/mi-riego/ |
| PNIA | National programme for agricultural innovation | Call for proposal | http://www.pnia.gob.pe/es/fondos-concursables/convocatoria-2016.htm |
| FONCODES | Fund for development cooperation | | http://www.foncodes.gob.pe |
| FDA | Fund for agricultural development | | http://fdaunalm.com/ |

A complete overview of financial services in Peru can be found on the website of the Superintendence of banc, insurance and pension funds.

## What are the obstacles and possibilities regarding finance and credits?

There are numerous financial service providers and programmes in Peru, varying from development banks and commercial banks to microcredit and impact finance. The access to these financial service providers depends on the financial knowledge, profile and size of the applicant.

### Size determines access to finance

Large companies in Peru still have a great advantage over small farmers in attracting capital and financial services. Oxfam published a report to show that projects financed by the International Finance Corporation (IFC) of the Worldbank are related to some of the most powerful entrepreneurial groups such as Grupo Breca, Grupo Romero, Intercorp and Grupo Wong.
Also agricultural companies and foreign investors have been able to benefit from IFC such as *Agrokasa Holdings* (30 million USD for infrastructure projects for agricultural export production) and *APM Terminals* (75 million USD for the expansion of the northern dock at the Callao Port). The most successful foreign applicants were from Spain, the USA and Colombia.

### The role of sourcing companies

Despite of the many initiatives of microcredit and impact finance, the access to finance for smallholders is difficult and expensive due to a general lack of collateral and financial history. Impact finance organizations are gradually moving away from funding micro-farmers and try to find new ways to reach them through medium sized sourcing companies. For sourcing companies it is common to help growers finance their production and provide them with technical assistance. The success of sourcing companies and cooperatives in organizing small growers and building reliable relations is essential for a sustainable flow of capital and social development. The company Machu Picchu Foods is an example of a company in cocoa products that used FMO funding to invest is small farmers.

### Financial education a top obstacle or opportunity

The Center of Financial Inclusion concluded that financial education is the top obstacle and opportunity in Peru regarding financial inclusion. Experts have also indicated the high cost of delivering services to rural, remote and poor areas as a main obstacle.

### Local interest rates are high

The financing of investment and working capital in agribusiness is considered high risk. The commercial interest rates for finance and credit are very high. For example, Agrobanco charges interest rates of 10-17% for business credit in US Dollars, depending on the type of finance and the duration of the loan. In local currency (Peruvian Soles) interest rates are even higher.

## Who are the main players that have the financial means to invest in innovation?

The production and processing of non-traditional export products, such as fresh fruit and vegetables, requires knowledge and new technologies. The largest exporting companies are most likely to apply new technology and invest in research and development. These large companies often manage an integrated chain of plant breeding, production and packing/processing. They compete in a global market and they are the drivers of innovation in Peru. A large quantity of medium-sized companies cannot afford to stay behind and will follow similar developments.

**Overview of the largest horticultural exporters**

| RANKING | EXPORTADOR | EXPORT (FOB) x 1,000 USD |
|---|---|---|
| 33 | CAMPOSOL S.A. | 179.303,5 |
| 36 | PERALES HUANCARUNA S.A.C. | 166.066,7 |
| 42 | SOCIEDAD AGRICOLA VIRU S.A. | 134.950,8 |
| 46 | COMPLEJO AGROINDUSTRIAL BETA S.A. | 118.134,8 |
| 48 | DANPER TRUJILLO S.A.C. | 112.087,4 |
| 59 | SOCIEDAD AGRICOLA DROKASA S.A. | 82.218,4 |
| 65 | GANDULES INC SAC | 73.745,6 |
| 68 | EL PEDREGAL S.A | 70.621,0 |
| 73 | MACHU PICCHU FOODS S.A.C. | 66.394,1 |
| 77 | SOCIEDAD AGRICOLA RAPEL S.A.C. | 59.357,7 |
| 82 | TAL S A | 56.046,4 |
| 88 | CONSORCIO DE PRODUCTORES DE FRUTA S.A. | 50.590,9 |
| 89 | ECOSAC AGRICOLA S.A.C. | 50.570,4 |
| 90 | CAFETALERA AMAZONICA S.A.C. | 50.325,1 |
| 93 | PROCESADORA LARAN SAC | 48.471,0 |
| 96 | PROCESADORA DEL SUR S.A. | 48.105,7 |
| 100 | AGROINDUSTRIAS AIB S.A | 45.543,8 |
| 115 | EXPORTADORA ROMEX S.A. | 36.308,7 |
| 118 | GREEN PERU S.A | 35.450,9 |
| 126 | AGRICOLA DON RICARDO S.A.C. | 32.827,7 |
| 133 | SUMAQAO SOCIEDAD ANONIMA CERRADA | 31.386,0 |
| 134 | H.V.C.EXPORTACIONES SAC | 31.287,8 |
| 136 | AGRICOLA CERRO PRIETO S.A. | 31.026,2 |
| 143 | AMAZONAS TRADING PERU S.A.C. | 29.532,8 |
| 146 | PRONATUR S.A.C | 28.228,7 |

Source: Sunat - annual export 2015

## What are interesting developments?

### New presidency

The elections of 2016 introduced the new presidency of Pedro Pablo Kuczynski. Kuczynski is a former minister of finance (2001-2006) and former advisor for the Worldbank. He is considered a pro-business economist and technocrat, who has been engaged in the private sector for a large part of his career. His presidency predicts a government policy towards economic development and a continuation of the favourable business climate for foreign investors.

### Trade Agreements

New Free Trade Agreements (FTAs) and bilateral phytosanitary protocols open up new markets for Peru. In recent years new agreements have been realized with Japan, China, South Korea the USA and Europe. As a result Peru is now exporting bell peppers to the USA and avocado to China. These developments are important to sustain the Peruvian export growth.

### Pacific Alliance

Established in 2011, the Pacific Alliance (Alianza del Pacífico) is an initiative between Peru, Mexico, Colombia and Chile with the objective of commercial integration and the free movement of goods, services, resources and people. Although its focus is on the Asia-Pacific, it also offers opportunities for companies and investors that have a regional ambition.

### Development of public services

The level of public services for exporters in Peru is in development. Although the private sector is often sceptic about the functionality of their services, the public sector is making obvious attempts to optimize processes. Examples of these developments are:

- Senasa and e-certification (assisted by the Dutch NVWA)
- Ventanilla Única de Comercio Exterior (VUCE) – a centralised window for export documentation

These steps are part of the total development and competitiveness of Peru.

### Foreign investment

Peru offers an attractive foreign investment policy (ProInversion) among which:

- non-discriminatory treatment;
- free transfer of capital;
- protection of private property;
- freedom to acquire shares from Peruvian nationals;
- Free to access internal and external credit;
- access to international dispute settlement mechanisms.

Peru also participates in and follows OECD guidelines for multinational enterprises.

### Growing demand of consumer market

The supermarket penetration in Peru is still low compared to Latin American countries, but consumer expenditure is feeding its fast expansion. This will result in a higher demand in processed food, as well as imported food products according to the retail foods 2015 report of the USDA Global Agricultural Information Network. Local supermarket chains will also help raising the quality

standards for fresh fruit and vegetables, providing better access to professional growers and foreign technology.

### Development of high value crops drives innovation

Future developments in high value crops will almost certainly drive the sector towards new technological solutions and further automation. This trend will be strengthened by

- the continuation in export growth
- the strong competition from national and international producers
- a low availability of skilled labour
- the increasing costs of labour
- the increasing quality requirements in export markets

However, every new technology needs prove of concept and training on the job.

### Direct import of generic pesticides improves competitiveness Peru

The legislation no. 30190 (adopted in May 2014) promotes the competitiveness of domestic agricultural production in Peru. Under this law the food safety authority Senasa supervises the registration of pesticides for agricultural use, allowing producers to import generic pesticides directly from origin.

### Professional service providers

With a wide range of service providers, the Peruvian horticulture sector has been able to accommodate the export of fresh products and create a good basis for further growth.

- Packaging (Trupal)
- Laboratories & certifiers (ControlUnion, CNTA)
- Inspection bodies (SGS, BureauVeritas)
- Logistics (APM Terminals, Seatrade, CEVA Logistics)

Large holding companies such as Grupo Gloria, known for their dairy products, have integrated service companies such as Trupal for packaging and Logística del Pacífico for logistic operations. These operations are beneficial for the core activities of the holding, but at the same time they offer third party services.

Farming companies sometimes have a similar strategy, such as the company Agrícola Viñasol that, besides producing fresh products, also provides agricultural equipment, transport services, agrochemicals and technical assistance.

### Can logistics keep up with export?

The main ports for export of fresh products are Callao (Lima) and Paita. Pisco and Salaverry also manage logistical service in the fresh sector, but the availability of reefers is often insufficient. However, the development of these ports are is in progress. The plans for port modernisation are extensive and will be needed to handle the growing fresh export.

A positive addition is the direct service of Seatrade between Paita and Europe that reduces the lead time to just two weeks. This will increase the competitiveness of Peruvian exporters against other suppliers that are closer to Europe.


### Peru logistics: high cost, not competitive

The Peruvian Association of Logistic Professionals (APPROLOG) estimates a logistical cost of 20 to 30% on the sales value, compared to 12% in Chile and 8% in the USA. The transport sector is still characterised by a large number of small and medium companies with low efficiency. This results in a variety of predicaments:

- Low availability of trucks in peak season
- No transparency in costs
- Large differences in pricing
- Professionality is sometimes lacking

One of the main barriers for the entrance of larger full-service logistical companies is the poor infrastructure according to an analysis of the Oxford Business Group.

## What are the challenges and needs for Dutch companies in Peru?

### Finding a good local partner

Doing business in Peru starts with a local presence and finding the right partner, local representative or manager. Finding the right people can be a challenge for companies that are not familiar with Peruvian business. Local partners should be well connected to the business community and maintain a good reputation. When doing a background check on a company, try contacting the local office of PromPeru or the Lima Chamber of Commerce.

Tips for doing business:

- Be flexible (the concept of time is different)
- Take time to build relations (get to know each other)
- Give a preference to personal contact (Communication through email is less effective)

> *"Traditionally, the business community in Peru has been small and its ties run deep. Companies don't always accept the lowest price or best service proposal because of other factors. Family, classmates and the goodwill and trust that have been built with members of the business community are things that come into play when making business decisions in Peru."*
>
> Source: Peruthisweek: Seven tips for doing business in Peru

### Restrictions in biosafety and certification

Peru maintains a strict policy in biosafety and biodiversity, which complicates the import of transgenic products. The Peruvian law no. 29811 established the moratorium on the production and import of living modified organisms (LMOs or GMOs) for a period of 10 years. The purpose of the moratorium is to strengthen national capacities in biosafety, promote the development of biosafety infrastructure and generate knowledge to protect biodiversity and regulate the entry of LMOs.

International seed companies are known to produce and export seed from Peru. Seed producers and commercial seeds need to be registered, but Peru does not have a certification body yet that is internationally recognized by ISTA, the International Seed Testing Association.

| | |
|---|---|
| INIA<br>www.inia.gob.pe | Register of seed producers |
| | Registration of commercial seeds (still limited to a few varieties) |
| | Certification of seeds |
| | Legislation for seeds (in Spanish) |

### New technology requires training

Operators in packing houses, as well as on the farms, need sufficient training when introducing new technologies. The low education of workers is often a reason for agribusinesses not to invest in modern technology. They consider training and skilled labour to be crucial for modernisation. Service and knowledge transfer are equally important as the product itself. Therefore technology suppliers that invest in training and local services have a better chance for success.

## What are the constraints in competitiveness that hamper market entry in the sector for Dutch companies?

### Local competition

The relation of mining and agriculture

Mining and agriculture are the two main industries in Peru. These are almost contradictory industries that often compete for water resources and land, but there is also a relation between them. The mining industry is responsible for a large share of Peru's capital and tradition in metal engineering. The agricultural sector is labour intensive, looking for modernization, and can profit from the knowledge and the investment from mining. This means that Peru is very capable of designing and producing their own metal constructions such as conveyor belts, sorting tables and basic machinery.

Example of Peruvian engineering companies:

| | | |
|---|---|---|
| Vulcanotec | Machinery for food industry | www.vulcanotec.com |
| Conveyor Systems | Machinery and automation | http://conveyorsystems.com.pe |
| ABG | Metal engineering company | www.abg.com.pe |

## International competition

### The relation of Dutch and Peruvian horticulture

The Dutch experience in horticulture is very different from that in Peru. The Dutch climate is wet and relatively cold, while the Peruvian coast is a warm desert area that lacks water. In contrary to Peru, the Dutch horticulture is a high-tech industry with lots of greenhouse technology. Also the type of products are very different: The success of Peruvian fresh products is in (tropical) fruit (avocado, grapes, citrus, mango, banana), while the Dutch horticulture is much more developed in flowers and vegetables (tomato, peppers, lettuce).

The vegetable sector in Peru is very locally oriented, informal and has less attention to technology. Moreover, the commonly consumed varieties of (for example) tomatoes and onions in Peru are different from those consumed in the Netherlands.

Countries that have similar products and challenges as Peru have a better connection with Peruvian horticulture. As a consequence, business relations are strong with countries such as Spain, the USA, Chile, Israel, Brazil and South Africa. However, according to Peruvian companies, the Netherlands have a good reputation in the agricultural sector. Dutch suppliers are advised to either look for specific niches in the sector or pay extra attention to their promotion and competitiveness.

**International competition:**

| Products | | Main suppliers |
|---|---|---|
| Genetic material / young plants | e.g. blueberry, avocado | Chile, USA |
| Soil preparation/cultivation machinery | | Brazil, China, Italy, Mexico |
| Harvesting/threshing machinery | | China, Brazil, USA |
| Post-harvest technology | Sorting & grading | Spain, Israel, Brazil, USA |
| Irrigation technology | Drip irrigation, sprinkling | Israel*, USA, Spain |
| Cooling & freezing equipment | Compressors, tunnel freezers | USA, Italy, China |

*In 2013 the National Water Authority (ANA) and Israel signed a cooperation for the management of water resources.

**How do Peruvians pick their suppliers?**

- Established confidence (e.g. existing relation)
- Local presence and service
- Price and how investment can be financed
- Prove of concept (demonstration)

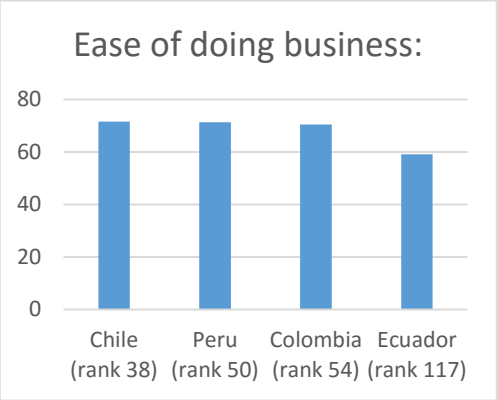
**Overview competitors**

| Company | Products | Website |
|---|---|---|
| Fomesa Fruitech | Post-harvest technology | www.fomesafruitech.net |
| Sermac | Sorting, grading & packing | www.sermac.org |
| Compac | Sorting, grading & packing | www.compacsort.com |
| Maf Roda | Sorting, grading & packing | http://maf-roda.com/en/ |
| Sinclair | Labelling | www.sinclair-intl.com/ |
| Scanico | Freezing equipment | www.scanico.com/ |
| Eurodrip | Irrigation technology | www.eurodrip.gr/eurodrip-peru-s-a-c/ |
| Eurosemillas | Seeds | www.eurosemillas.com/es/ |

## What are the constraints in the business climate that hamper market entry?

### Ease of doing business

The World Bank Group classified Peru on the 50th position on the 2016 Doing Business ranking. This places Peru as second country in the region of Chile, Colombia and Ecuador.




Source: World Bank Group

*"The positive trend of regulatory reforms that has benefited Peru since the early 2000s has stalled over 2013-2014. However, the country's business climate continues to show attractive features including relatively low total tax rates, openness to trade and foreign investment, and a relatively stable macroeconomic environment. On the other hand, aspects subject to improvement remain, like the weak quality of the educational system, relatively rigid labour market, and low capacity for innovation."*

Source: Euromonitor

| | Chile | **Peru** | Colombia | Ecuador |
|---|---|---|---|---|
| Ease of doing business: | 71,49 | **71,33** | 70,43 | 59,07 |
| Starting a business: | 89,84 | **85,02** | 86,13 | 68,51 |
| Dealing with construction permits (e.g. warehouse): | 78,78 | **74,69** | 75,99 | 71,03 |
| Ease of registering property: | 71,72 | **76,77** | 72,85 | 68,2 |
| Ease of getting credit: | 50 | **80** | 95 | 45 |
| Strength of minority investor protection index: | 63,33 | **60** | 71,67 | 46,67 |
| Ease of paying taxes: | 84 | **81,18** | 63,32 | 62,84 |
| Ease of trading across borders: | 80,56 | **71,45** | 62,83 | 61,38 |
| Ease of enforcing contracts: | 62,81 | **60,7** | 29,66 | 56,68 |
| Ease of resolving insolvency: | 54,18 | **47,57** | 72,06 | 28,4 |

Source: World Bank Group

### Informality

The informal economy in the agricultural sector is both a constraint for local development as well as for Dutch innovations. On one side it prevents Peru from creating a competitive playing field and it withholds farmers from making technological investments. On the other side informality is most dominant in agricultural products for the local market, which are crops that fit very well the expertise of Dutch horticulturists. The transition to high quality seeds, precision horticulture and greenhouse technology for local crops will be slower than the developments in export crops.

The informal economy has consequences for:

- The use of quality seeds, pesticides, agricultural practices (GAP), certification
- The level of control, organization, knowledge, investment, technology, competition

Informal fruit and vegetable market in La Victoria

To move away from informality and introduce new technologies, Peru needs to organise and standardise supply chains.

Example: Potato industry

A typical example where standardisation and organisation are necessary, is the potato industry. Peru, home to many potato varieties and the International Potato Center, produced 4.5 million tonnes of potatoes in 2015. At the same time Peru imported three times more pre-fried frozen potato between 2010 and 2014 because of rising demand by the chicken restaurants. Peru has not managed to supply for its own demand of potato fries. It is an opportunity for Dutch suppliers of processed potatoes, however, local optimisation and investment in processing technology remains absent.

| **Peru** | **Europe / Netherlands** |
|---|---|
| • Small farmers: 12,5 ton/ha yield | • Dutch famers: 40-50 ton/ha yield |
| • Many potato varieties, but only few fit for fries | • Efficient use of waste (starch) |
| • Competition of informal potato cutters | • Experience and additional services |

## What are potential leads for cooperation between Dutch and Peruvian partners?

### What are interesting products?

The majority of Peruvian agribusiness focus on simple and effective solutions. At the same time the sector is gradually improving its technology level, which provides opportunities for a variety of products and services.

| Materials | Technology | Knowledge | Services |
|---|---|---|---|
| ▪ Plastics<br>▪ Tubes<br>▪ Nets<br>▪ Pesticides<br>▪ Agrochemicals | ▪ Nurseries<br>▪ Net greenhouses<br>▪ Harvest technology<br>▪ Weeding machinery<br>▪ Drip irrigation systems<br>▪ Irrigation wells<br>▪ Filters & Pumps<br>▪ Automated weighing systems<br>▪ Automated packing systems<br>▪ Cooling & pre-cooling<br>▪ Used equipment<br>▪ ICT | ▪ Seed technology<br>▪ Plant breeding<br>▪ Pest management<br>▪ Production efficiency<br>▪ Precision agriculture<br>▪ Irrigation technology | ▪ Logistics<br>▪ Certification<br>▪ Laboratory |

### Knowledge and training!

Training for farmers

One of the top opportunities in Peru is knowledge development and training. Peru's modern agricultural sector is still emerging from a long history of informal and traditional farming. Professional agricultural practices are mainly dominated by the larger private companies, but they also deal with a shortage of skilled labour.
Knowledge transfer used to take place on a very limited scale when agricultural inputs were provided by the government. Nowadays the Peruvian government policy is more focused on privatizing information services and co-financing investments. Public investment in a knowledge economy in agriculture is very limited. Initiatives to join forces between the public and private sector are gradually explored, but structural and integrated cooperation in knowledge development has not yet been realized.

The transfer of agricultural knowledge to smaller farms is in the hands of NGOs and large companies. NGOs focus on artisanal export crops for smallholders, such as organic coffee and cocoa, in which quality control in production and processing (drying) is crucial. Farmers are very open to new learning experiences, but many of them are still not well connected to knowledge providers and apply their own production methods.

Need for knowledge:

- Crop protection (for insects or pests)
- Integrated Pest Management (IPM)
- Precision agriculture
- Good Agricultural Practices (GAP) & traceability
- Post-harvest methods
- Plant breeding techniques
- Management systems (ICT)

### Knowledge transfer to public entities

Public investment in agricultural innovation is limited, but organisations such as INIA and Senasa are receptive to foreign knowledge providers and international cooperation. For example Senana runs an e-certification project with the Dutch NVWA. INIA has indicated to be interested to develop their knowledge on bioinformatics. They manage experimental stations (Estación Experimental Agraria) throughout the country to test new seeds and provide these to growers in the area.

Dutch public organisations and knowledge institutes could contribute to:

- Institutional development
- Knowledge development (e.g. bioinformatics)
- Cooperation of governmental organisations (G2G)
- Cooperation of knowledge institutes (K2K)
- Organizing and training of small farmers (e.g. coffee, cocoa farmers)

| | |
|---|---|
| **INIA**<br>Instituto Nacional de Innovación Agraria<br>Av. La Molina 1981, La Molina, Lima<br>Apartado Postal 2791<br>Telephone: +51 1 349-2600 / 240-2100 / 240-2350<br>E-mail: informes@inia.gob.pe<br>Website: http://www.inia.gob.pe | **CONCYTEC**<br>Consejo Nacional de Ciencia Tecnologia e Innovación Tecnológica<br>Calle Grimaldo del Solar 346, Miraflores, Lima<br>Telephone: +51 1 399-0030<br>E-mail: comunicacion@concytec.gob.pe<br>Website: https://portal.concytec.gob.pe |
| **Universidad Nacional Agraria La Molina**<br>Av. La Molina, La Molina, Lima<br>Telephone: +51 1 614-7800<br>Website: http://www.lamolina.edu.pe | **SENASA**<br>Av. La Molina 1915, La Molina, Lima<br>Telephone: +51 1 313-3300<br>E-mail: senasacontigo@senasa.gob.pe<br>Website: http://www.senasa.gob.pe |

Potential cooperation partners:

- NAK tuinbouw
- NVWA
- WUR
- Agriterra
- Training institutes
- Consultants
- NGOs

## Seeds and plant breeding

Plant breeding and seed technology in Peru are generally old fashioned. Small farmers that produce for the local market often use inexpensive seeds or use their own seeds, with the consequence of a low production and increased risk of plant disease. The emergence of high-end supermarkets will generate more conscience among growers and provide a local market for high quality fruit and vegetables.

The experimental stations of INIA test and reproduce seeds on different locations. Each location has its own product focus and provide workshops for growers. According to Donoso, the experimental station in Huaral, most seeds are still being imported such as onion, carrot and watermelon. At

Donoso they receive seeds from Japan, thanks to a long-lasting cooperation. They also showed specific interest in seed tape and seed growing licences.

INIA Donoso, Huaral

INIA Donoso, Huaral

Peru is also a good production country for seeds. Despite of not having an internationally recognized certification body, Peru belongs to the top 20 exporters of vegetable seeds and is within the top 10 of fruit seeds and spores. For example, the Netherlands is the main importer of tomato seeds from Peru.

Professional companies with exportable products import young plants or sometimes have their own plant breeding nurseries.

Opportunities:
- Seed breeding and production in Peru
- Plant nursery equipment

Peruvian companies with seed and plant breeding equipment:

| | | |
|---|---|---|
| AgroGenesis | Seeds and youngplants | www.agrogenesis.com |
| Agritec Peru | Plant breeding material | www.agritecperu.com |
| AGP | Seeds | www.agpsac.com |
| NovaSeeds | Seeds | http://novaseeds.com |
| Litec | Plant breeding material | www.litecperu.com |
| Semiagro | Seeds | www.semiagro.com.pe |
| Farmex | Seeds and breeding material | http://farmex.com.pe |
| Maruplast | Horticultural equipment | www.maruplast.com |

### Agrochemicals

Peru is a significant user of agrochemicals, especially in the coastal area. The coast has a climate that is more sensitive for pests, but is also characterized by larger companies with greater financial resources. Agrochemicals are considered to be very expensive in Peru. This market is dominated by a few large companies such as Bayer, BASF, Dow Chemical and Syngenta.
The new law that permits direct import of agrochemicals by farmers creates an opportunity for new competitors. The high prices of agrochemicals and the strict regulation in export markets also provide possibilities for alternative crop science.

Opportunities:
- Innovative solutions for typical problems such as nematodes.
- Organic crop science

### Irrigation technology

Government programmes and investments in infrastructure facilitate the access of water resources. Availability of water can be problematic, especially in the south. Large companies do not want to depend on the national water authority and sometimes have their own water supply facility.

Irrigation techniques are becoming more advanced. The high value crops (citrus, berries, grapes) are very suitable for more precise technologies such as drip irrigation. In the future precision horticulture is expected to grow, providing in the long term opportunities for hydroponics and greenhouses.

Opportunities:
- Water reservoirs, sprinklers, drip irrigation systems, water pumps, filters, desalination equipment
- Introducing precision horticulture

Importing companies of irrigation technology:

| | | |
|---|---|---|
| Naandan Jain Peru | International company | http://naandanjain.pe |
| Sistemas de Riego Ingenieros | Irrigation systems | www.sistemasderiego.pe |
| Raesa Peru | Sprinkling systems | www.raesa.com |
| Guilboa | High frequency irrigation | www.guilboa.com |
| Olivos Corande | Irrigation supplies | www.olivoscorande.pe |
| Orbes Agrícola | Irrigation & other supplies | www.orbesagricolasac.com |
| Itagrif | Irrigation supplies | http://itagrif.com |

### Precision horticulture

Precision horticulture will become more important in the future. The adoption of high tech greenhouses is still far away, but producers are keen on precision horticulture techniques because of the main issues of low water resources, labour costs, soil management and expensive agrochemicals. Solutions have to be feasible for the large scale horticulture. The recent application of drones in agriculture is an example of a potential solution for large farmers.

Representatives of drones:

| | |
|---|---|
| Skyvant | http://skyvant.pe |
| Drones Peru | http://dronesperu.com |
| Aerovision | www.aerovision.pe |
| UAV del Peru | www.uavdelperu.com |

Opportunities:
- Innovative solutions cost effective precision technology for large scale horticulture

### Post-harvest and packing houses

#### Automation: Faster & more precise

Fruit packing houses are looking to tune up their processes. The general feeling is that continuous improvement is necessary to remain competitive. Because most fruit is being exported, many of the packing houses adapt their facility to international standards and acquire food safety certification such as BRC. Technical improvements are made when required by their international buyers or when they have a direct impact on costs. The efficiency and availability of labour is often one the main issues:

- Reliable human resources are scarce
- Rotation requires extra investment in training
- Labour costs are increasing (on official payroll)
- Manual labour is more difficult to manage and less precise

For some products such as asparagus and grapes, there is hesitance of using automation due to the complexity or delicate characteristics.

#### Increasing efficiency

Not only the efficiency in processing itself is important, but also the efficiency throughout the year. In northern parts of Peru, packing houses for mango sometimes only operate only a few months per year. But also facilities in for example Huaral are looking for alternatives to operate their packing capacity more efficiently throughout the year. This provides opportunities for fruit sourcing companies and growers to experiment with other fresh products than the regular avocados and mandarins.

Specific opportunities in automation, quality and efficiency in post-harvest include:

- automated multi-weighing systems (e.g. for grapes in clamshell packaging)
- automated packing system (e.g. for mandarins)
- setting up production projects with alternative or counter seasonal products for processing/packing
- performing research in post-harvest (e.g. temperature and dry-matter of avocados)

Examples of packing houses in Huaral:

| | |
|---|---|
| Agrihusa | www.agrihusa.com.pe |
| Torre Blanca | www.torre-blanca.net |
| T&T Fruit | *No website* |
| VerdeFlor | www.verdeflorperu.com |
| Campo Verde | www.grupocampoverde.com.pe |

General suppliers of agricultural and post-harvest equipment

| | | |
|---|---|---|
| Orbes Agrícola | Irrigation & other supplies | www.orbesagricolasac.com |
| Ferreyros | Agricultural equipment | www.ferreyros.com.pe |
| AgroImex | Agricultural & post-harvest | www.agroimex.com.pe |
| Corporación Jassi | Post-harvest grains | www.corporacionjassi.com |
| Vidagro | Sprayers | www.vidagro.com |
| MaquiPeru | Tractors & machinery | www.maquiperu.com |

### Cold chain & logistics

The post-harvest and logistics can have a great influence on the quality of the fresh products. Most of the agricultural companies have reasonable control over the production and packing operations. Logistics on the other hand is almost always outsourced and a number of external factors start playing a role:

- Cold storage at the harbour is expensive and inefficiency at the customs office leads to extra costs.
- Infrastructure of roads and ports is underdeveloped.
- Logistical companies are not efficient and lack transparency and reliable planning.

Opportunities:

- Investment opportunity in infrastructural projects (public-private partnership, port development).
- Need for logistical information systems (ICT), better monitoring and improved services.
- Availability of cold storage at packing houses is sufficient, but will increase together with production.

Companies active in cold technology

| | | |
|---|---|---|
| Friopacking | Cooling infrastructure and processing | www.friopacking.com |

## Opportunities in food processing

### Looking for differentiation

More and more often companies are looking to differentiate themselves by adding value to their products. Some realize this by integrating their supply chain from farming to packing, while others look for possibilities of processing fruit or vegetables. Preservation techniques are common practices. For example, the Peruvian export of frozen fruit increased 5 times in the past decade, reaching 56,000 tonnes (mostly mango).

### Finding uses for discarded products

Every harvest has a quantity of fruit and vegetables that is not fit for export. To avoid that these fruit and vegetables are sold for an extreme low price on the national market, companies look for alternative possibilities. Basic processing can be an interesting option, such as juices, concentrates, pulp and dried fruit.

Opportunities in processing technologies:

- Individual Quick Freezing (IQF) (for example frozen mango)
- Juicers, pulp machines, fruit concentrate equipment (for example: avocado pulp, orange juice, pomegranate syrup)

Important to mention is that freezing technology is not limited to the horticultural sector. The fishery industry is also a very important industry for Peru's export that requires preservation techniques.

Fresh companies that invested in food processing:

| | | |
|---|---|---|
| Icatom | Fresh products, tomato pasta, frozen asparagus, plant nursery | www.icatom.com |
| Danper | Fresh products, sauses, Ready made meals | www.danper.com |
| Sociedad Agrícola Viru | Fresh, preserved, frozen products, sauses | www.viru.com.pe |
| Agroworld | Fresh, frozen, concentrates & sauses | www.agroworld.com.pe |

## Diversifying agribusinesses

Diversification is a common practice of many Peruvian agribusinesses and entrepreneurs maintain a very flexible attitude when it comes to new ventures.

**Example: Pampa Baja**

Pampa Baja, a company that started with the production of bell peppers in 1998, continued with forage and cattle, then diversified with grapes, avocados, sweet onion, mandarins and pomegranates. And nowadays they are implementing a processing facility for dairy products, a market that so far has been dominated by the two companies Gloria and Laive.

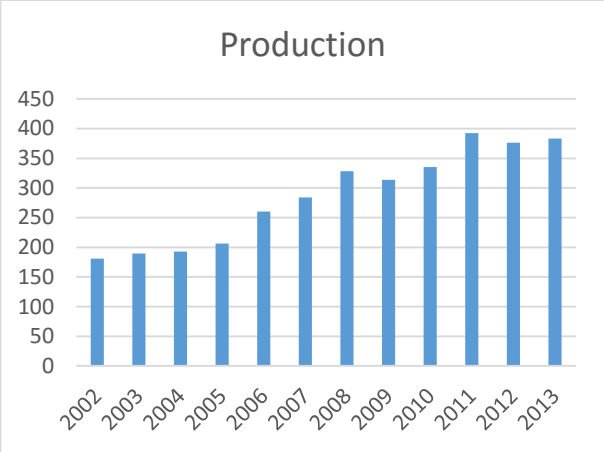
These types of companies, with a high skill of adaptability, easily switch to opportunities in related industries. Related industries can be fishery, poultry, dairy, flowers, food, feed etc. Knowing the right entrepreneurs in Peru can lead to a direct opportunity and increase the chance of realizing an innovative project.

## ANNEX I: Factsheet Asparagus

Peru is the number 1 exporter of asparagus in the world (2015). The production has declined in recent years:

- Asparagus are either processed (conserved) or freshly packed for export
- Many of the fields have reached their maximum lifespan
- Due to water shortage, producers in Ica change to other high value crops (blueberries)
- Fields move up north, even though fields are longer productive and have higher yields in the south

| | |
|---|---|
| Varieties | Green asparagus, white asparagus |
| Season | Year round |
| Location | Ica, La Libertad, Lima |
| Association | IPEH - http://www.ipeh.org.pe |
| Other information | http://asparagus.pe/estadisticas.html |




Source: Faostat in 1,000 tonnes


Source: ITC Trademap in 1,000 tonnes

| Company | Export in tonnes to the Netherlands (2014) | Volume in tonnes (2012) |
|---|---|---|
| Camposol | 1,931 | 23,641 |
| Danper Trujillo | 1,436 | 18,418 |
| Complejo Agroindustrial BETA | 1,550 | 16,476 |
| Sociedad Agrícola Viru | | 11,511 |
| TAL | 904 | 6,976 |
| Drokosa | 689 | 116,863 |
| Agualima | 721 | |
| Agrícola La Venta | 650 | |
| Agro Paracas | 423 | |
| Proagro | 242 | |
| Empresa Agro Export ICA | 356 | |

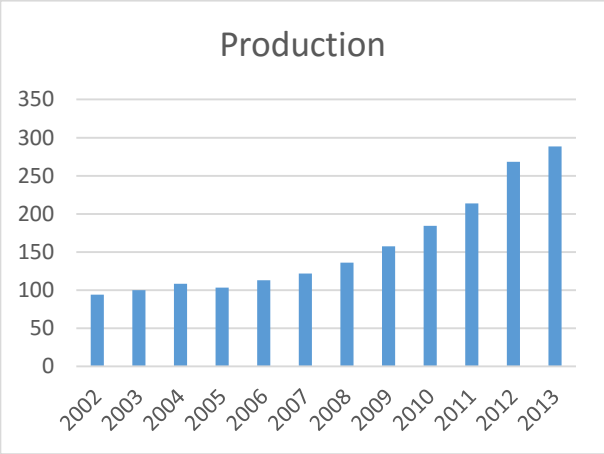
Source: Inform@ción

## ANNEX II: Factsheet Avocado

Peru is the 2nd largest exporter of avocados in the world (2015). The main exported variety is the Hass avocado.

- Challenge in Production: flies in some production areas.
- Challenge in post-harvest: grey pulp, decay, black spots.
- Challenge in logistics: Defining best conditions for controlled atmosphere (ratio O2/CO2 in relation to season and dry matter).
- Dry matter requirements in Peru (21.5%) are lower than other countries (Chile, New Zealand).
- Opportunity: New markets such as China and Japan open up.

| | |
|---|---|
| Varieties | Hass (only export) – approx. 26,000 hectares<br>Fuerte – approx. 18,000 hectares |
| Season | January – March (Fuerte), March – June (Hass) |
| Location | Arequipa, Lima, Ica, La Libertad, Ancash, Piura |
| Yield | Yield: 8-9 ton/ha to 10-15 ton/ha (commercial production) |
| Association | ProHass - http://www.prohass.com.pe/ |




Source: Faostat in 1,000 tonnes


Source: ITC Trademap in 1,000 tonnes

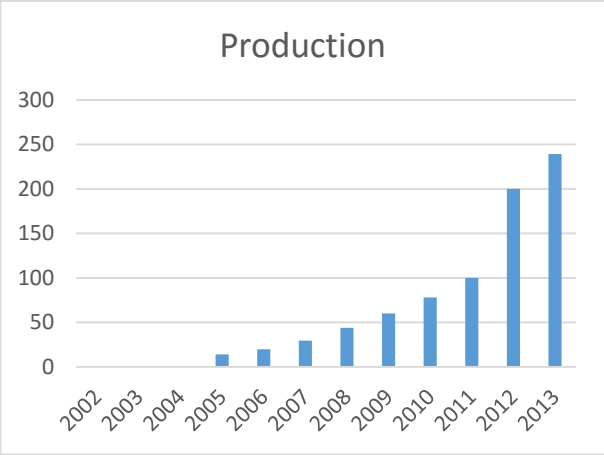
| Company | Export in tonnes to the Netherlands (2014) | Volume in tonnes (2012) |
|---|---|---|
| Consorcio de Productores de Fruta | 6,213 | 12,418 |
| Camposol | 3,544 | 11,419 |
| Drokasa | 6,759 | 9,451 |
| Agroindustrias Solcace | | 6,016 |
| Avo Peru | | 3,601 |
| Agrícola Cerro Prieto | 4,965 | |
| Agropecuaria las Lomas de Chilca | 2,993 | |
| Agroindustrias Verdeflor | 2,683 | |
| Corporación Frutícola de Chincha | 2,749 | |
| Eurofresh Peru | 1,918 | |
| Agrícola Campoverde | 1,328 | |
| Dominus | 1,219 | |
| Other companies: Agrofrutero, Agrícola Don Ricardo, Hass Peru SA, Colca Agroindustria Peruana de Exportación, Sociedad Agraria Estanislao del Chimu, Asica Natural, Procesadora Laran, Agrícola Chapi, Agricola Ayacucho, Fairtrasa Peru, Agrícola Pampa Baja, Fundo los Paltos | | |

Source: Inform@cción, Equifax

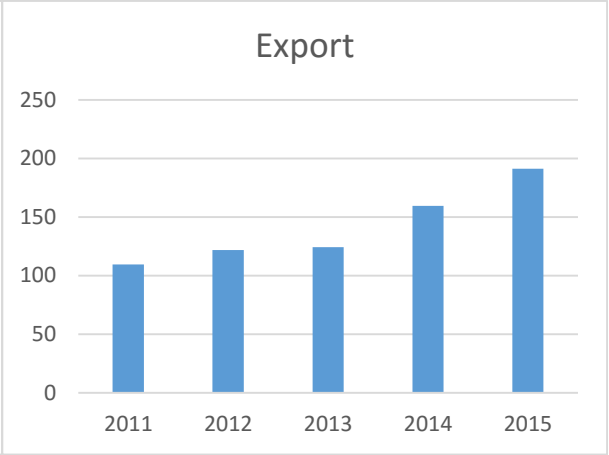
## ANNEX III: Factsheet Bananas

Peru exports a large amount of organically produced bananas. It holds the 10th place in terms of global supply (2015).

| | |
|---|---|
| varieties | organic Cavendish Valery bananas |
| Season | Year round |
| Location | Mainly Piura |




Source: Faostat in 1,000 tonnes




Source: ITC Trademap in 1,000 tonnes

| **Companies** | ***Export to the Netherlands in tonnes (2014)*** |
|---|---|
| Asociación de Pequeños Productores de Banano Orgánico de SAM | 12 866 |
| Asociación de Pequeños Productores Orgánicos de Querecotillo | 8 528 |
| Asociación Comunal de Productores de BAN | 7 778 |
| Asociación de Productores de Banano Orgánico Sector el Monte | 5 483 |
| Asociación de Productores de Banano Orgánico Valle del Chira | 4 917 |
| Biorganika SAC | 4 330 |
| Fairtrasa Perú SA | 4 003 |
| Asociación de Bananeros Orgánicos de Salitral SUL | 3 499 |
| Pronatur EIRL | 3 154 |
| Asoc. Unión de Bananeros Organicos Inmaculada Concepción de H. | 3 093 |
| Others:<br>Central Piurana de Asociaciones de Pequeños Productores de B Asociación de Micro Productores de Banano Organico del Alto | |

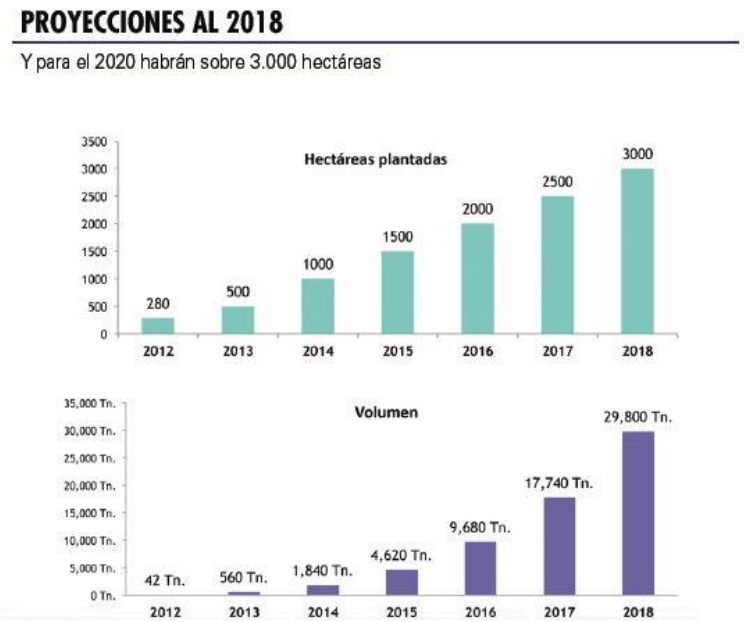
Source: Equifax

## ANNEX IV: Factsheet Blueberries

Blueberries is a high value crop that has recently started in Peru. In 2015 they became the 9th largest exporter.

- The investment in blueberry plantations is high, estimated at 45 to 55,000 USD per hectare.
- The production of blueberries is expected to grow from less than 5,000 tonnes in 2015 to 30,000 tonnes in 2018.
- According to Sierra Exportadora in 2015 there was already an acreage of 2,500 hectares and export value reached 70 million USD.

| | |
|---|---|
| Varieties | Biloxi, gongapa and pushay |
| Season | Year round / counter seasonal August - May |
| Location | Lima, La Libertad, Ancash and others |
| Association | ProArándanos |
| Information | Agronegocios<br>Red Agrícola |



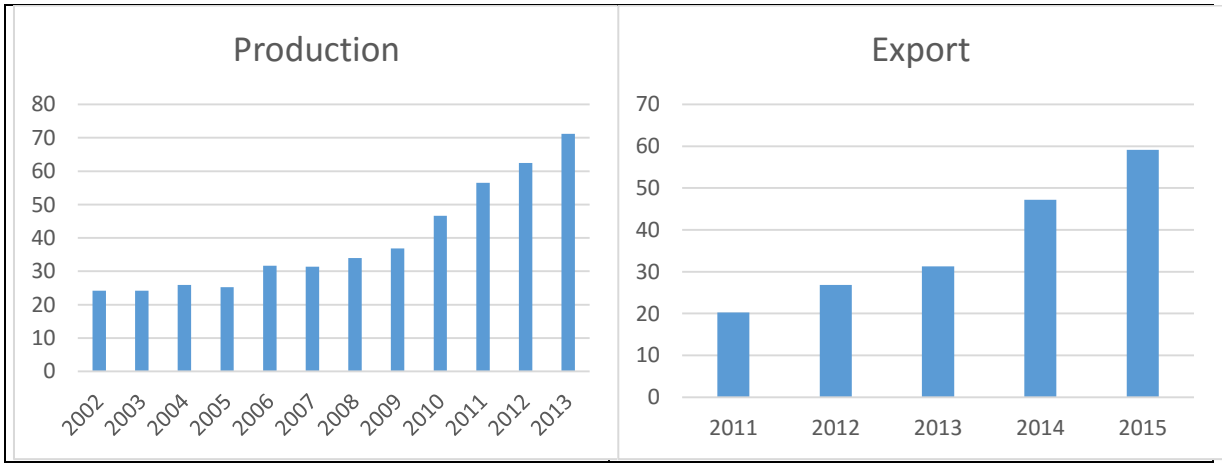

Source: www.redagricola.com

## ANNEX V: Factsheet Cocoa

Peru is the 8th exporter of cocoa in the world (2015), and the 2nd largest exporter in organic cocoa. Cocoa is a typical export product; 90% is exported.

- Peru possesses 60% of the worldwide varieties of cocoa.
- According to Sierra Exportadora there are 90 thousand families in cocoa business with a production of 77 thousand tonnes (136 thousand hectares).
- Production chains of cocoa and coffee receive a relative large amount of public investment support, mainly distributed through local governments.

| | |
|---|---|
| varieties | Chuncho Cusco, Blanco Piura, Criollo de Montaña |
| Season | Year round |
| Location | 300 – 900 meters above sea level in 10 regions<br>Main production regions: Cusco, San Martín, Amazonas, Piura, Ayacucho y Junín |
| Association | Cámara de Comercio del Café y Cacao - www.camcafeperu.com.pe<br>Asociación de Productores Peruanos de Cacao - http://appcacao.org/<br>Central Café y Cacao - www.centralcafeycacao.org |
| Other | International Cocoa Organization (ICCO) |




Source: Faostat in 1,000 tonnes

Source: ITC Trademap in 1,000 tonnes

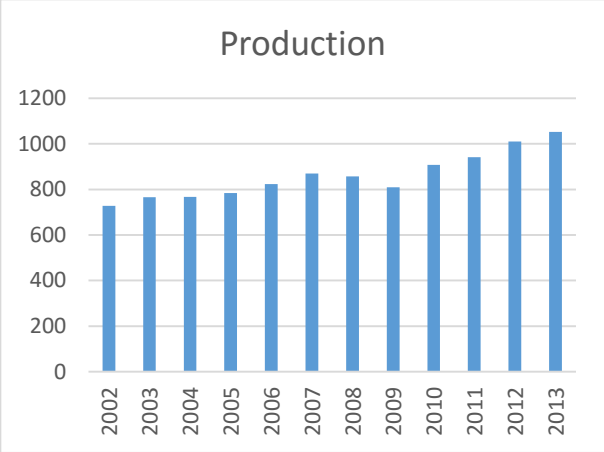
| Companies | Export in million Peruvian Soles (2014) |
|---|---|
| Machu Picchu Foods | |
| Cacao del Perú Norte SAC (United Cacao) | |
| Naranjillo Ltda | 25,935 |
| Ecoandino SAC | 9,112 |
| Sumaqao SAC | 7,853 |
| Asociación Cacao VREA | 7,580 |
| Amazonas Trading SAC | 6,403 |

Source: Sierra Exportadora, among others

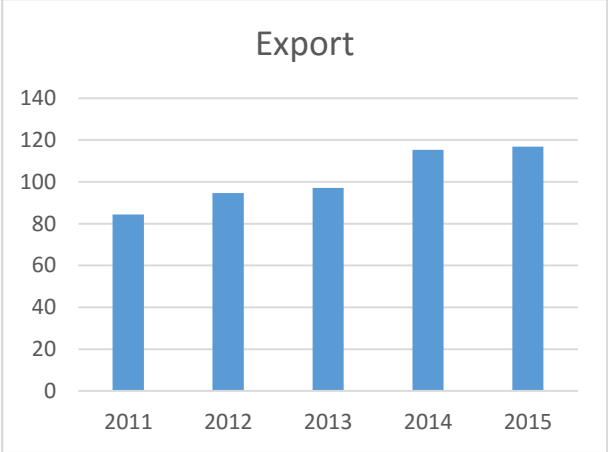
## ANNEX VI: Factsheet Citrus

Peru produces a various citrus fruit such as mandarins, oranges and Tangelos. Of the total export volume in 2015 of 117 thousand tonnes of citrus, 102 thousand tonnes are mandarins and tangelos. With this volume, Peru is the 7th largest exporter of mandarins worldwide (2015).

| Type | Mandarins | Orange | Tangelo |
|---|---|---|---|
| Production | 313,797 tonnes | 438,560 tonnes | 88,473 tonnes |
| Season | Feb – Sept | Sept - Nov | Jun - Sept |
| Varieties | Clementina<br>Satsuma<br>Nova<br>Okitsu<br>Owari | Navel<br>Valencia | Minneola |
| Location | Central coast: La Libertad, Ancash, Lima, Ica | | |
| Association | ProCitrus - http://www.procitrus.org | | |




Source: Faostat in 1,000 tonnes




Source: ITC Trademap in 1,000 tonnes

| **Companies** | **Volume in tonnes (2012)** |
|---|---|
| Consorcio de Productores de Fruta | 26,402 |
| Procesadora Laran | 20,617 |
| Coexa | 5,965 |
| Inversiones Marzala | 5,520 |
| Empacadora y Procesadora Huamani | 5,240 |

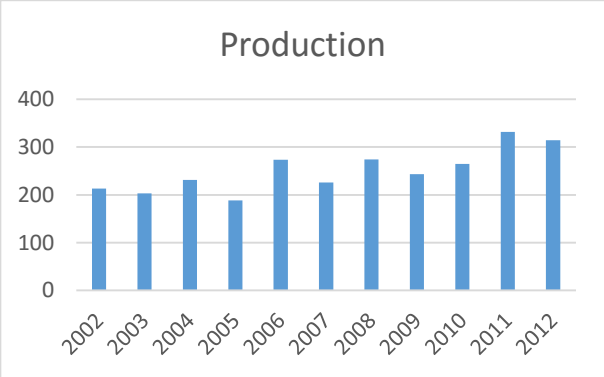
Source: Inform@ccion

## ANNEX VII: Factsheet Coffee

According to the Junta Nacional de Café (JCN) there are around 150,000 coffee smallholders in Peru. Coffee farmers distinguishes themselves through hand-picked and a large share of organic quality coffee. Peru is the 9th largest exporter of coffee in the world (2015). In organic production they are number 6.

- According to Sierra Exportadora there are 160 thousand families in cocoa business with a production of nearly 300 thousand tonnes, of which 69 thousand tonnes organic.
- There are 11 regions and 32 microclimates where coffee is produced.
- The Junta Nacional de Café counts 75 coffee export companies in Peru, of which 20 dominate 90% of the total export volume.
- Recent production and export have decreased due to an outbreak of rust disease in 2014.
- Production chains of cocoa and coffee receive a relative large amount of public investment support, mainly distributed through local governments.

| | |
|---|---|
| Varieties | Arabica (Typica, Bourbón, Pache, Caturra, Catimor) |
| Season | March - September |
| Location | 1000 – 1800 meters above sea level in 11 regions<br>Main regions: Junin, San Martin, Cajamarca |
| Association | Cámara de Comercio del Café y Cacao - www.camcafeperu.com.pe<br>Central Café y Cacao - www.centralcafeycacao.org<br>Junta Nacional de Café - http://juntadelcafe.org.pe |
| | International Cocoa Organization (ICCO) |




Source: Faostat in 1,000 tonnes


Source: ITC Trademap in 1,000 tonnes

| Companies | Volume in tonnes (2012) | Export Jan-May 2015 in tonnes |
|---|---|---|
| Perales Huancaruna | 70,694 | 3672 |
| Louis Drefus Commodities Peru | | 1198 |
| Procesadora del Sur | | 1113 |
| Pronatur | | 939 |
| Outspan Peru | 16,265 | 854 |
| H.V.C. Exportaciones | | 765 |
| Export Import Candres | | 483 |
| Cafetalera Amazónica | 14,490 | 449 |
| Comercio & Cia | 29,300 | 432 |
| Cooperative de Servicios Multiples Cenfrocafe Peru | | 408 |
| Cooperative de Servicios Multiples Sol&Café | | 396 |
| Coffee Green | | 391 |
| Importaciones y Exportaciones Agritum | | 268 |
| Compañía Internacional del Café (COINCA) | 20,963 | 258 |
| | Inform@ccion | CamCaféPerú |

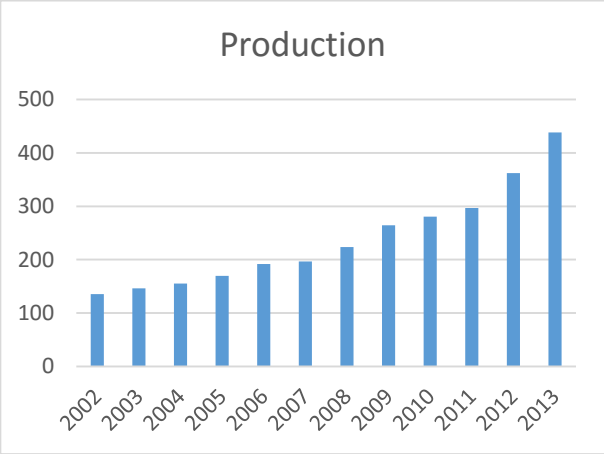
Source: Cámara de Comercio del Café y Cacao, Inform@ccion

## ANNEX VIII: Factsheet Grape

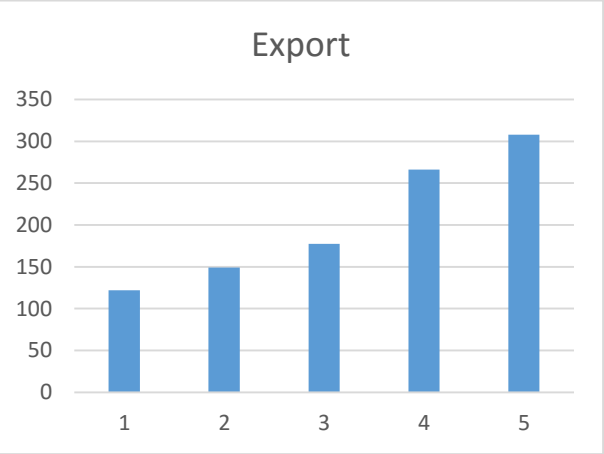
In 2015 Peru became the 5th exporter of grapes worldwide. It has been one of the fastest growing crops in Peru.

- The trend in international markets is seedless grapes. The increased production of Red Globe grapes (with seeds) surpassed the demand of Peru's export markets and have put some companies in financial difficulties.
- China has become a relatively important market for Red Globe grapes.

| | |
|---|---|
| Varieties | ▪ Red Globe<br>▪ Flame Seedless<br>▪ Thompson Seedless<br>▪ Sugraone Seedless<br>▪ Crimson Seedless<br>▪ Others (e.g. Autumn Royal) |
| Season | October – March |
| Location | 2015: Ica (9020ha), Piura (6000ha), La Libertad (1800ha), Lambayeque (1500ha) |
| Association | Provid Peru - http://www.providperu.org |




Source: Faostat in 1,000 tonnes




Source: ITC Trademap in 1,000 tonnes

| Company | Volume in tonnes (2011-2012) | Market share 2014 |
|---|---|---|
| EL PEDREGAL S.A. | 16,457 | 10% |
| SOCIEDAD AGRICOLA RAPEL | | 7% |
| COMPLEJO AGROINDUSTRIAL BETA S.A. | 13,811 | 5% |
| AGRICOLA DON RICARDO S.A.C. | | 5% |
| SOCIEDAD AGRICOLA DROKASA S.A. | | 5% |
| ECOSAC AGRICOLA S.A.C. | 8,164 | 4% |
| CAMPOSOL S.A. | 7,363 | 4% |
| SOCIEDAD AGRICOLA SATURNO SA | | 4% |
| AGRO VICTORIA S.A.C. | | 3% |
| ECO – AQUICOLA S.A.C. | 8,164 | |
| | inform@cción | Sunat |
| Others: Empresa Agrícola San Juan, Ecosac Agrícola, Sociedad Agrícola Saturno, Agrícola Pampa Baja, Gandules, Agrícola José Juan, Sociedad Agrícola Rapel, Agrícola Chapi, Fruitxchange, Corporación Frutícola de Chincha, Agrícola Andrea, Agroindustrias Jose Luis, Complejo Agroindustrial BETA, Agrícola San José, Agroexportaciones Manuelita | | |

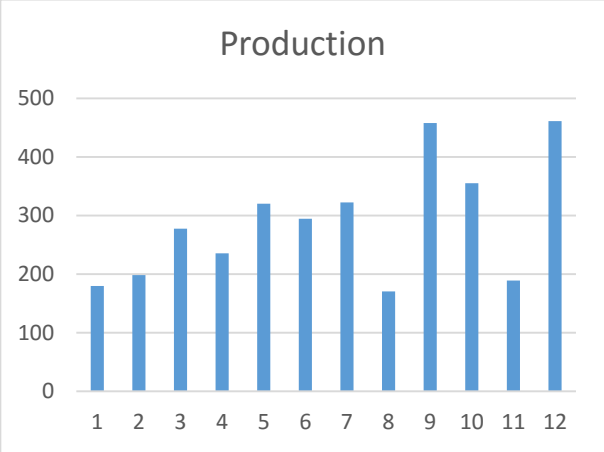
Sources: SUNAT in ProduceReport, Inform@cción

## ANNEX IX: Factsheet Mango

As a 5th largest exporter of mangoes, Peru has taken a strong position in the worldwide mango trade.

- Besides fresh mango, Peru also processes mangoes (dried, frozen, pulp) for the national and international markets.

| | |
|---|---|
| Varieties | Kent, Tommy Atkins, Haden, Edward |
| Season | December – March |
| Location | Mainly north (Piura) |
| Association | Apem - http://www.peruvianmango.org<br>ProMango - http://www.promango.org |




Source: Faostat in 1,000 tonnes


Source: ITC Trademap in 1,000 tonnes

| | Export in tonnes to the Netherlands (2014) | Volume in tonnes (2011-2012) |
|---|---|---|
| Dominus | 6,763 | 7,059 |
| Frutierrez Latin Perishables Peru | 4,829 | |
| Camposol | 3,365 | 7,444 |
| Sunshine Export | 2,130 | 9,460 |
| Frutos Organicos del Peru | 1,578 | |
| Tropical Fruit Trading PERU | 2,837 | |
| Fundo Los Paltos | 1,618 | 6,929 |
| Logifru | 2,061 | |
| Peru Fruit Tropical | 1,507 | |
| Jumar Peru | 1,176 | |
| Frutas Piuranas | | 3,677 |
| Others: Eco Natural, Pronatur | | |

Sources: Equifax, Inform@ción

## ANNEX X: SWOT Analysis

**Strengths Dutch sector in Peru**

- High level of technological development and knowledge in horticulture.
- Well-organized knowledge centres, institutions and branch organizations.
- Generally the Netherlands has a good reputation as an advanced agricultural country.
- Experienced in seed and plant breeding, which can be further developed in Peru.
- The Netherlands is a major trade hub for Peruvian fresh fruit and vegetables (integrated in the supply chain).

**Weaknesses of Dutch sector in Peru**

- The Dutch experience in horticulture does not match fully with Peruvian products.
- There is limited knowledge of specific Dutch technologies in Peru.
- Lack of Dutch promotion and product demonstration in Peru.
- The Dutch sector is more trade oriented and less investment-oriented, while most opportunities in Peru depend on investors.

**Opportunities for Dutch companies in Peru**

**Peru will continue to be an interesting supplier for Dutch importers**

- Favourable climate, climate zones and counter-seasonal production
- Natural greenhouse effect

**Peruvian horticulture is a fast-growing sector and will need 'more of everything'**

- Successful export growth of high value crops
- New Free Trade Agreements
- Strong focus on export promotion

**Open attitude towards alternative production methods**

- EU requirements have a positive influence on improving quality standards
- Cleaner production will stimulate precision agriculture and the use of alternative agrochemicals

**Potential for precision agriculture and irrigation technology**

- Producers need to advance in efficiency to remain competitive
- Agricultural exports are strongly linked to good water infrastructure and management

**Interest in improving seed and plant breeding technology**

- Institutes in Peru are interested in cooperation and increasing knowledge in biogenetics
- Larger private companies insource plant breeding and set up their own nurseries

**Need for knowledge and training**

- Strengthening of the sector through trade guilds and producers associations
- Diversification: New crops for export are being developed
- Agricultural practices are improving and quality/safety programmes are implemented

**Development of national market will increase technological investment in local products**

- The supermarket segment is growing, including high end shops that will demand high quality fruit and vegetables.
- Modern retailers help decrease informality in the sector.
- Many small and medium-large farmers are eager for new knowledge.

**Extending and updating infrastructure guarantee future growth of the sector and new needs in services**

- Strong investments in infrastructure (e.g. irrigation projects, ports, roads)
- Exporters are looking for cost-efficient logistical solutions and services

**Support for investment projects and development projects**

- Support programmes and funds for SME's in Peru
- Attractive proposition to foreign investors

**Decentralisation gives way to broader regional development**

- More regional opportunities through decentralization
- Increasing acreage for production of fruit and vegetables in various regions (Olmos, Majes, Chavimochic)
- Improved infrastructure of ports in other provinces will help other production regions to develop.

**Technological advancements in post-harvest and packing**

- Establishment of modern and professional agricultural companies with investing power
- Awareness of the necessity of automation and moving towards more advanced packing and processing

**Increasing interest in processing and added value technologies**

- Companies try to distinguish themselves from other producing companies

**Threats for Dutch companies in Peru**

**Social**

- High level of informality
- Lack of training and knowledge
- Fragmented land ownership
- Lack of organisation and associativity
- Marked social economic inequality in rural areas.
- Social conflicts over land rights and water

**Strategical & Practical**

- Choices in production strategy are hype sensitive
- Insufficient quality of services
- High logistical costs
- Limited availability of (skilled) labour

**Environment**

- Scarcity of water
- Soil degradation, salinization, erosion, deforestation and environmental pollution.
- Inadequate management and efficient use of water.
- Adverse natural phenomena (El Niño, climate change)

**Technological**

- Limited progress in research, innovation and technology transfer.

**Financial**

- Limited access to financing
- High interest rates for credit

## ANNEX XI: Interviews and contributors

| | |
|---|---|
| Agrícola Pampa Baja | Mr. Nadim Saman |
| Agrihusac | Mr. Bruno Caribaldi Vásquez |
| Agrihusac | Mr. Luis Garibaldi Vásquez |
| Agrobanco | Mr. Walther Hernán Reátegui Vela |
| Asparragus del Perú \| Swiss Capitals | Mr. Pierre Giannoni |
| ControlUnion | Mr. Yemil Zarzar Kourniatis |
| ControlUnion | Mr. Rick Rutten |
| Corinor | Mrs. Laura Sanchez Pierola |
| Farm2Market | Mr. Pablo Ramirez |
| FCE Export | Ms. Diana Sajami Tavora |
| FCE Export | Mr. Denis Sajami Tavora |
| Fruit Consultancy Europe | Mr. Piet Schotel |
| Fundo el Milagro \| Fresh Farming | Mr. Manuel M. Chávez Andía |
| Fundo Sacramento | Mr. Rodolfo Pacheco M. |
| Fundo Sacramento | Mr. Jose Gustavo Pacheco Espejo |
| Independent consultant | Mr. Manuel Yzaga |
| Independent consultant | Mr. Claudio Meneses |
| Instituto Nacional de Innovación Agraria (INIA) | Mr. Alberto Dante Maurer Fossa |
| Instituto Nacional de Innovación Agraria (INIA) | Mr. Benjamin Quijandría |
| Instituto Nacional de Innovación Agraria (INIA) | Mr. Luis de Stefano Beltrán |
| Inversiones Marzala | Mr. Aldo Combina Ratto |
| Inversiones Marzala | Mr. Alvaro Combina Cresto |
| Inversiones Marzala | Mr. José Casapía Nué |
| Ministerio de Agricultura y Riego | Mr. Mario R. Tavera Terrones |
| Ministerio de Agricultura y Riego | Mr. Jorge Augusto Amaya Castillo |
| Natper | Mrs. Andrea Navarrete |
| Natper | Mrs. Johanna Vargas |
| Dutch embassy | Mr. Gerwin Woudt |
| ProHass | Mr. Victor Escobedo |
| ProInversión | Mrs. Lisbeth Loja Arroyo |
| ProInversión | Mr. Luis F. Pita Chávez |
| PromPerú | Mr. Iván Serpa Cárdenas |
| PromPerú | Mr. William Alberto Arteaga Donayre |
| RVR Agro | Ms. Rosie Villacorta Rath |
| Sang Barrents & Company (SBC) | Mr. Eduardo Talavera Larenas |
| Senasa | Mr. Orlando Dolores Salas |
| Universidad Nacional Agraria La Molina | Mr. Alfredo Rodríguez Delfín |
| Universidad Nacional Agraria La Molina | Mrs. Saray Siura |

# ANNEX XII: Information sources and activities

## Portals and news media

| Organisation | Description | website |
|---|---|---|
| Red Agrícola | International website with reports and news | www.redagricola.com |
| Portal Frutícola | International information portal | www.portalfruticola.com |
| Agencia Agraria de Noticias | Agricultural news site of Peru | www.agraria.pe |
| Grupo Agronegocios | Peru website with news on agribusiness | www.agronegocios.pe |
| Inform@ción | Portal with statistical and sector information | www.informaccion.com |

## Sector organisations

| Organisation | Description | website |
|---|---|---|
| AGAP | Association of agricultural producer guilds in Peru | http://www.agapperu.org |
| ▪ ProHass | Producer association of Hass avocados | http://www.prohass.com.pe |
| ▪ ProCitrus | Producer association of citrus | http://www.procitrus.org |
| ▪ Provid | Producer association of table grapes | http://www.providperu.org |
| ▪ IPEH | Peruvian institute of asparagus and vegetables | http://www.ipeh.org.pe |
| ▪ Apem | Producer and exporter association of mango | http://www.peruvianmango.org |
| ▪ ProArandanos | Producer association of blueberries | |
| ▪ ProGranada | Producer association of pomegranates | |
| ProMango | Producer association of mango | http://www.promango.org |
| CAC | Peruvian chamber of coffee and cocoa | http://www.camcafeperu.com.pe |
| Central Café & Cacao | Association 'La Central' coffee and cocoa | http://www.centralcafeycacao.org |
| JNC | National board for coffee | http://juntadelcafe.org.pe |
| APPCACAO | Association of Peruvian cocoa producers | http://appcacao.org |

## Activities and trade fairs

| Organisation | Description | website |
|---|---|---|
| ExpoAlimentaria | Main platform for international business in the food sector, beverages, machinery, equipment, supplies, packaging, services, restaurants and gastronomy. | www.expoalimentariaperu.com |
| Tecnoagro | International technology fair for agriculture, agroindustry and agri-export. | www.tecnoagroperu.com.pe |
| Agritech Peru | The Agritech Israel Exhibition, held once every three years, is an international event to showcase agriculture technologies from around the world. | http://agritechperu.com |
| Symposia | SIMPOSIO INTERNACIONAL DE LA UVA DE MESA<br>SIMPOSIO INTERNACIONAL DE LA PALTA<br>SIMPOSIO INTERNACIONAL DE CITRICULTURA<br>SIMPOSIO INTERNACIONAL DEL ESPÁRRAGO | www.siuva.pe<br>http://sipa.pe/<br>http://citrica.pe<br>http://asparagus.pe |

## ANNEX XIII: Relevant organisations in Peru

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AAAP: Asociación de Agentes de Aduanas del Perú.
ADEX: Asociación de Exportadores del Perú.
AGROBANCO: Banco Agropecuario.
APACIT: Asociación de Transporte y Logística.
APAM: Asociación Peruana de Agentes Marítimos.
APN: Autoridad Portuaria Nacional.
ASMARPE: Asociación Marítima del Perú.
ASPPOR: Asociación Peruana de Operadores Portuarios.
BCRP: Banco Central de Reserva del Perú.
CCL: Cámara de Comercio de Lima.
COMEX: Sociedad de Comercio Exterior del Perú.
CONCYTEC: Consejo Nacional de Ciencia Tecnología e Innovación Tecnológica
DIGESA: Dirección General de Salud Ambiental.
DGFFS: Dirección General Forestal y de Fauna Silvestre.
ENAPU: Empresa Nacional de Puertos.
INEI: Instituto Nacional de Estadística e Informática.
INIA: Instituto Nacional de Innovación Agraria.
MEF: Ministerio de Economía y Finanzas.
MINCETUR: Ministerio de Comercio Exterior y Turismo.
MINAGRI: Ministerio de Agricultura y Riego.
MTC: Ministerio de Transporte y Comunicaciones.
PRODUCE: Ministerio de la Producción.
PROINVERSION: Agencia de Promoción de la Inversión Privada.
PROMPERU: Comisión de Promoción del Perú para la Exportación y el Turismo.
SENASA: Servicio Nacional de Sanidad Agraria.
SNI: Sociedad Nacional de Industrias.
SUNAT: Superintendencia Nacional de Aduanas y de Administración Tributaria.
UNALM: Universidad Nacional Agraria La Molina.

# ANNEX XIV: Sources and literature

## Analysis


**GRADE** - Agricultura Peruana: Nuevas Miradas desde el Censo Agropecuario, septiembre 2015

**Gregory J. Scott** - Competitividad Agrícola y El desarrollo de Cadenas y Clusteres de Valor en el Perú, febrero 2011

**ICON Institute** - Asistencia Técnica para los Planes Operativos (POS), Sector Agricultura y Agroindustria, septiembre 2009

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**Ministerio de Agricultura y Riego; INEI** - IV Censo Nacional Agropecuario 2012: Resultados Definitivos

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**Camara Peruana del Café y Cacao** - Estadistica de Exportación de Café – por exportador a mayo del 2015

**Ministerio de Agricultura y Riego** - Boletín Estadístico de Comercio Exterior Agrario, enero 2016

**Ministerio de Agricultura y Riego** - Boletín Estadístico de Comercio Exterior Agrario, febrero 2016

**Ministerio de Agricultura y Riego** - Boletín Estadístico de Medios de Producción Agropecuarios, febrero 2016

**Faostat**

**ITC Trademap**

**Market Access Database**

## Governmental

**BID; Ministerio de Transportes y Comunicaciones** - Plan de Desarrollo de los Servicios de Logística de Transporte; Parte A – Diagnóstico Final, Capítulo 8 – Anexos, julio 2011

**Centro Nacional de Planeamiento Estratégico** - Plan Bicentenario: El Perú hacia el 2021, marzo 2011

**Ministerio de Agricultura y Riego; El Peruano** - Decreto Supremo que aprueba la Política Nacional Agraria; Decreto Supremo No. 002-2016-MINAGRI, Normas Legales, marzo 2016

**Ministerio de Agricultura y Riego** - El Ministerio de Agricultura y Riego al 2016, *presentación* de la Oficina de Planeamiento y Presupuesto, Unidad de Inversión Sectoral, noviembre 2013

**Ministerio de Comercio Exterior y Turismo** - Plan Estratégico Nacional Exportador: PENX 2025: Hacia la Internacionalización de la Empresa Peruana

**Ministerio de Economía y Finanzas** - Guía de Orientación al Ciudadano: Que hace el Estado con los Ingresos que recauda? Ley de Presupuesto 2016

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