#### **Environmental Classification and Issues:**

Environmental Classification: This is a category III project according to the IIC's environmental and labor review procedure because specific impacts may result that can be avoided or mitigated by adhering to generally recognized performance standards, guidelines, and design criteria. During project evaluation the following potential environmental and labor issues were analyzed: (1) legislation; (2) product quality and third-party certification of good agricultural and environmental practices; (3) handling and application of agrochemicals; (4) water supply and treatment; (5) management of solid, liquid, and hazardous waste; (6) air emissions; (7) handling of chemicals; (8) environmental protection; and (9) occupational safety and health practices.

### (1) Legislation

Green Perú is in compliance with EUREPGAP standards for following appropriate practices in its operations. EUREPGAP certification amply fulfills local environmental requirements because it is based on more comprehensive, stricter standards. Green Perú recently engaged Food Solutions SAC to carry out the environmental impact assessment for this project. The company has an environmental management system in place governing the farm, water supply and treatment, handling of wastewater, solid and hazardous waste, air emissions, and occupational health and safety. The person in charge of agricultural production is also responsible for compliance with the environmental management system in the processing plant; the quality assurance manager ensures its compliance in the farm, and the general manager, at the corporate level. The latter is also responsible for providing the necessary resources.

# (2) Product quality and third-party certification of good agricultural and environmental practices

Green Perú has obtained third-party certification of its good agricultural practices (EUREPGAP and USGAP) and manufacturing (HACCP). EUREPGAP ("Euro-Retailer Produce Working Group for Good Agricultural Practice") was established in 1999 by a group of leading European retail chains in order to improve fresh fruit and vegetable production standards by promoting food safety, sustainable use of natural resources, and more environmentally friendly production. The Hazard Analysis and Critical Control Points System (HACCP) uses the process flowchart to help identify the key control points. This ensures that products are, and remain, safe for human consumption. In order to achieve this status, companies must use Good Manufacturing Practices (GMP), a protocol whereby the production plant operators, who have been trained for this purpose, monitor all operations throughout the production process on a daily basis. This is a preventative process that is documented and in full effect at all times.

The company uses drip irrigation, the most efficient irrigation system in sandy soil. It is also used to apply fertilizers ("fertigation"), a more efficient system than traditional fertilizing techniques that enables better, continuous dosage of small amounts. Chemicals are applied as indicated in the soil analyses. All growing and harvesting activities are coordinated and supervised by agricultural engineers. Green Perú benefits from the local universities' capacity to carry out agricultural research projects, particularly as they relate to health matters, with students engaged in internships or postgraduate theses. Some regional research and training tasks are carried out with the assistance of Instituto Peruano del Espárrago y Hortalizas, an institution of which the company is a founding member. Plantation management monitors all operations and keeps appropriate records.

#### (3) Handling and application of agrochemicals

Only chemicals that comply with updated Environmental Protection Agency (EPA) and European

Economic Community (EEC) standards are used, and worldwide restrictions on the use of pesticides are observed. Green Perú has an updated list of banned and restricted pesticides worldwide. All agrochemicals employed include technical data sheets and are used according to the recommendations on the label. Integrated pest management minimizes or avoids the use of agrochemicals on the farm. The farm has EUREPGAP certification. This ensures proper management of solid, liquid, and hazardous waste and is proof of Green Perú's concern for the well-being of its workforce and the preservation of the environment.

Chemicals are used rationally and in the smallest possible amount thanks to the integrated pest and disease management system in place. Current insect and disease impact is minimal. Lures are used to capture various species of insects, including white and black light and, in some instances, natural insect pheromones released by unmated female specimens. Fertilizers are chiefly applied by means of drip irrigation, as per recommendations based on the soil analyses that are performed in the plantations on a regular basis. This minimizes component loss by evaporation or lixiviation, thus reducing the environmental pollution risks. Pesticides are used as recommended by the manufacturers. Their management, including empty container disposal, is part of the ongoing employee training program. Appropriate protective wear and gear are used.

## (4) Water supply and treatment

Water for the plant and for irrigation purposes comes from the Chavimochic Special Project canal. It is collected from a 20,000m3 catchpit 200 meters from the processing plant. Water undergoes a physicochemical purifying process involving coagulation, flocculation, filtering and disinfection and is ultimately stored in a 120m3 main tank. The resulting treated water is used in processing and cleaning activities in the processing plant, as well as for irrigation purposes. The treated water is tested monthly for microbiological and physicochemical quality parameters and annually for heavy metals.

#### (5) Management of solid, liquid, and hazardous waste

Solid waste. Solid waste generated includes the following: (a) Discarded raw materials from the production process, which are taken to a neighboring barn every day and used as a nutritional supplement for livestock. (b) Municipal solid waste including refuse from the cafeteria, restrooms, and offices, as well as packaging materials. This waste is picked up daily by a company unit and taken to a sanitary landfill. In the farm, three types of waste bins are used to separate organic, inorganic, and infectious contagious refuse that is subsequently taken to the decomposition area. Most of the farm's organic waste is asparagus foliage, which is cut shortly before harvesting. It is gathered and taken to a neighboring farm where it is used as the basic feed for dairy cattle together with waste from the processing plant. In exchange, Green Perú receives organic matter (livestock manure compost) that is used in the plantations. (c) Empty cans from calibrating the closing machines and from organoleptic analyses, scrap cans, and empty food containers (cans and jars) that should not be reused. This waste is gathered in a trench on the far side of the property and incinerated in the presence of a notary public. (d) Empty chemicals containers: empty solvent containers are rinsed three times prior to disposal in the bins that are sent to the sanitary landfill. Empty containers of chemicals used for pest control in the plant and in the fields are rinsed three times. Then they are punctured in order to render them unusable and stored in a restricted access area for subsequent incineration as per EUREPGAP recommendations.

Liquid waste. Wastewater is the product of processing and washing activities and can be reused, except for water with detergents. To this end it is sent to a repumping tank where it is filtered and fed into the field irrigation network. Wastewater with detergent used for more thorough washing of equipment is sent to the oxidation pond, as is wastewater from the restrooms and cafeteria. The

farm is equipped with concrete pit latrines in number consistent with the workforce. Once in the oxidation pond, organic pollutants are biodegraded by aerobic or anaerobic microorganisms. Subsequently, the treated water is used for tree irrigation (living walls), boosting oxygen production. Wastewater quality is tested quarterly by means of microbiologic and physiochemical analyses.

Hazardous waste. Hazardous waste includes (a) canned goods beyond their "best before" date or that have spoiled. These are no longer suitable for human consumption and must be disposed of by incineration in a trench, as is the case with empty containers; (b) used oil from the boiler, gathered in plastic barrels and removed from the plant by the supplier; and (c) agrochemicals and pesticides: on the farm, they are stored separately, as per EUREPGAP standards. All storage units are equipped with devices to prevent overflowing and are organized to minimize spillage risks.

#### (6) Air emissions

Air emissions are generated by burning petrochemicals to obtain electric power for the auxiliary power unit and the boiler. Electric power is supplied by the Hidrandina grid; the backup power unit is only used in the event of a blackout in the public system. The equipment is powered by diesel fuel, and the boiler, with used oil. An operator monitors the boiler at all times.

#### (7) Handling of chemicals

The refrigeration equipment uses innocuous coolants and is monitored three times a day for temperature and pipe leaks. No chlorofluorocarbons are used in the cooling system, and no polychlorinated biphenyls (PCBs) are used in the electric equipment. Nontoxic, noninflammable and non-ozone-depleting solvents are used in the plant as grease removers for personnel and equipment.

Chlorine used for disinfection purposes at the plant is purchased in granulated form and stored in its original packaging in the plant warehouse. Once a week, or as needed, health personnel prepare a solution of granulated chlorine and stores it in a 35-liter plastic barrel. This container is kept locked in the sanitization station and is handled by health personnel only. Chlorine is supplied to the points requiring disinfection as per the directions in the document titled "Preparation of Chlorinated Solutions." Chlorine used in the farm for equipment disinfection is granulated calcium hypochlorite.

#### (8) Environmental protection

As a contribution to the environment and in order to foster and improve flora and fauna diversification, Green Perú has planted one hectare of eucalyptus forest and set up conservation areas for other plant species and a further 3,500 linear meters of eucalyptus as a living fence..

#### (9) Occupational safety and health practices

Back pain during harvest is the main health problem and the most frequently cited reason for leave. In order to alleviate this problem, employees perform relaxation exercises throughout the working day. Talks on technical, health and safety, and other topics are given to workers regularly. Employees use work clothing and other protective equipment as necessary. HACCP certification involves implementation of occupational safety and health practices, whence the need to observe good manufacturing practices and other corporate best practices. Personnel suspected of having or carrying a disease that might be food borne are denied access to all areas where food is handled and are sent for appropriate medical treatment. Workers handling food observe high personal hygiene standards and use protective clothing, caps, and appropriate footwear. They are required to wash their hands prior to starting any activity involving food handling; immediately after using the restrooms, and after handling nonprocessed foods or any contaminated materials. They are

instructed to avoid potentially contaminating behaviors such as smoking, spitting, chewing or eating, sneezing, or coughing over the food, and to avoid wearing personal items such as jewelry, watches, brooches or other objects that might compromise food safety in the area. Green Perú asks its employees to submit health certificates issued by the Peruvian health authorities, which are valid for twelve months. The company has retained two private doctors to provide health care to sick personnel. The "Good Manufacturing Practices" program, which requires the provision of training courses on occupational health and safety, is in place.

Workers in contact with equipment or chemicals receive training in the form of presentations on using and handling these items. Appropriate protective equipment is available for tasks involving some kind of risk, such as maintenance activities, operation of equipment, handling of cleaning and disinfection products and pest control substances (rodenticides and insecticides). Workers handling pesticides have access to a workplace pesticide exposure prevention program ("ESSALUD") with the general objective of preventing chronic and acute poisoning. The company has full-time health professionals to treat occupational diseases and other ailments. Occupational diseases are prevented through worker training. Green Perú complies with domestic labor regulations.

Nevertheless, as per project consultant recommendations, a number of actions should be taken to improve plant management: (a) improve the infrastructure of the raw materials warehouses in terms of construction materials, walls, flooring, and ceilings; (b) separate hazardous materials storage and the workshop more effectively (the existing partition is just wire mesh); (c) expedite the construction of storage units for containers (only the floor is finished to date); (d) paint the piping carrying air, steam, fuel, hot water, and cold water, as per the standard color code. (e) implement the use of written production orders for each processing batch for better tracking and production control; (f) consider coding metal containers before sealing; (g) purchase continuous canning liquid filling equipment; (h) replace the wooden table currently used by the quality assurance staff with a new table made of stainless steel or another safe material; (i) purchase a fibrometer and a turbidimeter for more accurate measurement; (j) set forth in writing the procedure for recalling canned goods if necessary.

## **Monitoring and Annual Reporting**

Green Perú already has an environmental management plan that will be supplemented with a schedule for implementing the improvements identified in this summary. This schedule shall be acceptable to the IIC to ensure that the company complies with domestic laws and the IIC's environmental guidelines. Green Perú will submit a yearly report with a summary of the data from monitoring the handling of agrochemicals and waste, occupational health and safety issues, accident reports, food hygiene and control, and labor issues. EUREPGAP also requires that suppliers carry out annual internal audits, document their outcomes, and take appropriate corrective steps.