

**Voluntary Report** – Voluntary - Public Distribution

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**Report Name:** Table Grape Production in Chile - Field Visit to the Atacama Region

**Country:** Chile

**Post:** Santiago

**Report Category:** Agricultural Situation, Trip Report, Sanitary/Phytosanitary/Food Safety, Agriculture in the Economy

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**Report Highlights:**

Chilean producers export 260 thousand metric tons of table grapes to the United States annually. The arid Atacama region accounts for around 15 percent of Chilean area planted in table grapes. Chile seeks a systems approach to improve market access for three regions: Atacama, Coquimbo, and Valparaiso. A new regulatory approach would benefit these areas by altering the current fumigation requirements. Fumigation significantly decreases the quality and shelf life of the fruit, which negatively impacts its competitiveness. On January 27-28, 2022, the U.S. Chargé d'affaires led an embassy delegation to visit grape orchards, packing houses, and export facilities near the city of Copiapó in the Atacama region of Chile. The delegation included staff from FAS Santiago and a technical team from APHIS's preclearance program. The following includes information compiled from both teams.

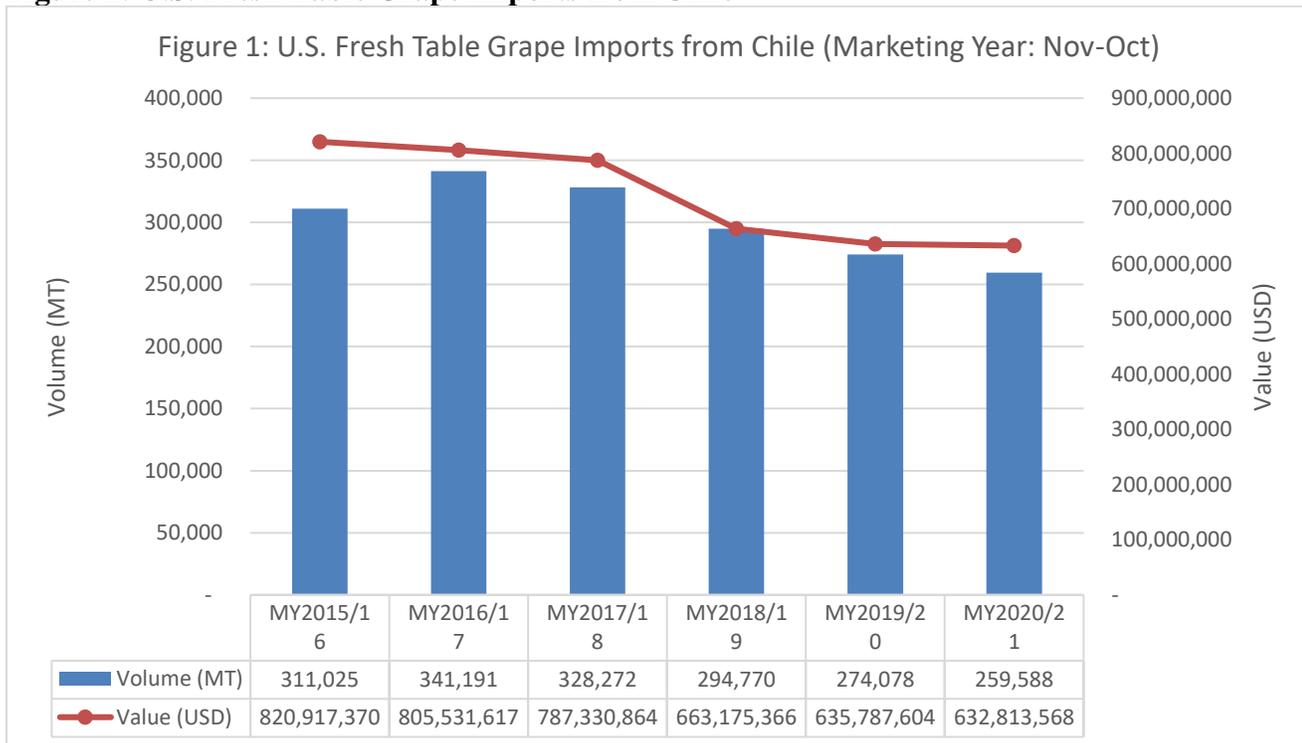
**Overview: Table Grape Production and Systems Approach in Chile**

Chile has access to the U.S. table grape market but seeks a systems approach to improve market access for three Chilean growing regions: *Atacama*, *Coquimbo*, and *Valparaiso*. Chilean producers export 260 thousand metric tons of table grapes to the United States, from December to May annually. A systems approach would benefit the three Chilean regions by helping them avoid using methyl bromide (MB) fumigation to mitigate against European grapevine moth (EGVM). Fumigation significantly decreases the quality and shelf life of the fruit, which results in lower prices from retailers. Further, fumigated product is ineligible to be certified USDA organic. Unlike the current program which allows untreated grapes to arrive in the United States and be fumigated after arrival, the systems approach will manage the risks offshore, in Chile, under the oversight of personnel from USDA’s Animal and Plant Health Inspection Service (APHIS).

**Table Grape Production in Chile**

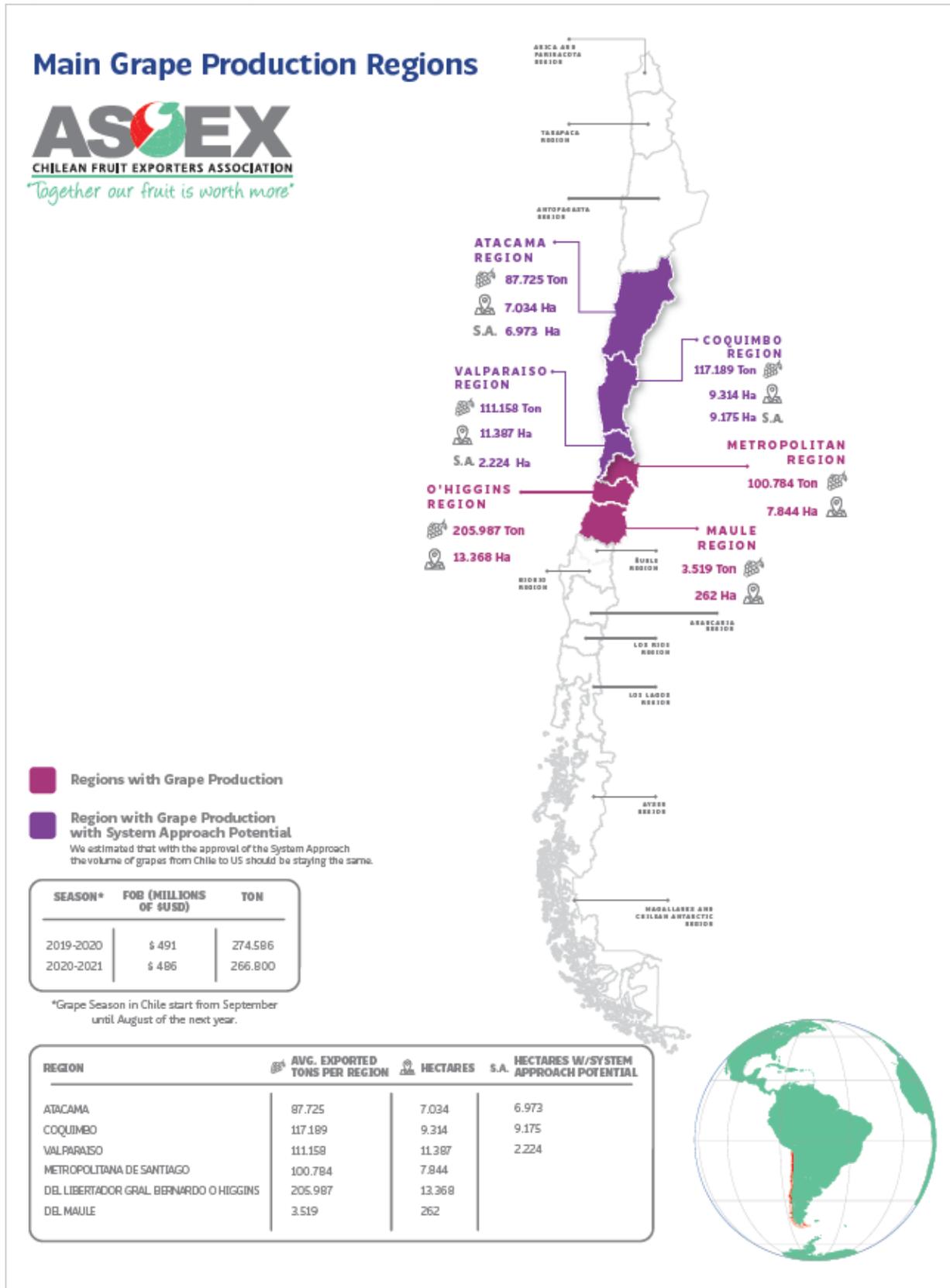
The United States is the top export destination for Chilean table grapes, and Chile is the top import supplier for the U.S. market. Forty-four percent of Chile’s table grape exports are shipped to the U.S. market, with China, Korea, and the European Union importing much of the remaining Chilean production. In MY2020/21, the United States imported \$633 million of table grapes from Chile, equivalent to 259,588 metric tons.

**Figure 1: U.S. Fresh Table Grape Imports from Chile**



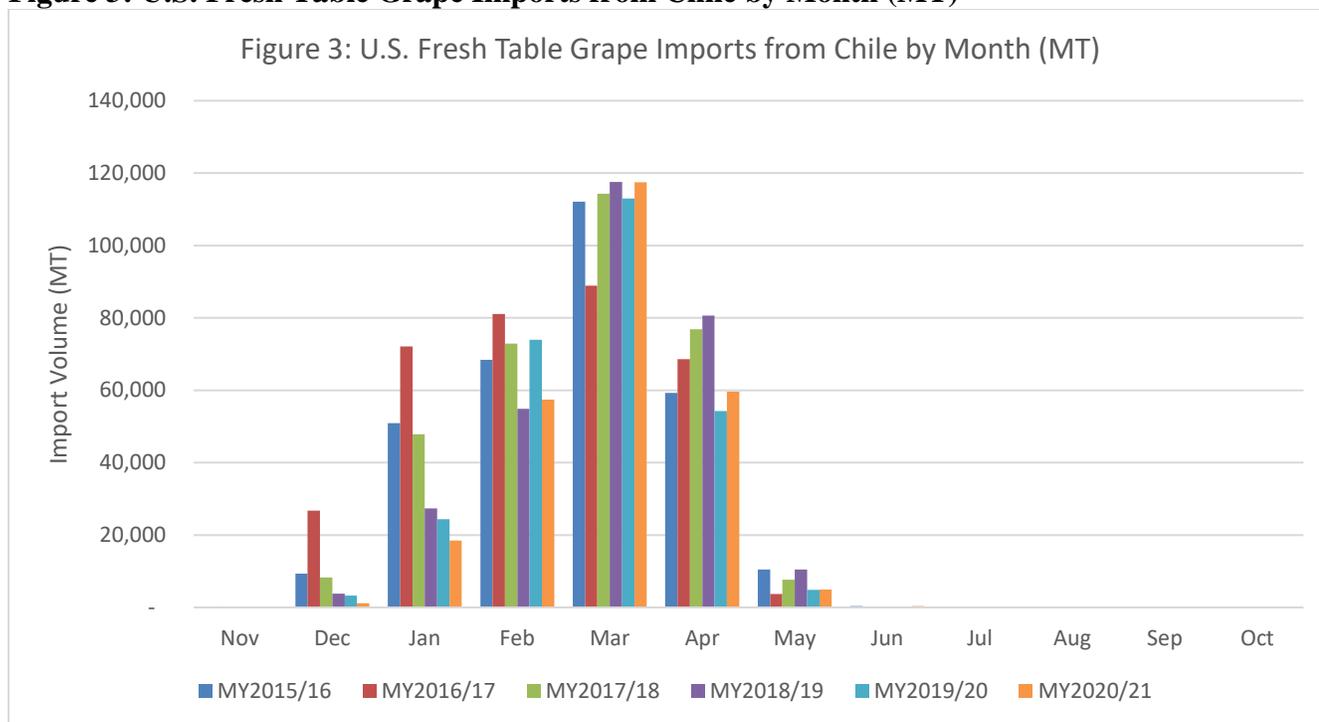
Source: Trade Data Monitor

Figure 2: Primary Grape Production Regions in Chile



U.S. and Chilean shipping season overlap only in the month of December, as the U.S. season ends, and the Chilean season begins. Chile exports to the U.S. market between December and May each year (see Figure 3). The peak U.S. production and shipping season is between July and December.

**Figure 3: U.S. Fresh Table Grape Imports from Chile by Month (MT)**



Source: Trade Data Monitor

Being further north in the country and having a drier climate, table grape harvest in the Atacama and Coquimbo regions is early in the season, generally in December and February. Table grapes produced in these regions compete directly with Peruvian grapes.

**Table Grape Production in Atacama Region**

The Atacama region is in the Northern part of the country. Most table grape production occurs in a desert area around the valley of *Copiapó* (Figure 4). Other than table grapes, pomegranate, and olives there is little variety in agriculture production in the region, due to the desert climate and saline soils. The valley’s limited agricultural production is largely isolated from population centers and other agricultural regions by vast swaths of desert mountains. Grape orchards in the region are on hillsides and are fed with water from drip irrigation systems.

The Association of Agricultural Producers and Exporters of the *Copiapo* valley (APECO) represents the agricultural industry in the region. The association represents 36 export companies from the Atacama region, representing 95 percent of regional exports and 90 percent of the cultivated area.

According to APECO contacts, table grape production is crucial for local employment and the stability of the region’s economy. During the harvest season the table grape export industry employs 20,000 people in harvest, packing, logistics and associated activities. APECO notes that agriculture provides

long-term economic stability. Contacts contrast agricultural stability to the uncertainty of mining, the other major regional source of employment.

In MY2019/20, Atacama accounted for 15 percent of Chile’s table grape planted area, totaling 14,944 hectares (Table 1). Atacama and Coquimbo regions have historically been known to have the earliest harvest in Chile (November-December). However, with increasing competition for the U.S. market with Peruvian grapes, producers have introduced mid and late-harvest varieties that can be exported from January to March to cover a longer export period, thus diversifying producer risk.

**Table 1: Table Grape Planted Area by Region in MY2019/20 (hectares)**

Region	Planted Area (hectares)	Share (%)
Arica y Parinacota	2	0.0%
Atacama	6,836	15.0%
Coquimbo	8,159	17.9%
Valparaíso	9,970	21.9%
Metropolitana	6,848	15.1%
O'Higgins	13,435	29.5%
Maule	241	0.5%
Total	45,489	100.0%

Source: Chilean Ministry of Agriculture, ODEPA

**Figure 4: Table Grape Production in Copiapó Valley, Atacama Region**



Source: USDA Staff

## Chilean Grape Exports and Current U.S. Requirements

Under the current system, Chilean table grapes are harvested and hand packed into 8.2 kg boxes. Packing generally takes place in a packing house, but some producers are now packing at mobile packing tables in the field. The packed boxes are stacked on pallets and moved to cold storage for chilling for 24 hours. The grapes may remain in cold storage a few days or weeks waiting for a vessel to be available for export. At the cold storage facility, the pallets are placed in refrigerated containers, sealed, and transported to port by truck. Shipping to the United States by sea takes 11-14 days. On arrival at port in the United States, the grapes are fumigated with methyl bromide and distributed. Ninety eight percent of Chilean table grapes are not fumigated until arrival in the United States. Only two percent of shipments are fumigated in Chile, before moving to cold storage.

In the United States, Chile competes mainly with Peruvian table grapes, which do not require methyl bromide fumigation. According to APECO, and the Chilean association of fruit producers (FEDEFRUTA), the additional fumigation requirement puts Chilean grapes at a disadvantage as methyl bromide considerably reduces the quality of the fruit. Since fumigation reduces the quality of the crop, most exporters opt to fumigate in the United States, to reduce the time from the fumigation and sale. The fumigation requirement also prevents Chile from sending organic table grapes to the U.S. market.

The current system requires fumigation with methyl bromide for imports of Chilean grapes to protect against the spread of *Lobesia botrana* or European grapevine moth. The European grapevine moth was detected in California in September 2009, and it was not fully eradicated until August 2016. The eradication effort cost close to \$100 million.

**Figure 5: Methyl Fumigation Chamber, Atacama Region**



Source: USDA Staff

Methyl bromide is a Class I ozone-depleting substance, as defined by EPA and the Montreal Protocol on Substances that Deplete the Ozone Layer. Methyl bromide is also toxic, as prolonged exposure to high

concentrations of methyl bromide can cause central nervous system and respiratory system damage and can harm the lungs, eyes, and skin. The United States phased out production and consumption of methyl bromide with the exceptions of critical uses, quarantines, and pre-shipment.

In January 2015, the Chilean Environment Ministry announced the implementation of a project to phase out the use of methyl bromide fumigation. Since January 2015, Chile prohibited imports of methyl bromide except for its use in quarantines and pre-shipment. In October 2017, Chile published resolution 6,129 which prohibits the import, purchase, sale, possession, and application of methyl bromide in any concentration other than 100 percent.

### **Chile's Request for Systems Approach**

In 2006, Chile's Servicio Agrícola y Ganadero (SAG) requested that APHIS amend the entry requirements for table grapes from Chile to allow importation under a systems approach. Currently, the two primary pests of concern for table grapes are the European grapevine moth (*Lobesia botrana*) and the Chilean false red mite (*Brevipalpus chilensis*).

According to the International Plant Protection Convention, a systems approach is a pest risk management option that integrates different measures, at least two of which act independently, with cumulative effect. APHIS has increasingly used systems approaches to approve new imports or establish requirements that are more desirable to producers and importers. These approaches have been effective in mitigating pest risk on imported commodities for consumption from many countries. APHIS has approved systems approaches for blueberries, citrus, and kiwi from Chile, and employs systems approaches for exports of U.S. products to other countries, like cherries from California to Japan and citrus from Texas to the European Union.

Prior to implementing the systems approach, SAG will provide an operational work plan to APHIS for review and approval. Prior to and during the season, SAG will ensure that all program participants follow program guidelines and maintain program records. APHIS' preclearance staff in Chile will be directly involved in monitoring the program.

APHIS has collaborated with SAG and Chilean industry through the preclearance program for close to 40 years. The program in Chile is one of the largest, with over 200 approved commodities and supporting close to \$2 billion of trade each year. Today, nine APHIS inspectors and over 100 SAG inspectors work at up to seven preclearance inspection sites in Chile. In addition to fruit inspections and certifications, APHIS inspectors conduct field monitoring and facility approval activities. The program is completely funded by Chilean industry, with an annual budget of almost \$2 million. Preclearance programs are designed to mitigate pest risk in the country of origin, while providing an important incentive for industry: precleared shipments receive expedited entry upon arrival at U.S. ports of entry, allowing perishable products to reach U.S. consumers faster.

Under the systems approach, only commercially grown table grapes from approved, registered places of production in Arica and Parinacota, Tarapaca, Antofagasta, Atacama, Coquimbo, and Valparaiso will be eligible to export to the United States. While all six regions are considered areas of low prevalence for EGVM, only three (Atacama, Coquimbo, and Valparaiso) currently have commercial table grape production. Prior to starting the season, SAG will review all production area applications for inclusion in the systems approach.

To qualify, places of production must be free from EGVM for the previous two shipping seasons and adhere to Chile's EGVM national control program regulatory guidelines and control measures to suppress, eradicate, and prevent the spread of the pest. Chile developed its protocols for EGVM trapping and control in consultation with a technical working group that included U.S. and European scientists. The methodology is based on the best available science, international standards, and is like the EGVM eradication program in California.

**Figure 6: Table Grape Production Area with EGVM Trap Locations Shown Copiapó Valley**



Source: Chilean Ministry of Agriculture

On January 28, APHIS staff from the preclearance program in Chile, with SAG, visited table grape production areas in the Copiapó Valley to learn more about the EGVM national control program. From August to the end of April, SAG officers check traps in rural (one trap every 10 hectares, with at least one per place of production) and urban (one trap per 25 hectares) every 10 days. The program has well-defined protocols in place to suppress and eradicate any EGVM outbreaks in the Atacama, Coquimbo, and Valparaiso regions.

In addition to being free from EGVM, places of production must also have a low prevalence of *B. chilensis*, established by pre-harvest fruit sampling. If a single live mite is found during pre-harvest sampling, the place of production will not be eligible to participate in the systems approach that season.

**Figure 7: APHIS and SAG Personnel Checking an EGVM Trap, Atacama Region**



Source: USDA Staff

**Figure 8: Close-up View of EGVM Trap (delta type) with Pheromone Lure, Atacama Region**



Source: USDA Staff

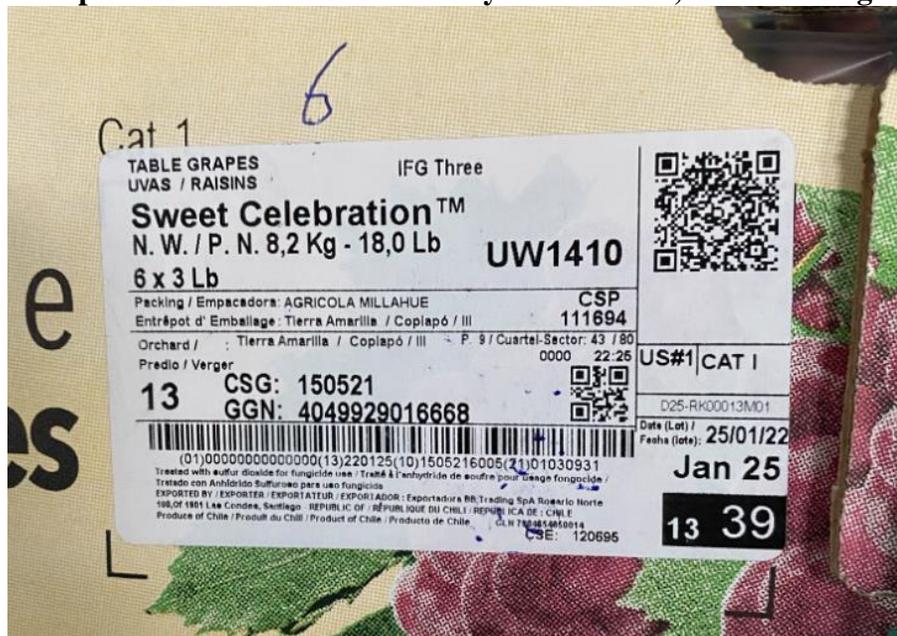
Table grape packinghouses must also be registered and jointly approved by SAG and APHIS prior to starting the season. Packinghouses must be pest exclusionary, physically separate systems approach fruit from non-systems approach fruit, cull diseased or damaged fruit, and pack the fruit into new, clean boxes or crates. Further, the identity and origin of the fruit must be maintained throughout the process, from the grove to the packinghouse, and through the export process for traceability purposes (Figures 9-10).

**Figure 9: Production Block Labelling in the Field for Traceability, Atacama Region**



Source: USDA Staff

**Figure 10: Table Grape Box Label with Traceability Information, Atacama Region**



Source: USDA Staff

Each shipment of table grapes must be accompanied by a phytosanitary certificate issued by SAG that certifies that the fruit was produced in accordance with systems approach guidelines and is free from EGVM and *B. chilensis*. Additionally, a random, representative sample of each shipment must also be inspected for pests at an APHIS-approved inspection site in Chile under the direction of APHIS inspectors, in coordination with SAG. Industry plans to build a new inspection site in Copiapó (Atacama Region) if the systems approach is approved (Figure 12). This new site will complement the seven existing preclearance inspection sites in Chile.

During the preclearance inspection, APHIS and SAG officers will verify that the fruit originated from an approved production area and packinghouse and physically inspect the fruit for EGVM and other pests, in addition to conducting another specialized inspection for *B. chilensis* mites (Figure 11). If the inspection is successful, APHIS will issue a certificate of preclearance for the shipment. Back at the packinghouse, the approved shipment will then be loaded into a refrigerated container, sealed, and not opened until it arrives at a U.S. port of entry.

**Figure 11: SAG Official Conducts Inspection Demonstration, APHIS Preclearance Site, Santiago**



Source: USDA Staff

**Figure 12: U.S. Embassy Delegation Visit to Proposed Preclearance at Unifrutti, Copiapó, Chile**



Source: USDA Staff

**Post Comment:**

The systems approach presents an alternative to fumigation with methyl bromide. Since almost all (98%) of methyl bromide fumigation for table grapes from Chile occurs on arrival at U.S. ports, implementing the systems approach will significantly reduce U.S. use of and reliance on methyl bromide. Additionally, pests that could be potentially imported to the U.S. in those shipments would be destroyed or detected outside of the United States. Currently, half of all methyl bromide fumigation conducted for agricultural quarantine purposes in the United States is for table grapes from Chile. A systems approach will also allow Chile to apply to send organic grapes to the U.S. market for the first time.

The Atacama and Coquimbo regions are particularly inviting candidates for systems approach access as there is no prevalence of EGVM in the controlled area due to the region's arid conditions.

**Attachments:**

No Attachments.