Comparing Canada's National Industry-led Food Safety Programs in the Fresh Produce Sector with Food Safety Programs Available in Importing Countries

Abridged Report with Additional Comparisons

May 2008

A Joint Project of
Canadian Horticultural Council
Canadian Produce Marketing Association
Canadian Federation of Independent Grocers
Canadian Council of Grocery Distributors

Canadian Horticultural Council
Conseil canadien de l'horticulture

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Preface to the Abridged and Revised Version

Early in 2008, the four organizations that participated in the 2007 project to compare Canada's national industry-led food safety programs in the fresh produce sector with food safety programs available in importing countries and Agriculture and Agri-Food Canada agreed to fund the review of two additional programs. These were the SQF1000 Code Level 2 with the guidance for the production of fresh vegetable produce which was released in draft form in late 2007 and the newly revised (January 2008) German QS scheme for produce marketing organizations and wholesalers of fresh fruits, vegetables and potatoes. These two schemes were selected in the case of the SQF 1000 scheme as an potentially important program for primary producers in the United States and elsewhere and in the case of the QS scheme as a European example of a scheme for repackers and wholesalers for fresh produce.

In commissioning this additional work, the steering committee took the decision to revise only those portions of the report impacted by including the new programs. With the exception of adding new information about the conformity assessment schemes being developed by the Canadian Horticultural Council and the Canadian Produce Marketing Association for their schemes for primary producers and repackers and wholesalers and the editorial change substituting GlobalGAP for EurepGAP, no changes have been made to the information about the other programs that are compared. Except for editorial or consequential changes, the conclusions remain the same.

The steering committee also agreed to issue an abridged version of the report including only the Section 1: Executive Summary, Section 2 - Study Objectives, Section 7: Programs Compared - Descriptions, Section 8: Programs Compared - Summary Tables, and Section 11: Conclusions. Readers interested in the discussion of the project's methodology, the information about Canada's horticulture industry, the comparison of various benchmarking schemes and the short descriptions of fresh produce food safety initiatives in other countries are referred to the 2007 report which can be found, in both French and English at: www.cpma.ca/fr_food_standardization.asp or www.cpma.ca/en_food_standardization.asp

Section 1 - Executive Summary

Project Background: Stakeholders in the Canadian fresh produce industry, the Canadian Horticultural Council (CHC), the Canadian Produce Marketing Association (CPMA) and the Canadian Council of Grocery Distributors (CCGD) have agreed that food safety should be a non-competitive matter, that the best means of achieving this is to have credible HACCP-based national food safety programs all along the supply chain, that they would recognize each others' national food safety programs and that they would promote food safety equally between domestic fresh produce and imported fresh produce. To achieve this final objective, they established a project to evaluate and assess the Canadian fresh produce food safety programs for grower/packers and repacker/wholesalers with those available in countries from which Canada imports.

After establishing a steering committee which also included representatives of the Canadian Federation of Independent Grocers (CFIG), Agriculture and Agri-Food Canada (AAFC) and the Canadian Food Inspection Agency (CFIA), the project obtained funding from AAFC's Canadian Food Safety and Quality Program and engaged Monachus Consulting to undertake the program comparisons and related research.

Methodology of Comparison: The steering committee reviewed a range of previous studies comparing food safety programs (see Section 3) and decided upon a set of criteria for the program comparisons based on general characteristics (commodity and programs scope, geographic reach, etc), the technical content of the programs and their approach to conformity assessment. Templates were created based on three Canadian programs, the CHC potato program, the CHC greenhouse production program and the CPMA repacker/wholesaler program.

Environmental Scan: Although Canada imports fresh produce from between 130 and 160 countries each year (see Section 5), the steering committee identified an initial list of 51 countries. The consultants undertook an extensive Internet search related to fresh produce food safety programs and determined that there are a very large number of programs that are or could be used by a grower/packer or a repacker/wholesaler. Based on the information available three broad categories are discussed in this report: programs that could be directly compared in detail (Sections 7 and 8), programs that have been benchmarked by either a government, an intergovernmental body or a private group (Section 9) and programs that could be described in general terms (Section 10).

Benchmarking & Recognition Schemes: Seven benchmarking or recognition schemes were reviewed as a basis of determining the comparability of the benchmarked programs with the Canadian programs. Section 4 outlines the nature, scope and processes of two private (EurepGAP and Global Food Safety Initiative), one intergovernmental (ASEAN) and four governmental (European Union, United Kingdom, New Zealand and Canada) schemes. The information available varies from scheme to scheme. However, it appears that they produce similar results. Each requires that the applicant programs be HACCP or HACCP-based, have detailed background materials, etc. And, each benchmarking or recognition schemes uses independent reviewers, involves adjustments to the program if required to meet the criteria and sets out expectations for the effective administration of the applicant scheme, its standard/requirements and the associated conformity assessment system. With respect to the latter, all require either the use of certification bodies accredited in the ISO/IAF system or bodies that are firmly rooted in that system (Canada).

Programs Compared: The abridged report provides the results of a detailed comparison of seventeen (17) non-Canadian programs. Ten (10) are compared with the CHC potato program, five of which are North American including the USDA Fresh Produce Audit Verification Program, the

California Leafy Greens Program and the SQF 1000 Code with guidance for fresh produce production. Five are from elsewhere, including the GlobalGAP Fruit and Vegetable scheme, ChileGAP, NewZealandGAP, FreshCare(Australia) and the South African program operated by the Perishable Product Export Control Board. Only one program, the PrimusLabs.com greenhouse program, is compared with the CHC greenhouse production program. Six programs, four from the United States, one from South Africa and one from Europe are compared with the CPMA program. All these programs are described in Section 7. Section 8 provides detailed tables that summarize the technical content of each against the base CHC and CPMA programs and indicate whether or not a program has comparable requirements, has fewer or more requirements or does not mention the requirement. In addition, the contents of a further eleven (11) programs at the primary production level and four at the repacker/wholesaler level can be assessed based on the EurepGAP and GFSI benchmarking schemes. Finally, information is provided on fresh produce schemes from fifteen (15) countries in the Americas, Africa and Asia.

Conclusions: Section 11 sets out the project's conclusions, the most important of which are:

- that the template developed by the steering committee can be utilized as a basis for determining the comparability of fresh produce food safety programs;
- that the information required for a comparison includes, where applicable, the generic model, the program's auditable requirements and the details of the conformity assessment scheme;
- that a rigorously applied HACCP or HACCP-based approach generates a set of industry requirements or a firm specific food safety program that is comparable to the Canadian programs which use the HACCP-based approach;
- that some of the differences in the HACCP or HACCP-based programs compared may be due to the differences in the hazard analyses;
- that food safety programs that do not use the HACCP or HACCP-based approach have deficiencies that reflect their underlying objectives, for example, the American programs that focus on microbiological contamination have fewer or no controls for chemical and physical hazards; and,
- that the identified private benchmarking and government recognition schemes have similar characteristics and appear to provide similar results thereby affirming that benchmarking could be used as a proxy for a detailed comparison of the programs.

Section 2 - Study Objectives

2.1 Project Participants

Three of the primary organizations involved in the Canadian fresh produce supply chain decided in mid-2006 to undertake a joint project aimed at establishing the comparability of Canadian industry-led food safety programs at the primary production and packer/wholesaler levels of the supply chain with those in place in other countries. During the course of the project, the Canadian Federation of Independent Grocers (CFIG) joined the Steering Committee, as an interested stakeholder and a supporter of a harmonized approach to food safety.

The four organizations are:

Canadian Horticultural Council (CHC): Established in 1922, the Canadian Horticultural Council (CHC) is a voluntary, not-for-profit, national association whose members are primarily involved in the production and packing of over 120 horticulture crops comprised of fruit, vegetables, flowers and ornamental plants. These members include provincial and national horticultural commodity organizations representing more than 20,000 producers in Canada, as well as allied and service organizations, provincial governments and individual producers. It focuses on an extensive range of needs and concerns, such as: research and technology, trade and industry standards (including food safety), trade relations, plant health issues, regulations, human resource availability and industry relations (growers, packers, wholesalers, retailers and processors). CHC has been involved in the development of food safety programs for its members since 1997 and is currently implementing or developing eight (8) programs for the following crop groupings using the Canadian approach to on-farm food safety: small fruit, tree and vine fruit, greenhouse production, potatoes, bulb and root vegetables, leafy vegetables and cruciferae, fruiting vegetables, and asparagus, sweet corn and legumes. CHC's potato program has received its letter of completion under Technical Review Part 1of the National On-Farm Food Safety Recognition Program established by the Canadian Food Inspection Agency (CFIA) and the provincial and territorial governments Further information can be found at: www.hortcouncil.ca

Canadian Produce Marketing Association (CPMA): Established in 1925, the Canadian Produce Marketing Association is a not-for-profit organization representing companies that are active in the marketing of fresh fruits and vegetables in Canada from the farm gate to the dinner plate. CPMA's 600 international and Canadian members include major grower/shippers/packers, importer/exporters, carriers, brokers, wholesalers, retailers, and foodservice distributors, integrating all segments of the fresh produce industry. They are responsible for 90 percent of the fresh fruit and vegetable sales in Canada at an estimated value of 6 billion Canadian dollars. CPMA's vision is to increase the market of fresh fruit and vegetables in Canada by encouraging cooperation and information exchange among all segments, at the domestic and international level, of the produce industry. The CPMA focuses on seven key areas: marketing and promotion, networking, food safety, health and nutrition, industry efficiency and technology, government and trade relations, and education and training. CPMA has been involved in the development of an industry-led HACCP-based food safety program for repackers and wholesalers since 2002. This program is currently being implemented by its members. CPMA has requested technical recognition of its program by the Canadian Food Inspection Agency and is involved in the development of a recognition program for post-farm food safety programs by CFIA and the provincial and territorial governments. Further information on CPMA can be obtained at: www.cpma.ca

Canadian Federation of Independent Grocers (CFIG): Founded in 1962, CFIG is a non-for-profit association. Its mission is to further the unique interests of Canada's independent and franchised grocers across Canada through progressive partnerships with retailers, suppliers and the consumer. CFIG has a national membership of 3,800 whose members have contributed $14 billion dollars in annual retail sales from coast to coast and who play a key role in the economic landscape of Canada's business community. CFIG has been involved in food safety program through a joint projects with CCGD to develop industry-led, HACCP-based programs for distribution centres and its members' retail outlets. Further information about CFIG can be obtained at: www.cfig.ca

Canadian Council of Grocery Distributors (CCGD): Established in 1919, the Canadian Council of Grocery Distributors is a not-for-profit organization committed to advancing and promoting the grocery and foodservice distribution industry in Canada, at both the regional and national levels. Its membership includes both small and large grocery wholesalers, foodservice distributors, and retail grocery chains. Their sales represent $71.8 billion in retail and $12 billion in foodservice. Members employ over 428,100 Canadians, and represent over 85 percent of all grocery (i.e. food, non-food, non-alcoholic beverages) distribution sales in Canada. It realizes its goals and objectives through domestic and international alliances, representing consumers, distributors and trading partners. CCGD's strategic priorities are public policy at the federal, provincial and municipal levels, supply chain efficiencies, industry communications and conferences and programs to facilitate industry networking, learning and new product promotion. CCGD, in association CFIG has developed industry-led, HACCP-based programs for distribution centres and for retail outlets. CCGD is also involved in assisting its members to facilitate recalls and other related activities. Further information on CCGD can be obtained at: www.ccgd.ca

2.2 Project Description

In early 2006, the three organizations CHC, CPMA and CCGD agreed that recognizing each others' national food safety programs was a priority in order to demonstrate to consumers their dedication to food safety throughout the fresh produce supply chain. Additionally, they recognized that food safety should be a non-competitive matter and that the best means of achieving this is to have credible, mutually recognized, HACCP-based, national food safety programs all along the supply chain.

These organizations also determined that in order to promote food safety equally between domestic fresh produce and imported fresh produce, it is necessary to evaluate and assess the Canadian fresh produce food safety programs at the farm level and at the packer/wholesaler level of the supply chain with those available in countries from which Canada imports.

The **objective** of this project is:

- to compare Canadian food safety programs with those of other countries;
- to provide a level of understanding amongst Canadian stakeholders;
- to enable the industry to determine how their food safety programs could be accepted internationally; and,
- to provide a basis for Canadian stakeholders (particularly wholesalers and retailers) to assess the acceptability of programs available in other countries.

In addition, the project will aid in promoting food safety for Canadian consumers and will support the development, implementation and participation in national food safety programs that encompass the entire food supply chain (both domestic and imported product) for the fresh produce sector.

The project's outputs include:

- an environmental scan of fresh produce food safety programs through a literature review and investigation of other national (country-wide) food safety programs for the on-farm, packing, repacking and wholesale sectors;
- development of comparison criteria covering program components, audit practices, training, reporting, government recognition, etc.;
- comparison of CHC and CPMA food safety programs with other programs to establish commonalities and differences - though developed differently, the programs may be equally effective in promoting the production of safe food - with a focus on HACCP and/or HACCP-based practices; and,
- a final report outlining comparison of programs and recommendations as appropriate.

Section 7 - Compared Programs

As discussed in Section 2, the objective of this project was to compare the industry-led food safety programs developed by the Canadian Horticultural Council for primary producers/packers and that developed by the Canadian Produce Marketing Association for repackers and wholesalers to similar national or international programs available in countries from which Canada imports fresh produce. As discussed in Section 3, this comparison has been conducted on the basis of three sets of criteria covering:

- General characteristics such as:
  - commodity scope (e.g. fresh produce, integrated, etc);
  - content scope (e.g. food safety, environmental, etc);
  - geographic reach (e.g. national, international);
  - recognition (e.g. by government &/or by customers);
  - other factors (e.g. infrastructure sharing).
- Program content/food safety characteristics, such as:
  - HACCP or HACCP-based;
  - relationship to Codex Alimentarius Commission principles, guidelines, etc.;
  - availability of documents (e.g. hazard analysis, program requirements);
  - CCPs (if any) identified;
  - a detailed analysis of GAPs or GMPs against either the CHC or CPMA programs;
  - record keeping requirements.
- Conformity assessment factors such as:
  - certification body requirements:
  - audit attributes (frequency, duration, use of random/unannounced audits, etc);
  - audit scoring approach;
  - auditor competency/qualifications, training requirements, etc

The results of these comparisons are highly dependent on the details available about each program and on those of the Canadian base programs.

What follows are short descriptions of each of these programs. Section 8 provides a tabular comparison of the programs.

7.1 Programs for Primary Producers/Packers

7.1.1 Canadian Horticultural Council - Potato Program

The CHC Potato program will be one of eight (8) modules based on broad crop groupings that will be included in the final horticultural on-farm food safety program. The other modules are for Bulb and Root Vegetables; Leafy Vegetables and Cruciferae; Fruiting Vegetables; Asparagus, Sweet Corn and Legumes; Greenhouse Production; Small Fruit; and, Tree and Vine Fruit. A separate program has been developed by the Canadian Mushroom Growers Association (CMGA) for that product. The Canadian Herb, Spice and Natural Health Products Coalition (CHSNPC) is currently developing a program that covers these products. CHC and CHSNPC have entered into a memorandum of understanding that clearly identifies which products fall under their respective programs.

Program Owner: The Canadian Horticultural Council (CHC) was established in 1922. It is a voluntary, not-for-profit, national association whose members are primarily involved in the production and packing of over 120 horticulture crops comprised of fruit, vegetables, flowers and ornamental plants. These members include provincial and national horticultural commodity organizations representing more than 20,000 producers in Canada, as well as allied and service organizations, provincial governments and individual producers. It focuses on an extensive range of needs and concerns, such as: research and technology, trade and industry standards (including food safety), trade relations, plant health issues, regulations, human resource availability and industry relations (growers, packers, wholesalers, retailers and processors).

Scope: The Potato program covers the primary production, storage and initial packing of potatoes for processing and for the fresh market. It is a food safety program. Environmental issues are covered by provincial regulatory requirements and by the voluntary environmental farm plans developed by primary producers. Labour requirements are covered by provincial regulations.

Reach: The program is available to all potato producers in Canada regardless of their membership in a CHC affiliated organization.

Recognition: The program's generic hazard analysis/model and producer/packer manual (required GAPs) have been reviewed and issued a letter of completion under Technical Review Part I (technical soundness) of the National On-Farm Food Safety Recognition Program. The potato program has also been endorsed by the Canadian Council of Grocery Distributors (retail chains and major distributors) for use by Canadian potato growers and packers. Several of Canada's major purchasers of potatoes for processing have also identified the program as a requirement for their growers.

Program content/food safety characteristics: The program is a HACCP-based program developed in accordance with the requirements of the National On-Farm Food Safety Recognition Program and in conformity with the HACCP principles established by the Codex Alimentarius Commission.

Conformity assessment scheme: CHC is currently implementing its approach to conformity assessment in order to meet the management systems requirements of the National On-Farm Food Safety Recognition Program. It has developed an audit protocol, including a scoring system. Version 1.0 of this protocol was made available to producers, customers and auditors conducting supplier audits and third party audits in June 2007. Version 2.0 is being updated for release in 2008. CHC has determined a set of criteria for auditors and certification bodies, is developing its scheme management system and has identified a lead certification body. Certification will commence with the 2008 crop year.

Website: www.hortcouncil.ca

Source Document(s):
CHC Potato Producer and Packer On-farm Food Safety Manual (Version 5.0, 2006)
CHC Appendices to Potato Producer and Packer On-Farm Food Safety Manual (Version 5.0, 2006)
CHC On-Farm Food Safety Audit for Fresh Fruit and Vegetable Producer/Packer/ Storage Intermediary (Version 1.0, 2007)

7.1.2 United States Department of Agriculture (USDA) - Fresh Produce Audit Verification Program

Program Owner: The program is operated by the Agricultural Marketing Service (AMS) of the United States Department of Agriculture (USDA)

Scope: The program covers fresh produce and other products grown in the United States. AMS lists the following products on its website: apples, apricots, Asian pears, asparagus, beans, beets, bell peppers, blackberries, blueberries, baby bok choy, bok choy, broccoli, butter beans, cabbage, cantaloupes, carrots, cauliflower, celery, cherries, cherry tomatoes, chili peppers, cilantro, cucumbers, currants, dill, eggplant, endive, escarole, fruits and vegetables (cold storage), gooseberries, grapefruit, grape tomatoes, green onions, green leaf lettuce, greens, herbs, honeydew, kale, kiwifruit, lemons, lettuce, mandarins, mangos, melons, Minneola tangelos, mint oil, mushrooms, nappa, nectarines, okra, onions, oranges, other citrus fruit, parsley, peas, peaches, pears, peppers, persimmons, pineapples, plums, plums (inter-specific), pluots, pomegranates, potatoes, prunes, purple hulled peas, radish, raspberries, red leaf lettuce, roma tomatoes, romaine, salad mix, satsumas, snap beans, spinach, spritemelons, strawberries, summer squash, specialty peppers, sweet corn, sweet peppers, sweet potatoes, table grapes, tangerines, tomatoes, watermelon, winter squash and yams.

Reach: This voluntary program is available to growers in the United States. It is currently operational in 34 states or territories: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oregon, Pennsylvania, Puerto Rico, South Carolina, Texas, Utah, Vermont, Virginia, Washington, West Virginia and Wisconsin.

Recognition: The program is operated by a US government department. Certification to the program will be required from suppliers to USDA's commodity purchase programs starting in July 2007.

Program content/food safety characteristics: The program is a food safety program based on USFDA's *Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables*. It focuses on microbial hazards and it is not a HACCP-based or a HACCP program.

Conformity assessment scheme: AMS provides the certification. Audits of farms are undertaken by specially trained federal or state inspectors.

Website: www.ams.usda.gov/fv/fpbgapghp.htm

Source Document(s):
Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables (USFDA 1998)
GAP/GHP Audit Verification Program Brochure (USDA n.d.)
USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist (2007)
Good Agricultural Practices & Good Handling Practices Systems Audit Scoresheet (2007)

7.1.3 California Leafy Greens Best Practices

Program Owner: The California Leafy Greens Handler Marketing Board is a body established in 2007 under the California *Marketing Act* and through and with the agreement of the signatories to the California Leafy Greens Handler Marketing Agreement. It has the powers to license signatory handlers to certify safe handling, shipment and sale of leafy green products to consumers, to advertise and promote use of the mark and to educate consumers about the meaning of the mark. Licensed handlers may only purchase leafy green products from growers who use the Best Practices and traceback systems.

Scope: The California Leafy Greens Best Practices cover iceberg lettuce, romaine lettuce, green leaf lettuce, red leaf lettuce, butter lettuce, baby leaf lettuce (i.e. immature lettuce or leafy greens), escarole, endive, spring mix, spinach, cabbage, kale, arugula and chard. It is a food safety program.

Reach: The program covers leafy greens grown in California and handled/purchased by the signatories to the California Leafy Greens Handler Marketing Agreement. These signatories are "handlers", that is "any person who handles, processes, ships or distributes leafy green product for market whether as owner, agent, employee, broker or otherwise" (excluding retailers).

Recognition: The program is required by the handlers signatory to the marketing agreement, approximately 99 percent of the handling industry in California. The program has been endorsed by major retailers, food service operators and others purchasing leafy greens for sale to consumers. In May 2007, the Canadian Food Inspection Agency revised its import policy to require that all leafy greens imported from California be handled by signatories to the marketing agreement.

Program content/food safety characteristics: The leafy greens program focuses primarily on microbial hazards and traceback. It is not a HACCP-based or a HACCP program. The key reference materials used in developing its GAPs were the USFDA's *Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables*, the United Fresh Fruit and Vegetable Association's *Food Safety Auditing Guidelines: Core Elements of Good Agricultural Practices for Fruits and Vegetables* and *Food Safety Questionnaire for Fresh Fruits and Vegetables* and the Cornell University publication *Food Safety Begins on the Farm: A Grower Assessment of Food Safety Risks.*

Conformity assessment scheme: The marketing board has established a certification scheme that utilizes services of USDA's Fresh Produce Audit Verification Program. Audits are undertaken by specially trained federal and state inspectors. The scheme audits handlers and the growers that supply them. The scheme certifies handlers, not growers. Auditing commenced on 23 July 2007.

Website: www.caleafygreens.ca.gov

Source Document(s):
CLGMB Commodity Specific Food Safety Guidelines for the Production and Harvest of Lettuce and Leafy Greens (5 June 2007)

CLGMB Commodity Specific Food Safety Guidelines for the Production and Harvest of lettuce and Leafy Greens Process Verification Review (29 June 2007)
Proposed California Leafy Green Products Handler Marketing Agreement (CDFA January 2007)

7.1.4 PrimusLabs.com Ranch Audit

Program Owner: PrimusLabs.com is a California based private company that provides pesticide residue testing, testing for microbiological organisms, third party auditing of growing and handling operations for Good Agricultural Practices (GAP) or Good Manufacturing Practices (GMP), development of data management systems designed to provide buyers and sellers an effective supply chain review of their safety and/or quality programs. In addition to its proprietary programs, it offers certification to EurepGAP's fruit and vegetable scheme and the British Retail Consortium's technical standard for companies supplying retailer- branded food products.

Scope: The Ranch Audit program covers fresh produce.

Reach: The program is available to operations in North, Central and South America.

Recognition: The PrimusLabs.com program is endorsed by US retailers and food service distributors, including: Albertsons, Avendra's, C.H. Robinson, CKE Restaurants, Merchants Distributor, Inc., Mitsubishi International, Publix Super Markets, Inc., Rubios Fresh Mexican Grill, Safeway and Sysco.

Program content/food safety characteristics: The program is a food safety program that covers microbial, chemical and physical hazards. It is not a HACCP-based or HACCP program. If an operation has HACCP in place, it will be audited. In addition to its own documents, the program cites those of the California Leafy Greens program.

Conformity assessment scheme: PrimusLabs.com operates its own certification scheme. Its audits are conducted by staff or subcontractors. It also operates a web-based information system which facilitates the posting of audit reports conducted by independent auditors to its requirements. These audits do not lead to certification. PrimusLabs.com has been accredited under ISO Guide 65 by the American National Standards Institute (ANSI) for product certification but its only fresh produce scope is for EurepGAP's fresh fruit and vegetables scheme. Audits are annual.

Website: www.primuslabs.com/index.asp

Source Document(s):
Primuslabs.com Expectations/Recommendations Ranch Audit (v.06.11)
Primuslabs.com Pre-Harvest Block Inspection (v06.09)
Primuslabs.com Food Safety Audit Harvest Crew Self-Audit (v04.11)
Primuslabs.com Food Safety Audit Ranch (v06.11)

7.1.5 Davis Fresh ProSafe Certified Farm and Ranch

Program Owner: The program is owned by Davis Fresh Technologies, a California based operation that is in turn owned by NSF International.

Scope: The program covers fresh produce.

Reach: The program is available in North, Central and South America, Europe and Japan.

Recognition: The program is endorsed by US retailers, food distributors and food service operators including: Albertsons, Kroger, MARKON Cooperative, Raley's Supermarkets, Safeway, Sainsbury, Sam's Club, Subway, SYSCO, Times Supermarkets, Waitrose, and Wal-Mart. It is also endorsed by international retailers Royal Ahold and Sainsbury.

Program content/food safety characteristics: Davis Fresh is a food safety program. It is not HACCP or HACCP-based. The ProSafe Certified program was designed in response to the US government's food safety concerns, as addressed by the FDA "*Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables*." The program also includes GAPs covering chemical and physical hazards.

Conformity assessment scheme: Davis Fresh operates its own certification scheme. It is not an accredited certification body. Audits are annual.

Website: www.davisfreshtech.com

Source Document(s):
Davis Fresh Technologies Farm/Ranch Audit (v.10.1, 2004)
Davis Fresh Technologies Farm Pre-Audit Prep Sheet (n.d.)
Davis Fresh Technologies Harvest Crew Audit (v10.1, 2004)
Davis Fresh Technologies Harvest Crew Pre-Audit Prep Sheet (n.d.)

7.1.6 GlobalGAP - Fruit and Vegetables

Program Owner: The GlobalGAP - Fruit and Vegetables scheme is owned by FoodPLUS GmbH based in Cologne, Germany. Additional details on FoodPlus GmbH are provided in Section 4.

Scope: The fruit and vegetables scheme covers food safety and environmental protection GAPs, occupational health and safety criteria on farms and awareness and responsibility regarding socially related issues.

Reach: The GlobalGAP programs are available worldwide either directly from GlobalGAP or through programs that have been benchmarked by GlobalGAP (see Section 9). As of 31 December 2006, approximately 59,000 farms were certified to the fruits and vegetables scheme. Of these 10,000 were directly certified and 49,000 were part of benchmarked schemes. Europe had the greatest participation, representing about 84 percent or 49,000 certificates. North American participation was limited and represented 0.5 percent or 316 farms of which 46 were in Canada.

Recognition: GlobalGAP originated as a customer driven initiative. As of March 2007, its fruits and vegetables scheme had thirty-four (34) retail or foodservice members, all but one of which is headquartered in Europe. However, many of the European firms operate in other regions as well. Furthermore, some non-European retailers and food service organizations endorse the scheme but do not directly participate in it. The GlobalGAP schemes are not formally recognized by governments. However, as the information in Section 10 demonstrates, governments in many countries that export fresh produce to Europe have

assisted industry groups to develop programs for GlobalGAP benchmarking or facilitated the implementation of GlobalGAP by farmers.

Program content/food safety characteristics: The GlobalGAP Fruit and Vegetables scheme is HACCP-based.

Conformity assessment scheme: GlobalGAP schemes have two options for certification. These are available either directly or in the approved schemes. The basic options are:

- Option 1(direct) or 3 (approved) - Individual Farm Certification which requires an annual internal audit, an annual announced external audit by a certification body inspector or auditor, unannounced audits by the certification body of 10 percent of the farms it certifies under Option 1 and a three (3) year certification period; and,
- Option 2 (direct) or 4 (approved) - Group Certification in situation where farms have contractual relationship for the purchase of product (e.g. a co-operative, etc) which requires annual farm self inspection, an internal audit by the group of all participating farms, an external audit of the group's management system by an approved certification body and an external audit of "a random sample that as a minimum is the square root of the total number of GlobalGAP registered farmers within the Farmer Group."

As noted in Section 4, bodies providing certification to GlobalGAP schemes must be accredited to ISO Guide 65 by a member of either EA or IAF and approved by GlobalGAP. There are approximately 100 approved certification bodies. GlobalGAP lists these on its website. Inspectors and auditors must meet GlobalGAP requirements and pass a standard GlobalGAP test.

Website: www.eurepgap.com

Source Document(s):
EurepGAP Control Points and Compliance Criteria CROPS BASE (INTERIM FINAL V3.0-MAR07)
*EurepGAP Control Points and Compliance Criteria Integrated Farm Assurance (*INTERIM FINAL V3.0-MAR07)
EurepGAP Control Points and Compliance Criteria FRUIT AND VEGETABLES (INTERIM FINAL V3.0-MAR07)
EurepGAP Generic HACCP Food Safety Plan Fruit and Vegetables (V2.1-Oct04)
EurepGAP General Regulations Integrated Farm Assurance PART I | *GENERAL INFORMATION* (INTERIM FINAL VERSION 3.0-MAR07)

7.1.7 New Zealand GAP

Program Owner: The program is owned Horticulture New Zealand which was established in 2005 through a merger of NZ Vegetable and Potato Growers Federation, NZ Fruitgrowers Federation and the Berryfruit Growers Federation.

Scope: NewZealandGAP covers the fresh produce supply chain from production to distribution.

Reach: The program is available to New Zealand growers, packhouses, brokers, merchants, consultants, packagers, wholesaler/auctions, transporters, retailers and contractors or in an integrated situation involving more than one of these segments. Approximately 1200 certificates were in place in June 2007.

Recognition: NewZealandGAP is recognized as a Code of Practice by the New Zealand Food Safety Authority (NZFSA). In New Zealand "recognition" means that the Code of Practice is "'a document providing a sound basis for the design, implementation, and operation of a Food Safety Programme' but has no legislative standing". The program is also supported by all major New Zealand retailers and fresh produce wholesalers, with organizations such as Progressive Enterprises, Foodstuffs, Turners & Growers and MG Marketing all requiring certification to the New ZealandGAP (or similar) for continued market access. The program was benchmarked by EurepGAP in 2005 and by GFSI in 2006.

Program content/food safety characteristics: It is a HACCP-based program that includes elements of ISO 9001. New ZealandGAP has three levels or modules: primarily for the domestic market; primarily for domestic market with GFSI benchmarking; and a GlobalGAPP benchmarked version. The latter includes: environmental protection GAPs; global level of occupational health and safety criteria on farms; and awareness and responsibility regarding socially related issues.

Conformity assessment scheme: The scheme has been designed to take into account its three modules/levels. Certification for the domestic market requires an audit by an independent third party and this work is currently undertaken by AgriQuality Ltd. (an agency of the New Zealand government) which is accredited by JAS-ANZ to both ISO Guides 62 and 65. Certification to the GFSI benchmarked module can be undertaken by any certification body accredited to ISO Guide 65 and able to deliver audit services. For the GlobalGAP benchmarked version, certification bodies must be accredited to ISO Guide 65 standards and by GlobalGAP. Currently, the independent third party auditor is AgriQuality Ltd. The audit frequency is annual.

Website: www.newzealandgap.co.nz/index.html

Source Document(s):
NewZealandGAP Foreword (August 2006 Version 4.0)
NewZealandGAP Section A Introduction (August 2006 Version 4.0)
NewZealandGAP Section B Consultants (August 2006 Version 4.0)
NewZealandGAP Section C Inputs (August 2006 Version 4.0)
NewZealandGAP Section E Laboratories (August 2006 Version 4.0)
NewZealandGAP Section F Packaging (August 2006 Version 4.0)
NewZealandGAP Section G Grower (August 2006 Version 4.0)

NewZealandGAP Section H Packhouse (August 2006 Version 4.0)
NewZealandGAP Section I Code of Best Practice Transportation of Fresh Vegetables by Road (1997)
NewZealandGAP Master Checklist Summary for New Zealand GAP (2006)
NewZealandGAP Application Form for Training and the New Zealand GAP Manual (2007)
NewzealandGAP Licence Agreement (2007)

7.1.8 FreshCare (Australia)

Program Owner: The program is owned by FreshCare Ltd, which is in turn owned by eighteen (18) grower and industry associations.

Scope: FreshCare is a food safety program that covers primary production and initial packing.

Reach: The program is available to growers in Australia. As of July 2007, in excess of 3600 certificates were in place.

Recognition: FreshCare is not recognized by government. FSANZ (Food Safety Australia New Zealand) is developing a new "*Primary Production and Processing Standards for Australian Horticulture"* and FreshCare is actively involved in the process. The Australian Chamber of Fruit and Vegetable Industries, which represents the major buyers of fresh produce, has a "FreshSpecs" program which requires growers to implement a HACCP-based program to meet its "Class One" specifications. FreshCare meets this requirement.

Program content/food safety characteristics: FreshCare is a HACCP-based program. In developing the program the technical committee took into account, inter alia, the following Australian and international guides: '*Developing an Approved Supplier Program for Fresh Produce – A Guide for Customers and Suppliers'*, the Codex *Draft Code of Practice for the Primary Production, Harvesting and Packaging of Fruits and Produce* and USFDA's *"Guide to Minimizing Microbial Food Safety Hazards for Fresh Fruits and Vegetables*".

Conformity assessment scheme: Certification to the program is done by third party certification bodies that are accredited by JAS-ANZ. Currently three bodies are approved by FreshCare: AUS-QUAL™ Pty Ltd, SGS Australia Pty Ltd, and Sci-Qual International Pty Ltd. Auditors are required to be certified food safety auditors under the RAB/QSA program and to have horticultural experience. Audits are annual.

Website: www.freshcare.com.au

Source Document(s):

Freshcare Code of Practice (2nd Edition – October 2004)

7.1.9 ChileGAP

Program Owner: ChileGAP is owned and was developed by Fundación Para el Desarrollo Frutícola (FDF) (Fruit Development Foundation).

Scope: ChileGAP is a food safety program for fresh produce production and packing. It also covers environment protection and worker's health, security and welfare.

Reach: It is available to Chilean growers. GlobalGAP data for 2006 indicates that approximately 1000 Chilean growers were certified to fruit and vegetable schemes and it is likely that most of these are involved in ChileGAP.

Recognition: ChileGAP is benchmarked to GlobalGAP's fruit and vegetables scheme.

Program content/food safety characteristics: ChileGAP is HACCP-based food safety program that also includes national and international regulations (e.g. Codex Alimentarius Commission).

Conformity assessment scheme: ChileGAP has developed its certification scheme based on the GlobalGAP model. There are two options for certification, Option 1 for individual farms and Option 2 for groups. Certification bodies that have previously been approved by GlobalGAP are eligible for approval by ChileGAP and as of July 2007, there are five (5): AENOR Chile S.A., BVQi S.A. Chile, CMI Agrivera Latinamérica S.A., DAVIS FRESH TECHNOLOGIES (Chile) SA, Inspectorate Chile Ltda, and LATU Sistemas Chile S.A..

Website: www.chilegap.com

Source Document(s):
ChileGAP Control Points and Compliance Criteria for Fresh Fruits and Vegetables (Version: 2. Rev 002, 2005)
GhileGAP General Regulations Fresh Fruits and Vegetables (Version: 02 Rev 0, 2004)
Chilean Fresh Export Fruit and Vegetables Good Agricultural Practices Scheme (Chilegap) Summary of the Standard (2003)

7.1.10 The Perishable Products Export Control Board (PPECB) Primary Production & On-Farm Produce Handling (South Africa)

Program Owner: The Perishable Products Export Control Board (PPECB), established in 1926, is a statutory organization under the *Perishable Products Export Control Act 9 of 1983.* It also operates as an assignee for the National Department of Agriculture under the requirements of the *Agricultural Product Standards Act 119 of 1990* and controls all perishable exports from South Africa, the value of which is approximately 9 billion S.A. Rands per annum. In this capacity it is responsible for providing quality and food safety inspection, certification and cold chain management services for producers and exporters of perishable food products.

Scope: The *Standards Regarding Food Hygiene and Food Safety of Regulated Agricultural Products of Plant Origin Intended for Export* (Standards) are a mandatory program for food products of plant origin, including fresh produce, intended for export. They cover the supply chain from primary production through all stages to port terminals and shipping companies.

Reach: All fresh produce and other food products of plant origin exported from South Africa are covered by the Standards and the associated inspection and certification schemes.

Recognition: The Standards were promulgated in May 2005 under the Agricultural Products Act.

Program content/food safety characteristics: The Standards and associated guidelines cover food safety and food suitability and traceability. Primary production is covered by food

hygiene provisions and all other segments of the chain are covered by food safety programmes based on HACCP. In addition to the Standards, a set of official checklists and compliance criteria have been developed to be used as an aid and self-assessment tool for food business operators (FBO's). The most recent versions come into effect on 1 August 2007.

Conformity assessment scheme: PPECB has ISO Guide 62 (Scope: HACCP) and ISO Guide 65 accreditation (Scope: GlobalGAP and BRC) from SANAS (South African National Accreditation System). PPECB has the responsibility to inspect and/or audit all food businesses within the system. The PPECB system has audit checklists, scoring criteria and guidance with respect to dealing with non-conformities. As of July 2007, PPECB started accepting third party certification to GlobalGAP by UKAS or SANAS accredited certification bodies as equivalent to its own audits.

Website: www.ppecb.com

Source Document(s):
Standards Regarding Food Hygiene and Food Safety of Regulated Agricultural Products of Plant Origin Intended for Export (May 2005)
FBO Type: Primary Production and On-farm Produce Handling - Checklist (Revision: April 2007 (3))
FBO Type: Primary Production and On-farm Produce Handling - Compliance Criteria, Notes and Management Aids (Revision: April 2007 (3))
Operating Guideline for Traceability of Regulated Agricultural Products of Plant Origin That Are Destined for Export (Version 1: June 2007)

7.1.11 SQF 1000 - Production of Fresh Vegetable Produce

Program Owner: The Safe Quality Food (SQF) schemes were established in 1997 under the Department of Agriculture of Western Australia and subsequently privatized as the SQF Institute. In 2003, the SQF Institute (SQFI) became a wholly owned subsidiary of the Food Marketing Institute (FMI). FMI is a trade association which conducts programs in research, education, industry relations and public affairs on behalf of its 1,500 member companies — food retailers and wholesalers — in the United States and around the world. FMI's U.S. members operate approximately 26,000 retail food stores with a combined annual sales volume of $680 billion — three-quarters of all retail food store sales in the United States. FMI's retail membership is composed of large multi-store chains, regional firms and independent supermarkets. Its international membership includes 200 companies from more than 50 countries.

Scope: The SQF 1000 Code Level 2 in combination with the guidance for the production of fresh vegetable produce.

Reach: The SQF schemes are available globally. As of May 2008, SQFI had issued 790 certificates in the fresh produce sector, representing approximately 49 percent of the SQF certificates outstanding. These were issued in Australia (645), the United States (38), Peru (6) and Thailand (1):

SQF 1000

Growing & Production	178
Growing, Production & Packing	5

SQF 2000

Growing & Production	100
Growing, Production & Packing	438
Packing only	45

Recognition: The SQF 1000 Code Level 3 is benchmarked by GFSI. SQFI is currently pursuing benchmarking to GlobalGAP under its second option as an "approved modified checklist". SQFI has also entered into agreements with Mexico Calidad Suprema (which operates the MexicoGAP scheme) and with International Food Standards (IFS) which provides a post-farmgate scheme for suppliers of French and German retailers to partner and/or harmonize standards. US retailer interest in food safety certification has been stimulated by US government announcements (e.g. FDA's proposed Food Safety Action Plan) and Congressional discussions. These initiatives propose introducing certification requirements for some food imports and, consequentially for US suppliers. Wal-Mart in February 2008 endorsed GFSI and GlobalGAP bench marked schemes. In May 2008, the US National Restaurant Association announced an "alliance" with CIES and the GFSI benchmarking scheme.

Program content/food safety characteristics: The SQF Codes (SQF 1000 and SQF 2000) are based on universally accepted Codex Alimentarius HACCP guidelines and provide food businesses with tools to manage food safety and quality simultaneously. The SQF 1000 Code is designed specifically for primary producers. In addition to GAP's a producer develops and maintains Food Safety and Food Quality Plans to control those aspects of their operations that are critical to maintaining food safety and quality. The SQF 2000 Code is available to primary producers, food manufacturers and distributors. In addition to GMP's a supplier develops and maintains Food Safety and Food Quality Plans to control those aspects of their operations that are critical to maintaining food safety and quality. Both Codes are tiered with three (3) levels. In SQF 1000 these are:

- Level 1 Food Safety Fundamentals (implementation of prerequisite programs);
- Level 2 Certified HACCP Based Food Safety Plans (Level 1 plus a farm specific food safety risk analysis to identify the hazards and the action taken to eliminate, prevent or reduce their occurrence);
- Level 3 Comprehensive Food Safety and Quality Management System (Level 2 plus conformation that the actions required to prevent the incidence of poor quality and the remaining quality management system procedures have been implemented.)

Conformity assessment scheme: SQF has developed its certification scheme based on the reqquirements of ISO/IEC Guide 65/IEC:1996 and its own *Guidance Document for Certification Bodies*. To be licensed by SQFI, a certification body must be accredited to the scheme scope by an IAF member. There are currently nine (9) licensed certification bodies. Auditors must be certified by SQF. The SQF 1000 scheme has two options: single site certifications and group certifications, but only in combination with an organization (e.g. packhouse) that has SQF 2000 certification. Single site audits are annual. For groups, audits

are based on a sampling approach: for certification (y=2.0vx), for surveillance (y=1.5vx) and for recertification (y=2.0vx). High risk groups are audited more frequently (y=2.0vx) during surveillance and recertification.

Website: www.sqfi.com

Source Document(s):
SQF 1000 Code - A HACCP Based Supplier Assurance Code for the Primary Producer (5th Edition - Issued January 2008)
Guidance for Developing, Documenting, Implementing and Auditing an SQF 1000 System: Level 2 for the Production of Fresh Vegetable Produce (Edition 1, September 2007)
Criteria for SQF Auditors (4th Edition, amended November 2005)
SQF Guidance on the Application of ISO/IEC Guide 65:1996 - General Requirements for Certification Bodies Offering Certification of SQF Systems (5th Edition - amended March 2006)

7.2 Greenhouse Operations

7.2.1 Canadian Horticultural Council - Greenhouse Program

Program Owner: The Canadian Horticultural Council (see above 7.1.1)

Scope: The greenhouse program covers tomatoes, cucumbers, peppers, leafy greens, eggplant, fresh herbs and edible flowers. It is a food safety program. Environmental issues are covered by provincial regulatory requirements and by the voluntary environmental farm plans developed by primary producers. Labour requirements are covered by provincial regulations.

Reach: The program is available to all greenhouse operators in Canada regardless of their membership in a CHC affiliated organization.

Recognition: The program's generic hazard analysis/model and producer/packer manual (required GAPs) are currently under Technical Review Part I (technical soundness) of the National On-Farm Food Safety Recognition Program and expecting to receive a letter of completion by mid-2008. The program has also been endorsed by the Canadian Council of Grocery Distributors (retail chains and major distributors) for use by Canadian greenhouse growers and packers.

Program content/food safety characteristics: The program is a HACCP-based program developed in accordance with the requirements of the National On-Farm Food Safety Recognition Program and in conformity with the HACCP principles established by the Codex Alimentarius Commission.

Conformity assessment scheme: CHC is currently implementing its approach to conformity assessment in order to meet the management systems requirements of the National On-Farm Food Safety Recognition Program. It has developed an audit protocol, including a scoring system. Version 1.0 of this protocol was made available to producers, customers and auditors conducting supplier audits and third party audits in June 2007. Version 2.0 is being updated for release in 2008. CHC has determined a set of criteria for auditors and certification bodies, is developing its scheme management system and has identified a lead certification body. Certification will commence with the 2008 crop year.

Website: www.hortcouncil.ca

Source Document(s):
CHC Greenhouse Producer and Packer On-farm Food Safety Manual (Version 1 Draft, 2007)
CHC Greenhouse Producer and Packer On-Farm Food Safety Appendix (Version 1.1 Draft, 2007)
CHC On-Farm Food Safety Audit for Fresh Fruit and Vegetable Producer/Packer/ Storage Intermediary (Version 1.0, 2007)

7.2.2 PrimusLabs.com - Greenhouse Program

Program Owner: PrimusLabs.com (see 7.1.4 above)

Scope: The Ranch Audit program covers fresh produce grown in greenhouses.

Reach: The program is available to operations in North, Central and South America.

Recognition: The PrimusLabs.com program is endorsed by US retailers and food service distributors, including: Albertsons, Avendra's, C.H. Robinson, CKE Restaurants, Merchants Distributor, Inc., Mitsubishi International, Publix Super Markets, Inc., Rubios Fresh Mexican Grill, Safeway and Sysco.

Program content/food safety characteristics: The program is a food safety program that covers microbial, chemical and physical hazards. It is not a HACCP-based or a HACCP program. If an operation has HACCP in place, it will be audited.

Conformity assessment scheme: PrimusLabs.com operates its own certification scheme (see 7.14 above). Audits are annual.

Website: www.primuslabs.com/index.asp

Source Document(s):
PrimusLabs.com Food Safety Audit Greenhouse Audit (v03.01)

7.3 Repacking and Wholesale Operations

7.3.1 Canadian Produce Marketing Agency - Repacking and Wholesale Program

Program Owner: The Canadian Produce Marketing Association is a not-for-profit organization representing companies that are active in the marketing of fresh fruits and vegetables in Canada from the farm gate to the dinner plate. CPMA 600 international and Canadian members include major grower/shippers/packers, importer/exporters, carriers, brokers, wholesalers, retailers, fresh cuts and foodservice distributors, integrating all segments of the fresh produce industry. They are responsible for 90 percent of the fresh fruit and vegetable sales in Canada at an estimated value of 6 billion Canadian dollars.

Scope: The CPMA program is a food safety program.

Reach: The program is available to all fresh produce repackers and wholesalers in Canada regardless of there membership in CPMA.

Recognition: The CPMA program has been endorsed by the Canadian Council of Grocery Distributors (retail chains and major distributors) for use by Canadian repackers and wholesalers. CPMA is participating in discussions with the federal, provincial and territorial governments with respect to the development of a national recognition program for non-farm food safety programs. It has indicated publicly that it will submit its program for review once the recognition program is operational.

Program content/food safety characteristics: The CPMA program is a HACCP-based program developed in accordance with the requirements set by the Agricultural and Agri-Food Canada and the Canadian Food Inspection Agency for the development of national industry-led food safety programs under the Canadian Food Safety Adaptation Program. These require that a national HACCP-based program be developed in conformity with the HACCP principles established by the Codex Alimentarius Commission and following the procedures set out in CFIA's Food Safety Enhancement Program for the development of a generic HACCP model.

Conformity assessment scheme: CPMA is currently implementing its approach to conformity assessment. It completed the development of a management system, including an audit protocol, and an auditor training program that take into account the requirements of the draft Federal/Provincial/Territorial recognition program for post-farm HACCP-based programs and ISO 17021:2006 and ISO 22003:2007. CPMA has developed an audit protocol, including a scoring system. Certification of repackers and wholesalers is expected to commence in 2008.

Website: www.cpma.ca

Source Document(s):
CPMA Repacking and Wholesale Generic HACCP Model for Fresh Fruits and Vegetables (First Edition, 2005)
CPMA Repacking and Wholesale Food Safety Standard for Fresh Fruits and Vegetables (First Edition, 2005)

CPMA Repacking and Wholesale Food Safety Log and Record Templates for Fresh Fruits and Vegetables (First Edition, 2005)
CPMA Repacking and Wholesale Food Safety Standard Workbook for Fresh Fruits and Vegetables (First Edition, 2005)

7.3.2 AIB Fresh Produce & Fruit Packinghouses Program

Program Owner: The American Institute of Baking (AIB) is based in Kansas. Amongst the services it provides are standards for the baking industry and concerning food safety, training courses in HACCP and food safety, third party inspections and audits.

Scope: The program is a food safety program.

Reach: AIB's program is available worldwide.

Recognition: AIB's certificates are accepted by retail and food service businesses.

Program content/food safety characteristics: The packinghouse program is based on a GMP standard. It is not HACCP-based. HACCP is optional at the packinghouse's choice.

Conformity assessment scheme: AIB's European subsidiary, AIB International is accredited by UKAS under ISO Guide 65 to offer certification to the BRC standard and under ISO Guide 62 to offer ISO 22000 certification. However, AIB does not offer "certification" for its GMP/food safety schemes. Its auditors undertake inspections and issue reports that provide a performance score. AIB then issues certificates of "achievement" based upon the rating received on the day of the inspection and for those companies that receive a Superior, Excellent or Satisfactory rating a certificate of "participation" (one per year). AIB's also issues "Certificates of HACCP Accreditation," valid for up to three years, providing that follow-up audits verify that HACCP records are being properly maintained, prerequisite programs remain in place, and AIB audit scores do not fall below 800, again with no section below 160. Audits and inspections are annual.

Website: www.aibonline.org

Source Document(s):
AIB Consolidated Standards for Food Safety (2000)
AIB Food Safety Documentation Needed for Review (2002)
AIB Consolidated Standards for Fresh Produce & Fruit Packinghouses (2001)
AIB Fresh Produce & Fruit Packinghouses Documentation Needed for Review (2003)

7.3.3 Davis Fresh Technologies ProSafe Certified Packinghouse Program

Program Owner: The program is owned by Davis Fresh Technologies a California based operation that is in turn owned by NSF International.

Scope: The program covers fresh produce.

Reach: The program is available in North, Central and South America, Europe and Japan.

Recognition: The program is endorsed by US retailers, food distributors and food service operators including: Albertsons, Kroger, MARKON Cooperative, Raley's Supermarkets, Safeway, Sainsbury, Sam's Club, Subway, SYSCO, Times Supermarkets, Waitrose, and Wal-Mart. It is also endorsed by international retailers Royal Ahold and Sainsbury.

Program content/food safety characteristics: Davis Fresh is a food safety program that requires the implementation of HACCP.

Conformity assessment scheme: Davis Fresh operates its own certification scheme. It is not an accredited certification body. Audits are annual.

Website: www.davisfreshtech.com

Source Document(s):
Davis Fresh Technologies Packing Facility (v.10.1, 2004)
Davis Fresh Technologies Packing Facility Pre-Audit Prep Sheet (n.d.)

7.3.4 PrimusLabs.com Packinghouse with HACCP Program

Program Owner: The program is owned PrimusLabs.com (see 7.1.4).

Scope: The Packinghouse with HACCP program covers fresh produce. PrimusLabs.com also offers a program that does not include HACCP.

Reach: The program is available to operations in North, Central and South America.

Recognition: The PrimusLabs.com program is endorsed by US retailers and food service distributors, including: Albertsons, Avendra's, C.H. Robinson, CKE Restaurants, Merchants Distributor, Inc., Mitsubishi International, Publix Super Markets, Inc., Rubios Fresh Mexican Grill, Safeway and Sysco.

Program content/food safety characteristics: The program is a food safety program. A HACCP system is optional and usually buyer/customer driven. In addition to its own documents, the program cites those of the California Leafy Greens program.

Conformity assessment scheme: PrimusLabs.com operates its own certification scheme. In addition to its proprietary programs, it offers certification to GlobalGAP's fruit and vegetable scheme and the British Retail Consortium's technical standard for companies supplying retailer- branded food products. It is accredited by ANSI under ISO Guide 65, but only for the GlobalGAP fruits and vegetables scheme. Audits are annual.

Website: www.primuslabs.com/index.asp

Source Document(s):
PrimusLabs.com Packinghouse Audit Scoring Guidelines (Jan 2006 Revision 7)
PrimusLabs.com Facility Audit Paperwork Checklist (v05.06)

7.3.5 Scientific Certification Systems - GMP Packing Facility Practices

Program Owner: Scientific Certification Systems (SCS) is a California based, third-party provider of certification, auditing and testing services, and standards. In addition to food safety audit and certification, SCS provides organic certification, offers second party audits or "vendor management" programs to buyers, provides laboratory services, including pesticide residue testing, and food safety training and consulting.

Scope: Its CertiClean food safety programs are available to the food industry and its GMP Packing Facility Practices program audit checklist has been developed especially for the fresh produce sector. SCS also offers certification to the BRC, Tesco's Nature's Choice, GlobalGAP.

Reach: SCS's programs are available to fresh produce packing facilities in North, Central and South America.

Recognition: The packing facility program is endorsed by US retailers and produce distributors including: Amerifresh, Giant Food Stores, L&M Companies, Inc., Stop & Shop, The Produce Exchange and Tops Markets.

Program content/food safety characteristics: CSC's programs require implementation of HACCP and operations must also demonstrate that they meet or exceed applicable local food safety and sanitation-related governmental regulations.

Conformity assessment scheme: CSC operates a third party certification scheme as well as undertaking second party audits for buyers. CSC is accredited as a certification body for its forestry, marine and organic certifications. An accreditation respecting product certification or food safety management system certification could not be identified.

Website: www.scscertified.com/foodag/

Source Document(s):
GMP Packing Facility Practices Self-Audit Checklist (version 3, 2005)

7.3.6 The Perishable Products Export Control Board (PPECB) Off-Farm Produce Handling (South Africa)

Program Owner: The Perishable Products Export Control Board (PPECB), established in 1926, is a statutory organization under the *Perishable Products Export Control Act 9 of 1983.* It also operates as an assignee for the National Department of Agriculture under the requirements of the *Agricultural Product Standards Act 119 of 1990* and controls all perishable exports from South Africa. In this capacity it is responsible for providing quality and food safety inspection, certification and cold chain management services for producers and exporters of perishable food products.

Scope: The *Standards Regarding Food Hygiene and Food Safety of Regulated Agricultural Products of Plant Origin Intended for Export* (Standards) are a mandatory program for food products of plant origin, including fresh produce, intended for export. They cover the supply chain from primary production through all stages to port terminals and shipping companies.

Reach: All fresh produce and other food products of plant origin exported from South Africa are covered by the Standards and the associated inspection and certification schemes.

Recognition: The Standards were promulgated in May 2005 under the Agricultural Products Act.

Program content/food safety characteristics: The Standards and associated guidelines cover food safety and food suitability and traceability. Off-farm produce handling is required to follow food safety programmes based on HACCP. In addition to the Standards, a set of official checklists and compliance criteria have been developed to be used as an aid and self-assessment tool for food business operators (FBO's). The most recent versions come into effect on 1 August 2007.

Conformity assessment scheme: PPECB has ISO Guide 62 (Scope: HACCP) and ISO Guide 65 accreditation (Scope: GlobalGAP and BRC) from SANAS (South African National Accreditation System). PPECB has the responsibility to inspect and/or audit all food businesses within the system. The PPECB system has audit checklists, scoring criteria and guidance with respect to dealing with non-conformities

Website: www.ppecb.com

Source Document(s):
Standards Regarding Food Hygiene and Food Safety of Regulated Agricultural Products of Plant Origin Intended for Export (May 2005)
FBO Type: Off-Farm Produce Handling - Checklist (Revision: April 2007 (2))
FBO Type: Off-Farm Produce Handling - Compliance Criteria, Notes and Management Aids (Revision: April 2007 (3))
Hazard Analysis - Vegetable Packing (Revision 2: n.d.)
Operating Guideline for Traceability of Regulated Agricultural Products of Plant Origin That Are Destined for Export (Version 1: June 2007)

7.3.7 QS Produce Marketing Organization/Wholesale: Fresh fruit, vegetables and potatoes

Program Owner: The Qualitätssicherung – stufenübergreifend (QS System) scheme was established in 2001 and is owned by six (6) industry organizations representing key parts of the German food supply chain (farmers' federation, feed processors, meat processors, produce wholesalers, retailers and the Central Marketing Agency of German Agriculture).

Scope: The *QS Produce Marketing Organization/Wholesale: Fresh fruit, vegetables and potatoes* was established in 2004 and covers fresh produce repackers and wholesalers. It complements the QS scheme for primary production of fresh fruit, vegetables and potatoes and links to the QS scheme for retailers which includes modules for meat and for fresh produce. To carry the QS label, produce must originate from a QS certified farm and be sold to a QS certified retailer.

Reach: The QS PMO/wholesale scheme is available globally. As of October 2007, there were 356 firms participating of which 45 were from outside Germany. There were also 7757 farms and 8285 retail outlets certified to the primary and retailer segments of the produce scheme.

Recognition: The scheme is recognized by supply chain participants. The QS label appears in retail outlets and on consumer packaging.

Program content/food safety characteristics: All EU food businesses, except farms, are required to implement HACCP or HACCP-based programs. The QS PMO/wholesale scheme provides a mechanism for implementing EU and German regulations and additional food safety requirements (e.g. residue testing) for in the fresh produce trade. The scheme can also be adapted to cover buyer specifications.

Conformity assessment scheme: Certification bodies are required to accredited to EN 45011 (ISO Guide 65) and to have the QS scheme included in their scope. QS then approves the certification bodies based on an application process. As of April 2008, 42 certification bodies were approved. Following an initial audit, the frequency of surveillance audits is determined on the basis of the audit score. There are three defined levels with semi-annual audits required of firms with a "satisfactory" score, annual audits required for those with a "good" score and biennial audits for those with a "very good" score.

Website: www.q-s.info

Source Document(s):

Produce Marketing Organisation/Wholesale Fresh fruit, vegetables and potatoes - General Regulations (Version: 01.01.2006)
Produce Marketing Organisation/Wholesale Fresh fruit, vegetables and potatoes - Guideline (Version: 01.01.2008)
Produce Marketing Organisation/Wholesale Fresh fruit, vegetables and potatoes - Work Tool (Version: 01.01.2008)
Checklist PMO/Wholesale (Version: 01.01.2008)
Fresh fruit, vegetables and potatoes - residue monitoring system - Guideline (Version: 01.01.2008)
Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs (including HACCP principles)

Section 8 - Summary Comparisons of Programs

8.0 Background

The Internet search identified a set of food safety programs covering primary production and packing and repacking and wholesale where sufficient information was available to permit a detailed comparison with the food safety programs developed by the Canadian Horticultural Council (potato program and greenhouse production program) and by the Canadian Produce Marketing Association (repacking and wholesale program). The following were identified as the key types of document required for comparison:

- a generic HACCP model;
- the detailed GAP or GHP (Good Hygiene Practices) requirements document;
- the audit checklist (either for self-assessment or third party audit); and,
- the general requirements of the certification scheme.

In no case were all these documents publicly available for a single program. In some cases, only the audit protocols were available, and in others, only the detailed GAP or GHP requirements.

For some programs, no documents were available on the Internet. This meant that schemes identified by the project steering committee as priorities could not be reviewed. In other cases, scheme owners helpfully provided additional documents.

Overall, information was available to permit the consultants to review fifteen (15) programs. Ten (10) of these were compared to the CHC potato or greenhouse production programs and five (5) were compared to the CPMA repacking and wholesale program.

The comparison work involved several steps. First, templates were created for each of the Canadian programs setting out in detail the food safety requirements. Then each program to be compared was reviewed and a separate template filled in. This involved selecting from the available documents, evidence in the form of either a GAP or GHP requirement or audit requirement or both that corresponded to the CHC or CPMA requirement. Finally, these templates were reviewed and a summary comparison developed using the Canadian requirements as a base value. This comparison involved an assessment as to whether the program was “comparable” to the Canadian program, “was missing requirements” or “had additional requirements”. A fourth notation in the summaries identifies were a requirement is not mentioned. In the tables that follow, the four assessments are identified with symbols. In some but not all cases, the particular missing or additional requirement is noted.

The second part of the comparison involved the conformity assessment schemes. As neither the CHC nor the CPMA have completed their decision-making on the nature and scope of their involvement in conformity assessment, the results of this comparison are displayed separately and without reference to the Canadian programs as a base. The results are for the most part informative, although they do compare non-Canadian programs one with another and provide a snapshot of the emerging international trends in conformity assessment within the fresh produce sector.

The remainder of Section 8 is devoted to these summary comparisons. Those pertaining to primary production and packing are provided first, followed by those covering repacking and wholesale.

8.1 Primary Production and Packing Programs Compared

North American Programs

- Canadian Horticultural Council (CHC) Potato Program
- USDA Fresh Produce Audit Verification Program
- California Leafy Greens Marketing Board Program
- PrimusLabs.com Ranch Audit
- Davis Fresh Technologies ProSafe Certified Farm & Ranch Program
- SQF 1000 with Guidance for Fresh Vegetable Production

International Programs

- GlobalGAP Fruits and Vegetables
- NewZealandGAP
- FreshCare (Australia)
- ChileGAP
- PPECB Primary Production & On-Farm Produce Handling (South Africa)

Table 8.1.1 Summary Comparison - North American Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh ProCert**	**SQF1000 Fresh Vegetable Produce**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
HACCP-based Program		Yes	No - microbiological hazards only	No	No	No	Yes
Generic HACCP Model		Available	No	No	No - HACCP is voluntary. Primus will audit	No	Available (in draft Guidance)
Good Agricultural Practices		Available	Available - USFDA/ USDA Guidelines	Available	No	Based on USFDA/ USDA Guidelines	Available
CCPs Identified		None	! !	! !	! !	! !	Yes, Draft generic HACCP model identifies 7 CCPs.
Record keeping requirements		Available	Included in Audit Protocols	Available	Included in Audit Protocols	Included in Audit Protocols	Available
Audit Protocol		Available	Available	Available	Available	Available	Not available
Program Requirements - Details							
Commodity starter products	1.1	! !	S	! !	S	S	! !
Premises	2						
Premises site assessment - R	2.1	! !	!	S	! !	! !	! !
Building exterior & surroundings - R	2.2	! !	!	S	! !	S	! !

Table 8.1.1 Summary Comparison - North American Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh ProCert**	**SQF1000 Fresh Vegetable Produce**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Building interior assessment, cleaning, maintenance, repair & inspection - R	2.3	! !	! !	S	! !	S	! !
Commercial fertilizers, pulp sludge & soil amendments	3						
Purchasing & receiving	3.1	! !	S	S	! !	! !	! !
Application - R	3.2	! !	S	! !	! !	!	! !
Storage	3.3	! !	S	S	! !	S	! !
Manure	4						
Purchasing & receiving - R	4.1	! !	! (permits use of municipal bio-solids)	! !	! !	! !	! (permits use of treated human sewage)
Application - R	4.2	! !	! ! (120 days)	! !	! !	S	! !
Storage	4.3	! !	! !	! !	! !	S	! !
Compost	4						
Purchasing & receiving - R	4.1	! !	! !	! !	! !	! !	! !
Application - R	4.2	! !	! !	! !	! ! (outside growing season)	S	! !

Table 8.1.1 Summary Comparison - North American Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh ProCert**	**SQF1000 Fresh Vegetable Produce**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Storage - R	4.3	! !	! !	! !	! !	S	! !
Mulch & Row Cover Materials	5	N/A	! !	! !	! !	! !	S
Agricultural Chemicals	6						
Purchasing & receiving	6.1	! !	S	S	* (licenced dealers & receiving)	! !	! !
Application - R	6.2	! !	S	S	! !	! ! ! (3rd party testing of residues & disposal policy)	! !
Storage	6.3	! !	!	S	! !	! !	! !
Training, Certification & Supervision - R	6.2	! !	S	S	! !	! !	! !
Agricultural Water	7						
Source assessment - R	7.1	! !	! !	! ! ! (covers storage & irrigation equipment etc)	! !	! !	! !
Equipment	8						
Purchasing, receiving & installation	8.1	! !	!	! !	! (purchasing)	S	!

Table 8.1.1 Summary Comparison - North American Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh ProCert**	**SQF1000 Fresh Vegetable Produce**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Use, cleaning, maintenance, repair & inspection - R	8.2	! !	! !	! !	! !	! !	! !
Calibration - R	8.3	! !	S	! !	! !	! !	! !
Storage	8.4	! !	!	! !	S	! !	! !
Cleaning & Maintenance Materials	9						
Purchasing & receiving	9.1	! !	!	S	S	! !	! !
Use	9.2	! !	!	S	S	! !	! !
Storage	9.3	! !	!	S	S	S	! !
Waste Management	10						
Storage & disposal of garbage, recyclables & compostable waste	10.1	! !	!	S	! !	S	! !
Storage & disposal of empty agricultural chemical containers	10.2	! !	S	S	S	S	! !
Disposal of production wastewater & waste from toilets & hand washing facilities	10.3	! !	! !	!	!	! !	! !
Personal Hygiene Facilities	11						
Facilities	11.1	! !	! !	! !	! ! !	! !	! !

Table 8.1.1 Summary Comparison - North American Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh ProCert**	**SQF1000 Fresh Vegetable Produce**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Employee Training	12						
Training protocols - R	12.1	! !	! !	! (hygiene focus)	! !	! !	! !
Employee illness	12.2	! !	! !	S	! !	! !	! !
Visitor Policy	13						
Protocol - R	13.1	! !	! ! ! (US requirements & ID)	S	! ! ! (US requirements & ID)	S	! !
Pest Control	14						
Pest control program for buildings - R	14.1	! !	! !	S	! !	! !	! !
Pets		! !	S	S	! !	! !	! !
Water for Fluming & Cleaning	15						
Source assessment - R	15.1	! !	! !	! !	! !	S	! !
Treatment - R	15.2	! !	! !	! !	! !	! !	! !
Storage		S	S	! !	S	S	! !
Ice	16	! !	! !	S	S	S	! !
Packaging Materials	17						
Purchasing & receiving - R	17.1	! !	S	S	! !	! !	! !
Use of packaging materials	17.2	! !	! !	S	! !	! !	! !

Table 8.1.1 Summary Comparison - North American Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh ProCert**	**SQF1000 Fresh Vegetable Produce**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Storage	17.3	! !	! !	S	! !	! !	! !
Growing & Harvesting	18						
Growing	18.1	! !	S	S	S	S	S
Harvesting	18.2	! !	! !	! !	! !	! !	! !
Sorting, Grading & Packing	19						
Purchasing & receiving harvested product - R	19.1	! !	! !	S	! !	S	! !
Sorting & grading	19.2	! !	! !	S	S	S	! !
Packing - R	19.3	! !	! !	S	! !	S	! !
Storage of Product	20						
Storage of product - R	20.1	! !	! !	S	! !	S	! !
Transportation	21						
On-site	21.1	! !	! !	S	! !	S	S
Off-site - R	21.2	! !	! !	S	! !	! !	! !
Identification & Traceability	21						
Identification & Traceability - R	22.1	! !	!	S	! !	! !	! !
Recall	22.2	! !	! !	S	! !	! !	! !
Deviations & Crisis Management	23						

Table 8.1.1 Summary Comparison - North American Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh ProCert**	**SQF1000 Fresh Vegetable Produce**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Minor deviations & corrective actions - R	23.1	! !	! !	S	! !	! !	! !
Major deviations & corrective action - R	23.2	! !	! !	S	! !	! !	! !
Crisis management plan	23.3	! !	!	S	! !	! !	! !
On-Farm Food Safety Program Review	24						
Protocol - R	24.1	! !	! !	S	! !	S	! ! ! (management system more detailed)

Table 8.1.2 - Summary Comparison - International Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**GlobalGAP Fruit & Vegetables**	**NewZealand GAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
HACCP-based Program		Yes	! !	! !	! !	! !	No
Generic HACCP Model		Yes	! !	! !	! !	! !	No
Good Agricultural Practices		Yes	! !	! !	! !	! !	! !
CCPs Identified		None	! !	! !	! !	! !	! !
Record keeping requirements		Yes	! !	! !	! !	! !	! !
Audit Protocol		Yes	! !	! !	! !	! !	! !
Program Requirements - Details							
Commodity starter products	1.1	! !	! !	S	S	! !	! !
Premises	2						
Premises site assessment - R	2.1	! !	! !	! !	! !	! !	! !
Building exterior & surroundings - R	2.2	! !	S	! !	! !	! !	! !
Building interior assessment, cleaning, maintenance, repair & inspection - R	2.3	! !	S	! !	! !	! !	! !
Commercial fertilizers, pulp sludge & soil amendments	3						

Table 8.1.2 - Summary Comparison - International Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**GlobalGAP Fruit & Vegetables**	**NewZealand GAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Purchasing & receiving	3.1	! !	! !	! !	! !	!	! !
Application - R	3.2	! !	! !	! !	! !	! !	! !
Storage	3.3	! !	! !	! !	! !	! !	! !
Manure	4						
Purchasing & receiving - R	4.1	! !	! !	! !	! !	! !	! !
Application - R	4.2	! !	! (interval)	! !	! (interval)	! !	! !
Storage	4.3	! !	! !	! !	! !	! !	! !
Compost	4						
Purchasing & receiving - R	4.1	! !	! (supplier letter)	! !	! !	! !	! !
Application - R	4.2	! !	! !	! !	! !	! !	! !
Storage - R	4.3	! !	! !	! !	! !	! !	! !
Mulch & Row Cover Materials	5	S	S	S	S	S	S
Agricultural Chemicals	6						

Table 8.1.2 - Summary Comparison - International Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**GlobalGAP Fruit & Vegetables**	**NewZealand GAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Purchasing & receiving	6.1	! !	! (licensed dealer)	! !	! !	! !	! !
Application - R	6.2	! !	! ! ! (residue testing)	! !	! !	! !	! !
Storage	6.3	! !	! !	! !	! !	! !	! !
Training, Certification & Supervision - R	6.2	! !	! !	! !	! !	! !	! !
Agricultural Water	7						
Source assessment - R	7.1	! !	! !	! !	! !	! !	! !
Equipment	8						
Purchasing, receiving & installation	8.1	! !	!	! !	!	!	S
Use, cleaning, maintenance, repair & inspection - R	8.2	! !	!	! !	! !	! !	! !
Calibration - R	8.3	! !	! !	! !	! !	! !	! !
Storage	8.4	! !	S	S	S	S	S
Cleaning & Maintenance Materials	9						
Purchasing & receiving	9.1	! !	! !	! !	!	! !	! !

Table 8.1.2 - Summary Comparison - International Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**GlobalGAP Fruit & Vegetables**	**NewZealand GAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Use	9.2	! !	! !	! !	!	!	! !
Storage	9.3	! !	! !	! !	!	! !	! !
Waste Management	10						
Storage & disposal of garbage, recyclables & compostable waste	10.1	! !	! !	! !	S	! !	! !
Storage & disposal of empty agricultural chemical containers	10.2	! !	! !	! !	! !	! !	! !
Disposal of production wastewater & waste from toilets & hand washing facilities	10.3	! !	S	S	S	S	! !
Personal Hygiene Facilities	11						
Facilities	11.1	! !	! !	! !	! !	! !	! !
Employee Training	12						
Training protocols - R	12.1	! !	! !	! !	! !	! !	! !
Employee illness	12.2	! !	S	! !	S	! !	S

Table 8.1.2 - Summary Comparison - International Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**GlobalGAP Fruit & Vegetables**	**NewZealand GAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Visitor Policy	13						
Protocol - R	13.1	! !	! !	S	S	S	!
Pest Control	14						
Pest control program for buildings - R	14.1	! !	! !	! !	! !	! !	! !
Pets		! !	! !	S	S	! !	S
Water for Fluming & Cleaning	15						
Source assessment - R	15.1	! !	! !	! !	! !	! !	! !
Treatment - R	15.2	! !	! !	! !	! !	! !	! !
Storage		S	S	S	S	S	S
Ice	16	! !	! !	! !	! !	! !	! !
Packaging Materials	17						
Purchasing & receiving - R	17.1	! !	S	! !	! !	S	!
Use of packaging materials	17.2	! !	! !	! !	! !	! !	! !
Storage	17.3	! !	! !	! !	S	! !	! !
Growing & Harvesting	18						

Table 8.1.2 - Summary Comparison - International Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**GlobalGAP Fruit & Vegetables**	**NewZealand GAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Growing	18.1	! !	S	S	S	! ! ! (residue testing)	S
Harvesting	18.2	! !	! !	! !	S	! !	! !
Sorting, Grading & Packing	19						
Purchasing & receiving harvested product - R	19.1	! !	! !	! !	! ! ! (residue testing)	!	S
Sorting & grading	19.2	! !	! !	! !	! !	! !	! !
Packing - R	19.3	! !	! !	! !	! !	! !	! !
Storage of Product	20						
Storage of product - R	20.1	! !	! !	! !	! !	! !	! !
Transportation	21						
On-site	21.1	! !	! !	! !	! !	! !	! !
Off-site - R	21.2	! !	S	! !	! !	! !	! ! ! (Transportation Guidelines)
Identification & Traceability	21						
Identification & Traceability - R	22.1	! !	! !	! !	! !	! !	! ! ! (Traceability Guidelines)

Table 8.1.2 - Summary Comparison - International Programs - Program Content - Primary Production & Packing							
Program Element	**CHC #**	**CHC Potato**	**GlobalGAP Fruit & Vegetables**	**NewZealand GAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"							
Recall	22.2	! !	! !	! !	! !	S	! !
Deviations & Crisis Management	23						
Minor deviations & corrective actions - R	23.1	! !	! !	! !	! !	! !	! !
Major deviations & corrective action - R	23.2	! !	! !	! !	! !	! !	! !
Crisis management plan	23.3	! !	! !	! !	! !	! !	!
On-Farm Food Safety Program Review	24						
Protocol - R	24.1	! !	! !	! !	! !	! !	S

Table 8.1.3 - Summary Comparison - North American Programs - Conformity Assessment - Primary Production & Packing						
	CHC Potato	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh Farm/Ranch**	**SQF 1000 Fresh Vegetable Produce**
Program						
Ownership	CHC	USDA/USFDA	California Leafy Green Handler Marketing Board	PrimusLabs.com	Davis Fresh Technologies a subsidiary of NSF International	SQF Institute, a subsidiary of the Food Marketing Institute (US)
HACCP or HACCP-based	Yes	No	No	No	No	Yes
Commodity Scope	Potatoes	Fresh Produce	Leafy Greens	Fresh produce	Fresh Produce	Fresh Vegetable Produce
Geographic Scope	Canada	USA - certificates issued in 34 states	California	North & South America	North & South America, Europe, Japan	Global
Participation/Certificates Issued	Certification Scheme to be launched in 2008	Approximately 360 certificates issued	99% of California handlers have signed agreement	Approx. 80 certificates issued	Approx. 200 certificates issued in NA/SA	Unknown Guidance for fresh vegetable produce at Level 2 released for implementation in 2008
Conformity Assessment						
Certification Body	QMI-SAI Global	USDA/AMS	USDA/AMS	PrimusLabs.com	Davis Fresh Technologies	SFQI has licensed nine (9) certification bodies

Table 8.1.3 - Summary Comparison - North American Programs - Conformity Assessment - Primary Production & Packing						
	CHC Potato	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh Farm/Ranch**	**SQF 1000 Fresh Vegetable Produce**
Accreditation as Certification Body for Food Safety	To be determined ISO Guide 65 or ISO 17021/TS 22003 by an IAF member Accreditation Scope to include CHC schemes	No	No	USDA for organic ANSI for GlobalGAP	Not mentioned	Accredited under ISO Guide 65 by a IAF member
Audit Frequency	Individual Farms - Option 1. Initial audit in year 1 followed by producer declarations in each of three years with random audits based on a sampling approach Option 2. Annual audits Producer Groups: 2nd Party (Group) audit of each farm + 3rd Party audit of sample (based on GlobalGAP)	annual	annual	annual	annual	Farm certification - annual Group certification - uses sampling protocol

Table 8.1.3 - Summary Comparison - North American Programs - Conformity Assessment - Primary Production & Packing						
	CHC Potato	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh Farm/Ranch**	**SQF 1000 Fresh Vegetable Produce**
Auditor Certification	Meet the requirements of the CFIA-led National On-Farm Food Safety Recognition Program & CHC scheme requirements	federal & state inspectors	federal & state inspectors	No Internal training program & exam for subcontracted auditors Some will meet GlobalGAP requirements	Not mentioned	SQFI licensed
Other Related Activities	Provides producer help-line for technical support	Quality Grading	No	Food safety consulting Laboratory Testing	Food safety consulting Laboratory testing	Licenses consultants, training organizations
Program Recognition						
By government	CFIA recognition (in progress)	Federal Government Program	California Department of Food & Agriculture CFIA requires for US imports	No	No	No

Table 8.1.3 - Summary Comparison - North American Programs - Conformity Assessment - Primary Production & Packing						
	CHC Potato	**USDA Fresh Produce**	**California Leafy Greens**	**PrimusLabs.com Ranch Audit**	**Davis Fresh Farm/Ranch**	**SQF 1000 Fresh Vegetable Produce**
By Customers	CPMA, CCGD, CFIG	Unknown	California Produce Handlers	US retailers, food service distributors & operators	US retailers, food service distributors & operators	SQF schemes owned by FMI SQF 1000, Level 3 benchmarked by GFSI GlobalGAP benchmarking under Option 2 in progress (2008) US retailers & foodservice companies moving to recognize GFSI & GlobalGAP benchmarked schemes

Table 8.1.4 - Summary Comparison - International Programs - Conformity Assessment - Primary Production & Packing					
	GlobalGAP	**NewZealandGAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Program					
Ownership	FoodPLUS GmbH based in Cologne, Germany	Horticulture New Zealand	FreshCare Ltd (owned by national produce commodity groups)	Fundación Para el Desarrollo Frutícola (FDF) (Fruit Development Foundation)	National Department of Agriculture regulations
HACCP or HACCP-based	Yes	Yes	Yes	Yes	No
Commodity Scope	Fresh Produce	Fresh Produce	Fresh Produce	Fresh Produce	Food Products of Plant Origin for Export
Geographic Scope	Worldwide	New Zealand	Australia	Chile	South Africa
Participation/Certificates Issued	59,000 certificates (December 2006) 10,000 directly in GlobalGAP Fruit & Vegetables 49,000 in benchmarked programs	approximately 1200 certificates issued along the supply chain from grower to retail (June 2007)	3,600 + certificates issued (July 2007)	approximately 1000 certificates (December 2006)	Mandatory Program
Conformity Assessment					
Certification Body	Approximately 100 certification bodies	AgriQuality Ltd - owned by Government of New Zealand	AUS-QUAL™ Pty Ltd SGS Australia Pty Ltd Sci-Qual International Pty Ltd	AENOR Chile S.A. BVQi S.A. Chile CMI Agrivera Latinamérica S.A. DAVIS FRESH TECHNOLOGIES (Chile) SA, Inspectorate Chile Ltda LATU Sistemas Chile S.A..	Perishable Products Export Control Board (PPECB)

Table 8.1.4 - Summary Comparison - International Programs - Conformity Assessment - Primary Production & Packing					
	GlobalGAP	**NewZealandGAP**	**FreshCare (Australia)**	**ChileGAP**	**PPECB (South Africa)**
Accreditation as Certification Body for Food Safety	Accredited under ISO Guide 65 by IAF member	JAS-ANZ accreditation to ISO Guides 62 & 65	Certification bodies are JAS-ANZ accredited	Accredited under ISO Guide 65 by a IAF member	Accredited under ISO Guide 62 & 65 by SANSA
Audit Frequency	Annual - 3rd party	Annual - 3rd Party	Annual - 3rd Party	Annual - 3rd Party	Risk Based
Auditor Certification	GlobalGAP test	None	RAB/QSA food safety required	None	Internal training program & programs to train industry technologists, etc
Other Related Activities	Benchmarking Scheme for GAP Programs	None		None	Laboratory services, Cold chain management, Product programmes & services
Program Recognition					
By government	Some benchmarked programs have received government support	Recognized as Code of Practice by NZ Food Safety Authority	No	Unknown	PPECB is an assignee of the National Department of Agriculture
By Customers	GlobalGAP Fruit & Vegetable scheme has 34 retailers & food service members - all but one are European Other retailers & food service firms endorse but do not participate	Supported by all major New Zealand retailers and fresh produce wholesalers	The Australian Chamber of Fruit and Vegetable Industries' "FreshSpecs" program requires growers to implement a HACCP-based program to meet "Class One" specifications. FreshCare meets this requirement.	Endorsed by the Chilean Exporters Association (ASOEX)	Government program

8.2 Greenhouse Production

Canadian Horticultural Council - Greenhouse Production Program

PrimusLabs.com - Greenhouse Audit

Table 8.2.1 - Summary comparison - Program Content - Greenhouse Production			
Program Element	**CHC #**	**CHC Greenhouse Production**	**PrimusLabs.com Greenhouse**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"			
HACCP-based Program		**Yes**	**No**
Generic HACCP Model		**Available**	**No**
Good Agricultural Practices		**Available**	**No**
CCPs Identified		**None**	**No**
Record keeping requirements		**Available**	**Available**
Audit Protocol		**Available**	**Available**
Program Requirements - Details			
Commodity starter products	**1.1**	! !	S
Premises	**2.0**		
Premises site assessment - R	**2.1**	! !	! !
Building exterior & surroundings - R	**2.2**	! !	!
Building interior assessment, cleaning, maintenance, repair & inspection - R	**2.3**	! !	!
Commercial fertilizers, pulp sludge & soil amendments	**3.0**		
Purchasing & receiving	**3.1**	! !	! !
Application - R	**3.2**	! !	! !
Storage	**3.3**	! !	! !
Manure	**4.0**		
Purchasing & receiving - R	**4.1**	! !	! !
Application - R	**4.2**	! !	! !
Storage	**4.3**	! !	! !
Compost	**4.0**		
Purchasing & receiving - R	**4.1**	! !	! !
Application - R	**4.2**	! !	! !
Storage - R	**4.3**	! !	! !
Mulch & Row Cover Materials	**5.0**	S	S

Table 8.2.1 - Summary comparison - Program Content - Greenhouse Production			
Program Element	**CHC #**	**CHC Greenhouse Production**	**PrimusLabs.com Greenhouse**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"			
Agricultural Chemicals	**6.0**		
Purchasing & receiving	**6.1**	! !	! !
Application - R	**6.2**	! !	! !
Storage	**6.3**	! !	! !
Training, Certification & Supervision - R	**6.2**	! !	! !
Agricultural Water	**7.0**		
Source assessment - R	**7.1**	! !	! !
Equipment	**8.0**		
Purchasing, receiving & installation	**8.1**	! !	S
Use, cleaning, maintenance, repair & inspection - R	**8.2**	! !	S
Calibration - R	**8.3**	! !	!
Storage	**8.4**	! !	!
Cleaning & Maintenance Materials	**9.0**		
Purchasing & receiving	**9.1**	! !	S
Use	**9.2**	! !	S
Storage	**9.3**	! !	S
Waste Management	**10.0**		
Storage & disposal of garbage, recyclables & compostable waste	**10.1**	! !	!
Storage & disposal of empty agricultural chemical containers	**10.2**	! !	!
Disposal of production wastewater & waste from toilets & hand washing facilities	**10.3**	! !	!

Table 8.2.1 - Summary comparison - Program Content - Greenhouse Production			
Program Element	**CHC #**	**CHC Greenhouse Production**	**PrimusLabs.com Greenhouse**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"			
Personal Hygiene Facilities	**11.0**		
Facilities	**11.1**	! !	! !
Employee Training	**12.0**		
Training protocols - R	**12.1**	! !	! !
Employee illness	**12.2**	! !	! !
Visitor Policy	**13.0**		
Protocol - R	**13.1**	! !	! !
Pest Control	**14.0**		
Pest control program for buildings - R	**14.1**	! !	! !
Pets		! !	! !
Water for Fluming & Cleaning	**15.0**		
Source assessment - R	**15.1**	! !	! !
Treatment - R	**15.2**	! !	! !
Storage			
Ice	**16.0**	! !	! !
Packaging Materials	**17.0**		
Purchasing & receiving - R	**17.1**	! !	S
Use of packaging materials	**17.2**	! !	S
Storage	**17.3**	! !	S
Growing & Harvesting	**18.0**		
Growing	**18.1**	! !	S
Harvesting	**18.2**	! !	! !
Sorting, Grading & Packing	**19.0**		
Purchasing & receiving harvested product - R	**19.1**	! !	S
Sorting & grading	**19.2**	! !	S
Packing - R	**19.3**	! !	S

Table 8.2.1 - Summary comparison - Program Content - Greenhouse Production			
Program Element	**CHC #**	**CHC Greenhouse Production**	**PrimusLabs.com Greenhouse**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"			
Storage of Product	**20.0**		
Storage of product - R	**20.1**	! !	S
Transportation	**21.0**		
On-site	**21.1**	! !	S
Off-site - R	**21.2**	! !	S
Identification & Traceability	**21.0**		
Identification & Traceability - R	**22.1**	! !	S
Recall	**22.2**	! !	S
Deviations & Crisis Management	**23.0**		
Minor deviations & corrective actions - R	**23.1**	! !	!
Major deviations & corrective action - R	**23.2**	! !	!
Crisis management plan	**23.3**	! !	S
On-Farm Food Safety Program Review	**24.0**		
Protocol - R	**24.1**	! !	! !

Table 8.2.2 - Summary Comparison - Conformity Assessment - Greenhouse Production		
	CHC Greenhouse Production	**PrimusLabs.com Greenhouse**
Program		
Ownership	CHC	PrimusLabs.com
HACCP or HACCP-based	Yes	No
Commodity Scope	Fresh Produce	Fresh produce
Geographic Scope	Canada	North & South America
Participation/Certificates Issued	Certification Scheme to be launched in 2008	Approx. 80 certificates issued
Conformity Assessment		
Certification Body	QMI-SAI Global	PrimusLabs.com
Accreditation as Certification Body for Food Safety	To be determined ISO Guide 65 or ISO 17021/TS 22003 - Accreditation scope to include CHC schemes	USDA for organic ANSI for GlobalGAP
Audit Frequency	Individual Farms - 2 Options: Option 1. Initial audit in year 1 followed by producer declarations in each of three years with random audits based on a sampling approach Option 2. Annual audits Producer Groups: 2nd Party audit (Group) audit of each farm + 3rd Party audit of sample of farms based on GlobalGAP	Annual
Auditor Certification	Meet the requirements of the CFIA-led National On-Farm Food Safety Recognition Program & CHC scheme requirements	Internal training program & exam for subcontracted auditors Some will meet GlobalGAP requirements
Other Related Activities	Provides producer help-line for technical support	Food safety consulting Laboratory Testing

Table 8.2.2 - Summary Comparison - Conformity Assessment - Greenhouse Production		
	CHC Greenhouse Production	**PrimusLabs.com Greenhouse**

Program Recognition		
By government	CFIA recognition (in progress)	No
By Customers	CPMA, CCGD, CFIG	US retailers, food service distributors & operators

8.3 Repacking & Wholesale Program

Canadian Produce Marketing Association - Repacking & Wholesale Program

AIB - Fresh Produce & Fruit Packinghouses

PrimusLabs.com - Packinghouse Program (with HACCP)

Scientific Certification Systems - GMP Packing Facilities Practices

PPECB Food Safety Programme (South Africa) - Off-Farm Produce Handling

Qualitätssicherung – stufenübergreifend (QS System) - Stage II - Produce Marketing Organization/Wholesale - Fresh Fruit, Vegetables and Potatoes

Table 8.3.1 - Summary comparison - Program Content - Repacking & Wholesale								
Program Element	**CPMA#**	**CPMA Repacking & Wholesale**	**AIB Fresh Produce & Fruit Packinghouse**	**Davis Fresh Technologies Packing Facility**	**Primuslabs.com Packinghouse Program with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! **| Missing Key Requirements:** ! **| Has additional Requirements :** ! ! ! **| Requirement not mentioned:** S **| "R" symbol is used to indicate Canadian program requires a "record"**								
HACCP-based or HACCP Program		HACCP-based	HACCP	HACCP	HACCP (voluntary)	HACCP	HACCP	HACCP is mandatory under EU legislation
Generic HACCP Model		Available	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific
Good Hygiene Practices		Available	Audit Protocol	Audit Protocol	Audit Protocol	Audit Protocol	Available	Available
CCPs Identified		None identified	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific	HACCP is firm specific
Record keeping requirements		Available	Available	Available	Available	Available	Available	Available
Audit Protocol		Available	Available	Available	Available	Available	Available	Available
Program Requirements - Details								
Premises	1.0							
Design, Construction & Maintenance of Building Exteriors ®	1.1	! !	! !	S	! !	! !	! !	! !

Table 8.3.1 - Summary comparison - Program Content - Repacking & Wholesale								
Program Element	**CPMA#**	**CPMA Repacking & Wholesale**	**AIB Fresh Produce & Fruit Packinghouse**	**Davis Fresh Technologies Packing Facility**	**Primuslabs.com Packinghouse Program with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"								
Building Codes	1.1	! !	! !	S	S	S	S	S
Interior Facility Design, Construction & Maintenance R	1.2	! !	! !	! !	! !	! !	!	! !
Sanitary Facilities R	1.3	! !	! !	! !	! !	! !	! !	! !
Water for Carrying, Rinsing, Ice Production & Cleaning R	1.4	! !	! !	! !	! !	! !	! !	! !
Receiving & Storage	2.0							
Supply Chain Stakeholder Relationship R	2.1	! !	! !	! !	! !	S	! !	! ! (QS primary producers & QS retailers)
Food Carriers, Receiving & Unloading R	2.2	! !	! !	! !	! !	! !	! !	! !

Table 8.3.1 - Summary comparison - Program Content - Repacking & Wholesale								
Program Element	**CPMA#**	**CPMA Repacking & Wholesale**	**AIB Fresh Produce & Fruit Packinghouse**	**Davis Fresh Technologies Packing Facility**	**Primuslabs.com Packinghouse Program with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"								
Incoming Materials & Finished Product Storage R	2.3	! !	! !	! !	! !	! !	! !	! ! ! (QS residue monitoring program
Packing, Packaging Materials & Containers R	2.4	! !	! !	! !	! !	! !	! !	! !
Produce Sorting & Repacking	2.5	! !	! !	! !	! !	! !	! !	! !
Produce Loading & Shipping R	2.6	! !	! !	S	! !	! !	! !	! !
Equipment	3.0							
Equipment Design & Installation R	3.1	! !	! !	! !	! !	! !	!	! !
Equipment Maintenance R	3.2	! !	! !	! !	! !	! !	! !	! !
Maintenance Materials R	3.3	! !	! !	! !	! !	! !	! !	! !
Calibration R	3.4	! !	S	S	! !	! !	!	! !

Table 8.3.1 - Summary comparison - Program Content - Repacking & Wholesale								
Program Element	**CPMA#**	**CPMA Repacking & Wholesale**	**AIB Fresh Produce & Fruit Packinghouse**	**Davis Fresh Technologies Packing Facility**	**Primuslabs.com Packinghouse Program with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"								
Personal Hygiene & Sanitary Working Procedures	4.0							
Management Responsibility for General Food Hygiene & Related Training R	4.1	! !	! !	! !	! !	! !	!	! !
Technical Training R	4.2	! !	! !	! !	! !	! !	S	! !
Hygiene Cleanliness & Conduct for Employees R	4.3	! !	! !	! !	! !	! !	! !	! !
Visitor Policy & Log R	4.3	! !	! !	! !	! !	! !	S	S
Worker Illnesses, Disease & Injury R	4.4	! !	! !	! !	! !	! !	S	! !
Sanitation Program	5.0							
Sanitation Program R	5.1	! !	! !	! !	! !	! !	! !	! !
Cleaning of Returnable Packing Materials R	5.2	! !	! !	! !	! !	! !	! !	! !

Table 8.3.1 - Summary comparison - Program Content - Repacking & Wholesale								
Program Element	**CPMA#**	**CPMA Repacking & Wholesale**	**AIB Fresh Produce & Fruit Packinghouse**	**Davis Fresh Technologies Packing Facility**	**Primuslabs.com Packinghouse Program with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Symbols used to indicate relationship with Canadian Program content: Comparable: ! ! | Missing Key Requirements: ! | Has additional Requirements : ! ! ! | Requirement not mentioned: S | "R" symbol is used to indicate Canadian program requires a "record"								
Cleaning Agents R	5.3	! !	! !	! !	! !	! !	! !	! !
Sanitation Program Training R	5.4	! !	! !	! !	! !	! !	!	! !
Pest Control Program	6.0							
Pest Program R	6.1	! !	! !	! !	! !	! !	! !	! !
Recall & Traceability System	7.0							
Traceability R	7.1	! !	! !	! !	! !	! !	! ! ! (Traceability Guidelines)	! ! ! (QS System participation)
Recall R	7.1	! !	! !	! !	! !	! !	! !	! !
Program Review								
Annual internal audit R		! !	! !	!	! !	! !	S	! !
Corrective Action R		! !	! !	! !	! !	! !	! !	! !
Crisis Management R		! !	S	S	S	S	S	! !
Annual review R		! !	! !	! !	! !	! !	S	! !

Table 8.3.2 Summary comparison – Conformity Assessment - Repacking & Wholesale							
	CPMA Repacking & Wholesale	**AIB Fresh Produce & Fruit Packinghouses**	**Davis Fresh Technologies Packing Facility**	**PrimusLabs.com Packinghouses with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Program							
Ownership	CPMA	American Institute of Baking (AIB)	Davis Fresh Technologies a subsidiary of NSF International	PrimusLabs.com	Scientific Certification Systems (SCS)	National Department of Agriculture regulations	National Industry Associations
HACCP or HACCP-based	HACCP-based	GMP standard. HACCP is optional	HACCP required	HACCP is optional, buyer driven	HACCP is required	HACCP is required	HACCP is mandatory under EU legislation
Commodity Scope	Fresh Produce	Fresh Produce	Fresh Produce	Fresh produce	Fresh Produce	Food Products of Plant Origin for Export	Fresh fruit, vegetables and potatoes
Geographic Scope	Canada	Worldwide	North & South America, Europe, Japan	North & South America	North, Central & South America.	South Africa	Worldwide
Participation/Certificates Issued	Certification Scheme to be launched in 2008	Unknown	Unknown	Unknown	Unknown	Mandatory Program	356 (45 of which are outside of Germany) (as of October 2007)
Conformity Assessment							
Certification Body	To be identified	AIB offers “certificates of achievement” & “of participation” & where HACCP ‘certificates of HACCP accreditation”	Davis Fresh Technologies	PrimusLabs.com	Scientific Certification Systems (SCS)	Perishable Products Export Control Board (PPECB)	QS has licensed 42 certification bodies

Table 8.3.2 Summary comparison – Conformity Assessment - Repacking & Wholesale							
	CPMA Repacking & Wholesale	**AIB Fresh Produce & Fruit Packinghouses**	**Davis Fresh Technologies Packing Facility**	**PrimusLabs.com Packinghouses with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Accreditation as Certification Body for Food Safety	Accredited under ISO 17021/ ISOTS 22003	No	No	USDA for organic ANSI for GlobalGAP	Not for food safety. SCS is accredited for forestry, marine & organic	Accredited under ISO Guide 62 & 65 by SANSA	Accredited under EN 45011 (ISO Guide 65) with QS included in scope
Audit Frequency	Annual	Annual	Annual	Annual	Annual	Risk Based	Risk based/audit score) Level 1 - every 2 years Level 2 - annual Level 3 - semi-annual
Auditor Certification	No Meet ISO/TS 22003 & CPMA scheme requirements	No Internal training program	Not mentioned	No Internal training program & exam for subcontracted auditors Some will meet GlobalGAP requirements	No Internal training program	Internal training program & programs to train industry technologists, etc	No Meet QS scheme requirements
Other Related Activities	Provides on-line training for repackers & wholesalers Provides on-line training for auditors to CPMA scheme requirements	Standards development HACCP & food safety training	Food safety consulting Laboratory testing	Food safety consulting Laboratory testing	Standards development 2nd party/vendor audits Laboratory testing	Laboratory services, Cold chain management, Product programmes & services	Audit laboratories must be accredited to EN 45001 (ISO 17025)

Table 8.3.2 Summary comparison – Conformity Assessment - Repacking & Wholesale							
	CPMA Repacking & Wholesale	**AIB Fresh Produce & Fruit Packinghouses**	**Davis Fresh Technologies Packing Facility**	**PrimusLabs.com Packinghouses with HACCP**	**SCS GMP Packing Facilities**	**PPECB Off-Farm Produce Handling (South Africa)**	**QS - Produce Marketing Organization/ Wholesale**
Program Recognition							
By government	Will seek CFIA recognition when program established	No	No	No	No	Mandatory Program	No
By Customers	CCGD, CFIG	US retailers, food service distributors & operators	US retailers, food service distributors & operators	US retailers, food service distributors & operators	US retailers & produce distributors	Government Program	German retailers are part owners of the QS scheme & participants - 8285 outlets are certified.

Section 11 - Conclusions

11.1 Project Objectives:

The objectives of the CHC/CPMA/CFIG/CCGD joint comparison project were to:

- provide an increased level of understanding amongst Canadian stakeholders about food safety initiatives in countries from which Canada imports fresh produce;
- enable the industry to determine how their food safety programs could be accepted internationally;
- compare CHC and CPMA food safety programs with those available internationally and in other countries; and,
- provide a basis for Canadian stakeholders (particularly wholesalers and retailers) to assess the acceptability of the non-Canadian programs.

To meet these objectives, the project consultants undertook an environmental scan of fresh produce food safety programs through an internet-based literature review and investigation of other international and national (country-wide) food safety programs for the on-farm, re-packing and wholesale fresh produce sectors. This lead to the development of comparison criteria covering program components, audit practices, training, reporting, government recognition and other factors and to a direct comparison between the CHC and CPMA food safety programs and a selected group of programs for which sufficient information was available. The purpose of this comparison was to establish commonalities and differences and to summarize these for use by the Canadian stakeholders.

11.2 Fresh Produce Food Safety Programs:

The internet search determined that there are a significant and growing number of food safety programs either in use or under development for growers and packers and repackers and wholesalers of fresh produce. This report includes information on programs from:

> **Americas**: Argentina, Brazil, Canada, Chile, Columbia, Costa Rica, Mexico, Peru and the United States.
>
> **Asia & Oceania:** Australia, China, India, Malaysia, New Zealand, Phillippines, South Korea, Taiwan, Thailand and Vietnam.
>
> **Africa:** Ghana, Kenya and South Africa.
>
> **Europe:** Austria, Denmark, France, Germany, Spain, Switzerland and the United Kingdom.

In addition, it discusses major international programs at the primary production level, the GlobalGAP - Fruits and Vegetables and several that can be implemented by repackers and wholesalers.

11.3 Key Characteristics of Fresh Produce Food Safety Programs:

The project set out to compare fresh produce food safety programs using a set of criteria that can be summarized as being general, content related and conformity assessment related. The most important of the identified characteristics are:

Commodity/Content Scope: Were the programs fresh produce specific or generic at either the farm/packer or repacker/wholesale level? Both types exist and have the potential to produce comparable results. Unfortunately, the information available about the generic programs such as the BRC, IFS, Dutch HACCP and SQF programs was insufficient to permit direct comparison. For those directly compared, all were produce specific. Of these, the content varied. Some were exclusively food safety, as are the Canadian programs. Others, following the GlobalGAP model, expand their scope to include limited assessments of environmental, labour or social factors. None of these, however, could be considered sufficiently detailed to permit a genuine multiple certification for food safety and the environment if one were to compare them to existing international standards such as ISO 22000, ISO 14001, etc.

Geographic Reach: A number of the schemes reviewed have an international reach. Others, like the Canadian programs, are designed with a particular country in mind. The presence of international schemes means that food safety certification options are available to grower/packers or repacker/wholesalers in those countries that do not have national GAP or repacker/wholesaler programs.

Recognition by Government and/or Customers: Almost all the identified programs, whether compared in detail or not, had some degree of recognition by customers. Primarily these were retailers, although food service companies appear to be increasingly involved. Government recognition comes in two forms. Amongst GAP programs, there are a significant number that have been developed by governments as either national standards, through the recognized processes of the international standards system, or as regulations under national legislation. In other countries, including Canada, governments have facilitated the development of these programs by providing financial and technical assistance. And, in a smaller number still, governments have established programs to officially recognize these industry programs.

HACCP or HACCP-based Programs: The Canadian programs have been developed using the "HACCP-based" approach. This means that they are founded on the HACCP principles established by the Codex Alimentarius Commission and structured to meet the rigorous technical and documentary requirements of an approach set out by CFIA and the provincial governments. A HACCP-based program is therefore generic, built upon a hazard analysis of most common modes of production and not site specific. The result is a set of requirements, GAPs or GHPs (Good Hygiene Practices), that a farm or food business must adapt and implement. Most non-Canadian GAP and post-farm programs have adopted a similar approach. Some, however, require the repacker/wholesaler to undertake an on-site hazard analysis and develop their own prerequisites, CCPs and other control measures. The notable exceptions to the HACCP-based or HACCP approach are the the USDA and California GAP programs.

These are based on best practices and are not underpinned by a documented hazard analysis consistent with Codex principles.

Conformity Assessment: This report does not directly compare the Canadian and non-Canadian approaches to conformity assessment. This is because neither CHC nor CPMA have finally decided on the approach they will use. For the non-Canadian programs, there appear to be two major trends, both of which include common elements. Most of the compared programs and many of those described have decided to use accredited certification bodies. This decision appears to have been driven initially by the choices made by European retailers as they developed both GlobalGAP and the GFSI benchmarking scheme and by their self-interest in seeing the basis for these initiatives as product certification schemes. In more recent years, this trend has been re-enforced by the choices of governments in favour of the infrastructure of the international and national standards systems. To date, bodies accredited to ISO Guide 65 have been favoured. However, new initiatives in the international standards system, including the publication in early 2007 of a new international technical specification setting out the requirements for bodies performing audit and certification of food safety management systems (ISO 22003:2007) and the publication in 2006 of the new ISO standard for certification bodies (ISO 17021:2006) to replace ISO Guides 62 and 66, may result in a shift in the basis of accreditation. The second trend is one that relies on the credibility of the body issuing the certificate. Examples of this approach include the US schemes run by the American Institute of Baking, Davis Fresh Technologies, PrimusLabs.com, etc.

11.4 Benchmarking and Government Recognition: The report reviews in detail the available information about two private schemes to benchmark food safety programs, an intergovernmental scheme (ASEAN) and three national initiatives from Canada, New Zealand and the United Kingdom (as an example of the EU approach). On the surface, all these approaches appear to produce similar results, in that the food safety schemes benchmarked or recognized can be seen to be comparable to the CHC and CPMA programs.

The six initiatives require that the applicant programs be HACCP or HACCP-based, have detailed background materials, etc. And, the processes used by each involves independent reviewers, adjustments to the program, if required, to meet the criteria and effective administration of the scheme, its standard/requirements and the associated conformity assessment system. With respect to the latter, all require either use certification bodies accredited in the ISO/IAF system or bodies that are firmly rooted in that system (Canada).

The ASEAN, UK (EU) and New Zealand recognition approaches are not as transparent. There are clear criteria in the cases of the ASEAN and the UK/EU but the process is somewhat of a "black box". The New Zealand recognition process currently focuses on the technical content of the program and it is a government owned and ISO/IAF system accredited certification body that undertakes the audit and certification.

11.5 Programs Compared - Results: The project compared the CHC's potato and greenhouse production programs and the CPMA repacker/wholesaler program with seventeen (17) programs from outside Canada. The results of these comparisons are set out in the descriptions and the tables in Sections 7 and 8. The direct comparison was limited to only program content as both CHC and CPMA are in the process of deciding on their conformity assessment approaches.

Grower/Packer Programs:

Eleven (11) programs are compared. The CHC's potato program is used as an example of the other six (6) field programs under development. To it are compared five (5) US programs and five (5) non-North American programs. The clearest differences come between the majority of US programs and the others, including the CHC program. With the exception of the SQF 1000 program, none of the other American programs is HACCP-based. Indeed, both the USDA Fresh Produce Audit Verification program and the California Leafy Greens program focus primarily on microbiological hazards and control measures. The PrimusLabs.com and the Davis Fresh programs do include control measures with respect to agricultural chemicals and they are, as a result more comparable to the CHC and non-North American programs. Being HACCP-based, the GlobalGAP Fruits and Vegetables scheme, ChileGAP, NewZealandGAP, FreshCare, the South African PPECB program and the SQF 1000 scheme very closely compare to the CHC Potato program. However, there are some differences, particularly in the treatment of purchasing, facilities assessments, visitor policies and the treatment of wastewater. It is also clear, that solidly and rigorously founding a GAP program on HACCP principles results in programs that are, for the most part, comparable in their technical requirements.

Greenhouse Production Programs: Only one program was identified for direct comparison with the CHC Greenhouse Production program - the PrimusLabs.com Greenhouse program. In many respects the technical requirements of these programs are comparable, although the PrimusLabs.com program is not explicitly HACCP-based. However, significant differences do occur, in particular in areas concerning packaging materials, product storage, shipping and transportation and identification and traceability.

Repacker/Wholesaler Programs: Six (6) programs were compared, four from the US, one from South Africa and one from Europe to the CPMA program. It should be noted that the programs of US origin have a considerably broader reach and are being used in other parts of the Americas and elsewhere. As all seven programs are solidly grounded in HACCP, it is not surprising that they demonstrate considerable comparability. Differences do occur, but not to the same extent as with the grower/packer programs.

11.6 Final Remarks

The results of this project provide a solid base for promoting food safety programming equally between domestic and imported fresh produce by providing comparisons between Canadian fresh produce food safety programs at the farm level and at the packer/wholesaler level of the

supply chain with those programs/standards available in countries from which Canada imports.

The Canadian Horticultural Council, Canadian Produce Marketing Association, and Canadian Council of Grocery Distributors have indicated that this work will be used as the basis for making recommendations as to which fresh produce food safety standards and/or programs are considered comparable for the Canadian marketplace and to increase awareness of food safety efforts within Canada and in other countries.

The support of the retail community for the CHC and CPMA food safety programs and the requirement that all fresh produce suppliers participate in these programs or a comparable program should also address stakeholders' concerns about being required to participate in more than one food safety program, and the subsequent need to participate in multiple audits.

The comparison template, the examples of its use as well the analyses of the benchmarking and recognition programs should also provide concrete solutions to the concerns (real or perceived) of suppliers and buyers in relation to differing food safety programs/standards and enable these segments of the chain to benchmark the acceptable level of food safety requirements for domestic and imported produce. This will have an overall beneficial impact on Canadian consumers, as all fresh produce marketed in Canadian retail outlets will have been produced using comparable food safety standards. Furthermore, ensuring that the Canadian fresh produce industry is using comparable food safety programs should also facilitate the export of fresh produce to other countries.