



The Conference Board
of Canada

A Review of Fresh Produce Benefit-Cost Studies and Potential Ratios from Canadian Fresh Produce Checkoff

Presented to:
The Canadian Produce Marketing Association

Presented by:
The Conference Board of Canada
September 20, 2013

CONTACT

Dr. Jean-Charles Le Vallée **Senior Research Associate**

Organizational Effectiveness and Learning
The Conference Board of Canada
255 Smyth Road
Ottawa, ON K1H 8M7

Tel: (613) 526 3280 ext. 250

Fax: (613) 526 4857

Email: levallee@conferenceboard.ca

About The Conference Board of Canada

We are:

- A not-for-profit Canadian organization that takes a business-like approach to its operations.
- Objective and non-partisan. We do not lobby for specific interests.
- Funded exclusively through the fees we charge for services to the private and public sectors.
- Experts in running conferences but also at conducting, publishing and disseminating research, helping people network, developing individual leadership skills and building organizational capacity.
- Specialists in economic trends, as well as organizational performance and public policy issues.
- Not a government department or agency, although we are often hired to provide services for all levels of government.
- Independent from, but affiliated with, The Conference Board, Inc. of New York, which serves nearly 2,000 companies in 60 nations and has offices in Brussels and Hong Kong.

Our Mission

To build leadership capacity for a better Canada by creating and sharing insights on economic trends, public policy and organizational performance.

Highlights

- Measures addressing the return on checkoff program investment can be depicted through benefit-cost ratios (BCR). Expected BCRs for the Canadian fresh produce checkoff programs range between 4.7 and 9.1.
- Although benefits would differ amongst checkoff participants (i.e., growers and importers may not capture all the benefit) and among changing market conditions, profitability, less the cost of the program, remains relatively small, particularly for larger growers.
- Economic gains, if any, may be less substantial, material or equitable than expected.
- Checkoff programs may have insufficient budgets to adequately fund promotion and research activities.

Introduction

Many fresh produce industries in Canada are looking at ways to increase their research and promotional capacity by establishing national promotion and research agencies. These commodity-based agencies would be funded through levy collection systems, referred to henceforth in this report as checkoff programs.

The Canadian Produce Marketing Association (CPMA) seeks to provide the CPMA Board with information to support an upcoming discussion in September 2013. Ultimately, the CPMA is looking to frame a position on the issue of checkoff programs that is based on evidence, including this report, and that will gain the support of the entire industry. The CPMA is reviewing the issue by looking for economic analysis of the value of developing national promotion and research agencies, expressed through benefit-cost ratios.

This report provides a brief review of benefit-cost ratios and data from selected U.S. and Canadian agricultural commodities. The focus is on fresh produce in particular, such as strawberries, raspberries, blueberries, apples, potatoes, but also on Canadian beef and fluid milk, for checkoff program analysis, most commonly for generic promotion activities. The report also discusses the range of potential benefit-cost ratios for the Canadian fresh produce market in terms of promotion and research. It ends with guidance to the CPMA based on the economic validation of establishing national fresh produce promotion and research agencies.

Methodology

The multi-faceted methodology included an extensive review of the literature on benefit-cost ratios studies, along with in-depth semi-structured interviews with 11 stakeholders in both Canada and the U.S. with interests in, and or experience with, checkoff programs or national agencies for promotion and research. This includes various fresh produce grower representatives and associations, owners of firms, marketers, retailers, and previous U.S. checkoff program commission members. The review appraised a dozen published benefit-cost studies from Canadian and American sources, to assess the methods used, assumptions made, and resulting benefit-cost ratios. The review also closely examined three national agencies at different stages of development: the current request to found a Canadian Red Raspberry Research, Market Development and Promotion Council; the Canadian Strawberry Promotion

and Research Council proposal; as well as the established Canadian Beef Cattle Research Market Development and Promotion Agency.

Increasing Demand for National Promotion and Research Agencies

Since 1993, the Farm Products Council of Canada (FPCC) has supervised all national promotion and research agencies established under the Farm Products Agencies Act (FPAA). The majority of regulations made under this Act have been for supply-managed (SM) commodities. The only national non-SM checkoff made under the Act was for the Canadian Beef Cattle Research Market Development and Promotion Agency, established in 2002.¹

In a 2013 survey on national checkoffs on imports, there was general agreement (73 per cent) for more generic promotion of specific fruit and vegetable commodities in Canada.² And interest in national agencies for fresh produce is growing. An application to establish a Canadian Red Raspberry Research, Market Development and Promotion Council (CRRC) was submitted in 2012, in accordance with Part III of the Farm Products Agencies Act. Other industries are developing their applications to the FPCC to set up similar national agencies or checkoff programs, such as the Canadian Highbush Blueberry Council (CHBC), and the Canadian Strawberry Promotion and Research Council (CSPRC). Other groups are considering and debating the issue, including the fresh potato industry,³ the apple industry, and the asparagus industry.

The Farm Products Agency Act

According to Part III of the FPAA, the object of an agency is to promote a “strong, efficient and competitive industry for the regulated products in relation to which it may exercise its powers.” It may do so by “promoting the marketing and production of the products, and by conducting and promoting research activities.”⁴ This includes the promotion of the consumption and use of their respective regulated products, quality and varietal improvements, as well as the publication of information in relation thereto.⁵ Additionally, plebiscites of the “producers or the producers and importers” may be requested in each province to determine whether the majority is in favour of establishing such agencies.⁶ Indeed, to establish an agency, the “majority of the aggregate of the producers and importers” must be in favour (not independently).⁷

¹ There are several provincial checkoff programs in Canada, but these fall outside the scope of the report. The focus here is on national level agencies.

² CPMA. National Check-off on Imports - Promotion & Research Agency Survey.

³ The potato industry is conducting its own checkoff program study to be completed in the fall of 2013.

⁴ Farm Products Agencies Act, Section 41.

⁵ Farm Products Agencies Act, Section 42(c).

⁶ Farm Products Agencies Act, Section 39(2).

⁷ Farm Products Agencies Act, Section 39(1).

Levies and Program Expenditures

Levies

Established checkoff programs created under the FPAA can fund their promotion and research activities through a national levy payable by “persons who are engaged in the production or importation of a regulated product, or the marketing thereof.”⁸ Thus mandatory and or voluntary assessments can be imposed on first handler commodity producers and others along the supply chain. In reality, contributions are largely made by commodity suppliers (i.e., growers and importers).

Checkoff rates are established by the national agency and operate on a unit or volume basis such as a \$1 per head of cattle, or \$0.005 per pound for raspberries, \$0.007 per pound of strawberries, or \$0.0075 per pound of Highbush blueberries. Rates often range around one per cent of value in the U.S. where programs are longer established.

Small producers may also be exempt, for those growers and importers who produce a *de minimis* quantity of the commodity such as raspberry growers with under 10,000 pounds per year.⁹ Although refunds are permitted by the FPAA,¹⁰ levies may be refundable or non-refundable. In effect, grower associations developing the agency proposal need to address how levies are collected, if they are mandatory or refundable, and if they apply to imports, levies which would be the same as for domestic participants under the notion of national treatment. The choice to allow levies to be refunded is therefore determined in accordance with the proposed agency's promotion and research plan submitted to, and approved by the FPCC. The Act also allows agencies to sue growers to recover unpaid levies in any court of competent jurisdiction.

Expenditures

Checkoff program expenditures from the revenues collected through levies are determined by the national research and promotion agencies. Promotional efforts are the most common expenditure, followed by research activities. For instance, the submitted raspberry agency budget allocates an amount for promotion expenditures of \$234,000 (52 per cent of the total budget) and \$115,000 (25 per cent) toward research, or 66 and 33 per cent of its operating budget. Similarly, tentative Canadian Strawberry Promotion and Research Council figures also allocate analogous shares with 70 (\$1.32 million) and 30 (\$0.57 million) per cent of the operating budget allocated to promotion and research.

Promotion and marketing activities, including advertising, often target health, diet and nutrition issues in the messaging to consumers and health professionals, students and government authorities. Different types of media are typically accessed, such as paper, online as well as television and radio. Event sponsorship, trade show attendance, and promotional initiatives within retail, grocery and foodservice outlets are all leveraged. Research efforts include production, health, and or market research which may cover health improvements, variety trials,

⁸ Farm Products Agencies Act, Section 44.

⁹ According to the red raspberry agency application to the FPCC.

¹⁰ Farm Products Agencies Act, Section 42(f).

value-added innovation, land managerial practices, travel hardiness and adaptability, disease and pest management, and other topics.

Checkoff Program Purpose

Growers and importers often lack the resources or market power to promote and market their commodities and products, and or to fund their own research. Through economies of scale, however, checkoff programs provide an opportunity to pool funds to support such activities. Checkoff funding is seen by many as a steady, renewable source as well as a means to take leadership, improve structures, and leverage matching government funding.

Current funding models at the federal and provincial levels commonly require shared funding from industry equalling 25 per cent, to the government's 75 per cent contribution. Moreover, commodity production and market science and research are no longer pursued by some governments. Therefore, various industries are exploring other sources of funding to enable them to continue leveraging government funds for checkoff programs. The levy assessments are also viewed as a long-term and sustainable funding model. However, it can also be considered a defensive strategy as some industries within the fresh produce sector look to arrest declining sales or lessen the erosion in demand from consumption and or processing, and help support the sustainability of the sector.

Other possible checkoff program objectives are to expand markets, support the sector following a food scare, and increase demand for growing markets such as for various berries. The U.S. Highbush blueberry industry, for instance, has recently submitted a request to raise its checkoff assessment rate by 50 per cent to \$0.009 per pound. The goal is to expand its health research and promotional efforts to raise demand by 39 per cent, to match the anticipated growth in supply by 2015.¹¹ Elsewhere, production research can include human health benefits, product and or commodity attributes, perishability, productivity gains, food innovation, while other goals may include researching and sharing market information and consumer preferences.

Nonetheless, numerous fresh produce industries are losing domestic market share to the U.S. in particular. The fresh produce sector is also contending with a strong Canadian dollar, low labour costs from exporting countries, varying regulatory standards, with promotion by other non fresh produce food products, and with other national market and research (and export) promotion and research agencies who may apply levies to Canadian exports.

If checkoff programs are mandatory, participants should theoretically benefit equally and proportionately to the volume marketed. However, retailers may also choose to raise the price of checkoff supported commodities which can reduce or negate the benefits to program participants. And retailers may not be supportive of checkoff programs as the program value to them appears negligible, if any.¹²

Canadian checkoff models would also leverage support from imports, which can be viewed as a more fair and equitable system. Current raspberry and strawberry checkoff program proposals would assess importers as now does the Canadian Cattle Research Market Development and

¹¹ Growing Produce, "Blueberry Fee Boost Proposed," and U.S. Federal Register, *Blueberry Promotion, Research and Information Order: Assessment Rate Increase*.

¹² Interview findings.

Promotion Agency since May 2013.¹³ This arrangement is perceived as fair by Canadian participants since international competitors would freely benefit from domestic generic produce checkoff programs supported by Canadian contributors. If assessments are not mandatory or do not apply to importers or retailers, for instance, it is possible for some stakeholders who do not contribute, to benefit from checkoff programs. Nevertheless, given the arguments favouring fairness, over half (57.7 per cent) of all respondents in the 2013 CPMA checkoff survey did not favour a checkoff or levy on imported, commodity-specific products.

Benefit-Cost Ratios

Checkoff program effectiveness is often measured using techniques such as consumer attitude and awareness studies though they do not address changes in sales, demand, or market pressure, at the retail level in particular.¹⁴ However, measures addressing the return on checkoff program investment can be depicted through benefit-cost ratios (BCR). Investments can include generic and branded advertising, promotion and research expenditures. These investments are expected to achieve many of the various checkoff program objectives above, such as enhancing sales over a given time period.

Checkoff programs in Canada have both promotion and research components while U.S. programs more commonly focus on promotion. Production research impacts can provide productivity gains over the medium term (e.g., 3 to 5 years). Consumers, however, often respond more immediately (or not all) to product advertising or messaging. Program members expect, nonetheless, that there will be positive returns on the investment or benefits over checkoff program expenditures. The range of benefits includes increased demand, price, sales, producer surplus, or profits, over the costs of advertising, production research, market development, technical assistance and so forth. Various studies have generated BCRs comparing associated gains or losses in revenues, or profit, relative to checkoff program expenditures, mainly from generic promotion.

BCR results can be estimated in different ways, through economic modelling, or based on actual implementation. The Canadian strawberry checkoff BCR is theoretical based on tentative budget figures within the proposal under development. Conversely, the BCRs for beef are estimated on actual implementation using baseline scenarios through an econometric simulation model that reproduces the U.S. and Canadian beef and cattle markets. The BCR for U.S. Highbush blueberries, for instance, uses economic analysis of the domestic market impacts of the checkoff promotion program. The focus is on domestic demand (the aim of the checkoff program) and thus excludes export markets. Table 1 provides a range of BCRs for various Canadian and U.S. commodity checkoff programs.

The review of several BCR studies reveals only positive results. Indeed, no study under review has shown negative BCRs. The returns are thus positive, which indicate checkoff program participants would benefit from their investment in the program. Average BCRs for Canadian fresh produce checkoff programs can therefore be expected to range from 4.7 to 9.1 based on the results in Table 1.

¹³ Foreign growers do not contribute to checkoff programs directly although importers may pass on the fees to them.

¹⁴ Willams and Capps, "Measuring the Effectiveness of Checkoff Programs."

Table 1.

Estimated Benefit-Cost Ratios for Various Checkoff Programs in Canada and the U.S.

Commodity	Country	BCR Overall	BCR Promotion	BCR Research	Source
Strawberries	Canada	5.97	4.7		Association des producteurs de fraises et framboises du Québec 2013
Highbush Blueberries	U.S.		9.12		Kaiser 2010
Potatoes	U.S.		5.17 short-run 6.51 long-run		Richards and Kaiser 2012
Washington Apples	U.S.		7.0		Ward and Forker 1991
Dairy	Canada		Butter 1.8 Cheese 8.3 Fluid Milk 2.2 Maritimes to 7.4 Quebec		Kaiser et al. 2007 Kaiser et al. 2005
Beef	Canada	9.01	7.55	45.94 (with government matching funds = 6:1)	Cranfield 2010

Source: The Conference Board of Canada.

The overall BCR is equal to the promotion BCR if not specified.

Published BCR results for research are scarce.

Checkoff Program Risks

It should be remembered that BCRs or the rates of return, are based on checkoff program expenditures rather than on overall industry sales, revenues or value. The costs of a checkoff program are quite tangible to program participants, growers and importers, but the benefits may not be. Indeed, checkoff contributors may also have unreasonable expectations.

For example, checkoff expenditures in the raspberry agency budget (fresh and processed) amounts to 0.8 of 1 per cent of the annual sales (total value of \$28.46M for 2011).¹⁵ Of the \$234,000 available for promotion, \$115,000 is allocated to a domestic public relations campaign, representing 0.4 per cent of annual sales. Benefits from this generic national promotion campaign may be 9 to 1 (BCR for U.S. Highbush blueberries), meaning sales may rise by \$1,035,000 per year, or 3.6 per cent above current annual sales. Therefore, with 2,555 raspberry farms in Canada, the average increase in revenue per farm would be \$405, *de minimis* growers under 10,000 pounds included, importers excluded. This is an average figure growers can expect. As marketed volumes increase so will the cost and return in absolute terms.

¹⁵ AAFC, *Statistical Overview of Canadian Horticulture 2010-2011*, 47.

There may also be a perception by growers that benefits from checkoff supported promotion are captured along the supply chain rather than fully by the grower (with benefits for processing, wholesale and retail levels, or businesses which do not participate in checkoff programs). For example, a 2006 U.S. study showed 35 per cent of cattle producers believed that most benefits are disproportionately captured along the supply chain.¹⁶ Consequently, as growers may not capture the full benefit of their respective checkoff program, the return would be lower than the aforementioned \$405 average figure in the case of raspberries.

Moreover, revenues from the levies on imports (the largest source of revenue in the raspberry and strawberry checkoff proposals) are further reduced by the service charged by the Canadian Border Services Agency (CBSA) who would have authority delegated to it to collect and remit the levies on imported produce to their respective checkoff program.¹⁷ According to the national raspberry agency budget, services charges range between 6 and 10 per cent (excluded from the current budget). By and large, although benefits would differ amongst checkoff participants and changing market conditions (i.e., price, exchange rate, or production), profitability, less the cost of the program (including CBSA service charges), remains relatively small, particularly for larger growers.

Therefore, national agencies will need to manage the expectations of program participants. Sales and consumption may not always go up but checkoff programs can possibly reduce potential losses or arrest decline; although this hasn't been the case for Canadian milk or beef consumption with much larger checkoff budgets (see below). Through proper extension and clear risk communication, growers and importers will thus have a sound appreciation of the expected benefits from the checkoff program.

Ensuring whether growers understand the benefits and risks of establishing a national agency requires not only their support if the checkoff program is to succeed, but their expectations and understanding of the risks. This may in part explain the unclear assessment and large number of spoiled ballots during the January 2012 vote held regarding the formation of the Canadian Highbush Blueberry Council (checkoff program).¹⁸

Do Positive BCRs Achieve Checkoff Program Objectives?

Checkoff program promotion and research activities can influence demand, as do many other factors outside the program and fresh produce industry. Demand and consumption may still erode, however, even with successful promotion and research activities.

The Dairy Farmers of Canada's annual marketing budget is much larger than total fresh produce checkoff program budgets: it is valued at \$74.9 million as of August 1, 2013 (including the latest fee increase of \$7.3 million). In comparison, the total marketing budget of the national red raspberry agency is \$0.23 million. Even with positive BCRs for dairy ranging from 2.2 to 7.4, in line with potential fresh produce BCRs in Canada, as well as large annual marketing and promotion budgets, annual Canadian per capita fluid milk consumption has dropped from 90 litres in 1993 to 77 litres in 2012.¹⁹ Moreover, a 2007 U.S. study found that American checkoff

¹⁶ Chung and others, "Producer Support for Checkoff Programs: The Case of Beef," 81.

¹⁷ By commodity classification and Harmonization System (HS) Code.

¹⁸ BC Blueberry Council.

¹⁹ Canadian Dairy Information Centre.

generic dairy promotion effectiveness was overstated, allocating too much expenditure to advertising.²⁰ Despite these efforts, fluid milk consumption has declined and demand has eroded, losing market share to other products, including fruit juices.

The situation is similar in the Canadian beef sector. Examples of checkoff program returns on investment include optimizing the value of Canadian beef products, maximizing domestic demand for beef products, maximizing foreign demand for Canadian beef products, and beef quality and food safety research to enhance consumer satisfaction and food safety. The sector's BCR is 9 to 1 and its checkoff budget is over \$8.2 million. Yet, Canadian per capita beef consumption has declined 10.7 per cent since 2001.²¹ Further statistics show Canada's beef industry is falling behind and opportunities are being eroded. In 2011, Canada's trade balance in beef in terms of value was \$42 million, falling from \$1.4 billion in 2002. Canada now supplies some 75 per cent of its own market's beef down from 87 per cent in 2005 while imports from the U.S. have risen.

Given that these two Canadian comparisons of industries, with similar BCRs to the fresh produce industry, have much larger checkoff budgets, yet have not arrested their respective declines in demand, it is unclear how fresh produce checkoff programs activities will succeed where the above programs have not. Moreover, in the 2013 CPMA survey on national checkoffs on imports, results showed all respondents believed that in order to effectively increase sales and research of fruit and vegetables on a national level, large budgets in millions of dollars would be required (\$1 million, 28.6 per cent; from \$1 to \$2.5 million, 19 per cent; and over \$5 million, 52.4 per cent): amounts much higher than the proposed fresh produce checkoff program budgets. This may also explain why the majority (62.5 per cent) of CPMA survey respondents are not supportive of the creation of an agency or agencies that would be responsible for the promotion and research activity for specific commodities. Of note, no minimum marketing expenditure figures or threshold showing program effectiveness (e.g., an amount for a promotion campaign to be effective) could be found through this review process.

Conclusion

The report aims to provide guidance to the CPMA on the development of national fresh produce agencies for promotion and research. In terms of overall economic validation, commodity checkoff programs can offer numerous but relatively small economic benefits to program participants. The BCRs are expected to be positive for the Canadian fresh produce sector, from 4.7 to 9.1, in line with previous studies on benefit-cost ratios. Gains, however, may be less substantial, material or equitable than expected, if any. Indeed, overall checkoff program budgets may be insufficient to adequately fund national and regional campaigns, or production research projects. Moreover, research on results will require time for collection, which can be years after initial checkoff investments. Still, it will partially reduce gaps in commodity science and data with declining expertise and funding support by government.

Industry shows a great desire to seek and leverage matching funds from government. And national agencies would provide a tool to pool limited resources together to pursue otherwise unaffordable promotion and research activities to attain checkoff program objectives. However, such objectives may be more attainable if pooled across commodities with a single administrative body to raise sufficient funds for national promotion campaigns. Such a body

²⁰ Balagtas and Kim, "Measuring the Effects of Generic Dairy Advertising in a Multi-Market Equilibrium."

²¹ CAPI 2012. Canada's Beef Food System.

would have an independent board whose focus is to develop and regularly evaluate and report on checkoff program(s) effectiveness, and on the use of checkoff assessments by research organizations and marketers. For example, Foodland Ontario is a consumer marketing model looking to grow revenues and market share for fresh produce from Ontario. The brand is well recognized and has successfully raised demand. It also has support from across the supply chain, including retailers. Although it is short of commodity and production research, expanding such a model nationally for marketing may more fully respond to the promotion needs of the fresh produce sector, particularly in Atlantic Canada and the western provinces where such efforts are wanting.

It may also be worth pursuing generic advertising to promote the whole range of fresh produce consumption over other food categories rather than segmenting by individual produce industries, and promoting produce products and commodities over one another, with potentially confusing and conflicting messages for consumers. Consistent broad-based messaging may be more manageable and economically efficient as well.

Lastly, if the sector chooses to pursue checkoff programs, as a whole or individually, it will need to be clear and clarify grower and importer expectations, especially for branded commodities or products which will have higher expectations of positive results from their investments in checkoff programs.

References

AAFC. *Statistical Overview of Canadian Horticulture 2010-2011*. Agriculture and Agri-Food Canada. October 2012.

Association des producteurs de fraises et framboises du Québec. Canadian Strawberry Promotion and Research Council Proposal. July 2013.

Balagtas J. V. and Kim S. "Measuring the Effects of Generic Dairy Advertising in a Multi-Market Equilibrium." *American Journal of Agricultural Economics* 89 (2007), No. 4, 932-946.

B.C. Blueberry Council. "BC Blueberry Council announces Results of Canadian Highbush Blueberry Council

Vote Held on January 26 to 28th 2012." April 24 2012 release.

<http://www.berriesnw.com/SFU/2012/SFUdocs12/BCblueCouncilVote12.pdf> Accessed August 19th, 2013.

B.C. Raspberry Industry Development Council. *Request for a Red Raspberry Research, Market Development Promotion Agency*. Presented to the Farm Products Council of Canada, Minister of Agriculture the Agri-food Canada. September, 2012. http://fpcc-cpac.gc.ca/images/Proposal_Submitted_to_FPCC_2012.pdf Accessed June 21, 2013.

CABI. *Canada's Beef Food System: A Roadmap for Dialogue on Strategy*. The Canadian Agri-Food Policy Institute. September 2012.

Canadian Dairy Information Centre. http://www.dairyinfo.gc.ca/xls/camilkcream_e.xls Accessed August 22, 2013.

CPMA. National Check-off on Imports - Promotion & Research Agency Survey. The Canadian Produce Marketing Association. January 30, 2013.

Chung C., Norwood F.B., and Ward C.E. "Producer Support for Checkoff Programs: The Case of Beef." *CHOICES*, 2nd Quarter (2006) No. 2.

Cranfield J. *Evaluating the Economic Benefits from the Canadian Beef Check-Off*. Department of Food, Agricultural and Resource Economics, University of Guelph. March 17, 2010

Farm Products Agencies Act. Department of Justice. Government of Canada. <http://laws-lois.justice.gc.ca/eng/acts/F-4/FullText.html>. Accessed August 6, 2013.

Growing Produce. "Blueberry Fee Boost Proposed." May 2, 2013.

<http://www.growingproduce.com/article/33729/blueberry-fee-boost-proposed> Accessed August 20, 2013.

Kaiser H.M. *An Economic Analysis of Domestic Market Impacts of the U.S. Highbush Blueberry Council*. Cornell University. August 14, 2010.

Kaiser H.M., Cranfield J. and Doyon M. *An Economic Analysis of Generic Fluid Milk Advertising in Ontario, Quebec, and the Maritime Provinces*. Report prepared for the Dairy Farmers of Canada. 2005.

Kaiser H.M., Cranfield J. and Doyon M. *An Economic Analysis of Generic Cheese and Butter Advertising and Promotion Activities by the Dairy Farmers of Canada*. Report prepared for the Dairy Farmers of Canada. 2007.

Richards T.J. and Kaiser H.M. *Evaluation of Grower-Funded Marketing Activities by the United States Potato Board*. Report Prepared for United States Potato Board. Denver, CO. November 13, 2012

U.S. Federal Register. *Blueberry Promotion, Research and Information Order: Assessment Rate Increase*. 78, no.97 May 20, 2013. Proposed Rules.

Ward R.W. and Forker O.D. *Washington Apple Advertising: An Economic Model of its Impact*. WAC 91.1. University of Florida, Gainesville, and the Washington Apple Commission. 1991.

Willams and Capps, "Measuring the Effectiveness of Checkoff Programs." *Choices*, 2nd Quarter (2006) 21, No.2. <http://www.choicesmagazine.org/2006-2/checkoff/2006-2-05.htm> Accessed August 19, 2013.

Insights. Understanding. Impact.

**A Review of Fresh Produce Benefit-Cost Studies and
Potential Ratios from Canadian Fresh Produce Checkoff**

By Dr. Jean-Charles Le Vallée



The Conference Board
of Canada

255 Smyth Road, Ottawa ON

K1H 8M7 Canada

Tel. 613-526-3280

Fax 613-526-4857

Inquiries 1-866-711-2262

conferenceboard.ca

