

CANADA AND ITS IMPACT ON THE GLOBAL FOOD CRISIS

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Today, the most important issue is: will our planet have the resources to feed a rapidly growing population? Agricultural technologies are improved, but there is still not enough food for all and in many countries people are starving. The Government of Canada is one of the strongest supporters of the World Food Programme and consistently in among the top three donors of food over the past five years.

Key words: Canada, The Food Crisis, The World Food Programme.

КАНАДА И ЕЕ ВЛИЯНИЕ НА ГЛОБАЛЬНЫЙ ПРОДОВОЛЬСТВЕННЫЙ КРИЗИС

На сегодняшний день наиболее актуальным вопросом является: есть ли у нашей планеты ресурсы, чтобы прокормить стремительно растущее население? Земледельческие технологии совершенствуются, но продовольствия по-прежнему на всех не хватает и во многих странах люди голодают. Правительство Канады является одним из сильнейших сторонников Всемирной продовольственной программы и неизменно находится среди лучших трех доноров продовольствия в течение последних пяти лет.

Ключевые слова: Канада, продовольственный кризис, Всемирная продовольственная программа.

КАНАДА ТА ЇЇ ВПЛИВ НА ГЛОБАЛЬНУ ПРОДОВОЛЬЧУ КРИЗУ

На сьогоднішній день найбільш актуальним питанням є такі: чи є у нашої планети ресурси, щоб прогодувати стрімко зростаюче населення? Землеробські технології удосконалюються, але продовольства, як і раніше, на всіх не вистачає і в багатьох країнах люди голодують. Уряд Канади є одним з найсильніших прихильників Всесвітньої продовольчої програми і незмінно перебуває серед кращих трьох донорів продовольства протягом останніх п'яти років.

Ключові слова: Канада, продовольча криза, Всесвітня продовольча програма.

Statement of the problem. World civilization is in a state of global crisis, the essence of which lies in the growing imbalance between limited natural resources, disabilities trophic (nutrient) systems of the biosphere and the rapid increase in the population of the planet. From 1950 to 1990 it has doubled its number from 2.5 to 5.3 billion. In 1997, the world population has exceeded 5.8 billion, people with an annual increase of 80–85 million per year. In 2014, it reached more than 7 billion. Experts warn that by mid-century the world population is projected to rise up to nine billion, and thus achieving the green revolution needs to be repeated — once again to double food production by 2030.

The purpose of the article is to reveal the Canadian agricultural and food systems as a modern, highly complex, integrated and growing part of the Canadian economy and her impact on the current situation of food crisis on a global scale.

Basic material. In 1996, Rome hosted the first World Food Summit. Its final resolution stated that food «mustn't be used as an instrument of political and economic compulsion». After 18 years, the problems associated with food are remaining unsolved.

The report of the Food and Agriculture Organization of the United Nations (FAO) [6], published in September 2014, outlined that in general the threat of hunger in the world has diminished. Over the past ten

years the number of people suffering from malnutrition, has decreased by more than 100 million, and more than 200 million over the period 1990–92. Over the same period, the number of undernourished people has decreased from 18.7 % to 11.3 % around the world, and from 23.4 % to 13.5 % in developing countries. This improvement, despite the strong regional differences are expected to reach the indicators identified in the «Millennium Development Goals», developed by the UN in 2000. The program deals with the planned reduction by half by 2015 in comparison with the period proportion of the population, who suffer from hunger in developing countries.

In order to provide food for the maximum proportion of the population of the world leading countries have decided to help. Internal and foreign trade policy of Canada is an example of a balanced approach to participation in the global market integration and support agribusiness sectors that are of vital importance for the prosperity of the national economy. The policy of the Canadian agriculture relies on four innovative management programs serious risks in the agricultural sector. When creating a support system that is capable to respond to sudden natural cataclysms and damage of agricultural production caused by them, the Canadian government has the ability to minimize the effects of risk factors, which allows it to confidently achieve further prosperity of agriculture.

Table 1

Macroeconomic indicators and characteristics of the agricultural sector

The indicator	1995	2014
The total population (million. people)	29,4	35,14
The rural population (percentage of total population)	22	19
The share of agricultural sector in GDP (percent)	3	3,1
Agricultural lands (share of total land area)	7,5	7,2
Employment in agriculture (as a percentage of total employment)	4	2,4

Source: compiled by the authors based on materials [6]

Table 2

Evaluation support of manufacturers and transfers tied to a single product

	1995	2000	2005	2013
Evaluation support of producers (ESP) (in million. \$ CAD)	5 583	6 390	7 671	6 937
Market price support	2260	3 214	3 301	4 106
Overall assessment of support	7 728	8 465	10 735	10 039
Percentage of ESPs in gross revenue in agriculture	19	19	21	14
Transfers tied to a single product (TSP) (in million. \$ CAD)				
Milk				
Percentage of TSPs in gross revenue in agriculture	1 923 48	2 669 63	2 446 49	2 567 43
Wheat				
Percentage of TSPs in gross revenue in agriculture	45 1	109 3	60 2	207 4
Rape seeds				
Percentage of TSPs in gross revenue in agriculture	49 2	36 2	58 2	273 4

Source: compiled by the authors based on materials [6]

Canada is a net exporter of agricultural products and foodstuffs, and one of the leading exporters of wheat, feed grains, oilseeds, pork and beef. Canada has traditionally been one of the three largest wheat exporters in the world along with the United States and Australia. More than half of its agricultural products Canada exports to the United States.

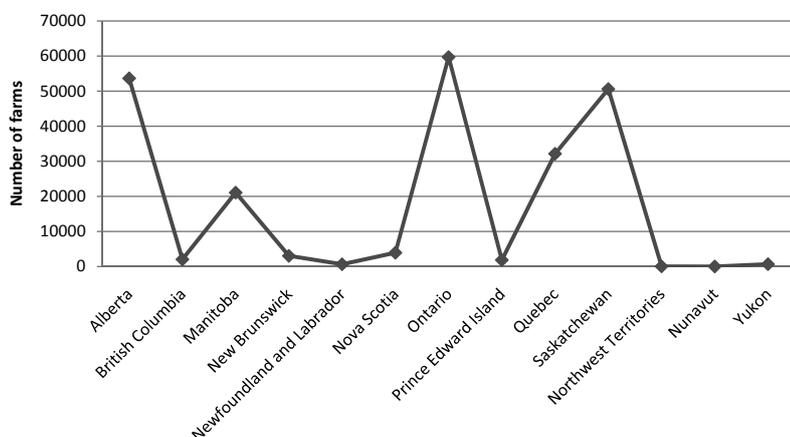


Fig. 1. Number of farms by Province territory Based on materials: [5]

Table 3

Canadian agricultural government departments

Department	Function
<u>Agriculture and Agri-Food Canada</u>	Responsible for policies governing agriculture production, farming income, research and development, inspection, and the regulation of animals and plants. Headed by the Minister of Agriculture (Canada).
<u>Canadian Dairy Commission</u>	Responsible for providing dairy producers a fair return for labour and investment and provide consumers with high quality dairy products.
<u>Canadian Food Inspection Agency</u>	CFIA consolidates the delivery of all federal food, animal and plant health inspection programs.
<u>Canadian Grain Commission</u>	Responsible for the grain industry. Headed by the Minister of Agriculture and Agri-food
<u>Canadian Fisheries and Oceans Canada</u>	Responsibility for the conservation and sustainable use of Canada's fisheries resources.
<u>National Farm Products Council</u>	Responsible for promoting efficient and competitive agriculture in Canada and oversees the Canadian Egg Marketing Agency, Canadian Turkey Marketing Agency, Chicken Farmers of Canada and Canada Hatching Egg Producers.

Source: compiled by the authors based on materials [5]

The most important measure of agricultural support is the support market prices, protecting producers of certain foods (dairy products, poultry, eggs) through the production control system and the trade of these products. Based on the cooperation of the federal and provincial authorities, Canada has developed a system whereby using a variety of domestic support measures and customs regulation, the state provides support to agricultural producers, protecting them from competition in the international market. While support for producers is not paid from the state treasury at the expense of taxpayers, it nevertheless causes significant damage to Canadian consumers through higher prices in the domestic market.

Domestic support to agriculture in Canada, as measured by aggregate indicator of support (AIS), which includes both market price support and budgetary payments, stacked in Canada's WTO commitments, which provide the maximum level of AIS in the amount of \$ 4 301 billion. CAD. While the restrictions on imports of some important agricultural products coming into Canada is problematic, in view of efforts to forge future trade alliances, the impact of domestic policies to measure support for agriculture and the future of AIS, is likely, to be negligible. This follows from the fact that the measurement of domestic support in the WTO are taken into account only internal measures and not of restricting trade.

The Canadian agriculture and agri-food system (AAFS) is a complex and integrated supply chain which includes input and service suppliers, primary producers, food and beverage processors, food retailers and

wholesalers, and foodservice providers. The activities along this supply chain generate significant economic benefits at both the federal and provincial levels. Agriculture and Agri-Food Canada's (AAFC) Farm Income Forecast projects that Canadian farmers' net income in 2013 and 2014 will remain at the historically

high levels seen in recent years. An excellent 2013 harvest in Canada for key grains and oilseeds will be a major contributor to strong sector performance in both years.

Canadian net cash income for 2013 is projected to total \$13.2 billion, only 1 % lower than in 2012. Farm-level average net operating income is estimated

Table 4

Net operating income of Agriculture Canada for 2012–2014

	2012	Average 2008–12	2013	13/12*	13/08–12*	2014	14/13*	14/08–12*		
Aggregate Level										
	(\$ millions)			(%)		(\$ millions)			(%)	
Total Market Receipts	50,746.9	44,253.5	51,415.6	1	16	50,610.7	-2	14		
Program Payments	3,442.4	3,495.6	2,580.4	-25	-26	2,779.0	8	-20		
Total Cash Receipts	54,189.3	47,749.1	53,996.0	0	13	53,389.7	-1	12		
Net Operating Expenses	40,841.3	37,527.6	40,764.5	0	9	40,825.3	0	9		
Net Cash Income	13,348.0	10,221.5	13,231.5	-1	29	12,564.4	-5	23		
Farm-Level										
	(\$)			(%)		(\$)			(%)	
Net Operating Income, Avg	67,633	54,518	68,498	1	26	65,243	-5	20		
Total Family Income, Avg	123,947	108,409	128,517	4	19	132,579	3	22		
Net Worth, Avg	1,779,842	1,528,074	1,893,211	6	24	1,995,409	5	31		

Source: compiled by the authors based on materials [5]

Table 5

Exports of major agricultural products in value terms (in million \$ US and thousands tonnes)

Product	A unit of measurement	1995	2013
Wheat	thous. tons	2 952	4 535
million. \$ US		16 960	18 394
Rape seeds	thous. tons	1 038	3 300
million. \$ US		3 416	7 471
Oil, rapeseed	million. \$ US	292	2 124
thous. tons		434	2 233
Pork	million. \$ US	424	1 888
thous. tons		167	689
Soybeans	million. \$ US	167	1 368
thous. tons		654	2 776
Semi-finished goods	million. \$ US	241	1 250
thous. tons		214	422
Beef	million. \$ US	169	1 080
thous. tons		75	325
Total value of agricultural exports, million. \$ US		12 789	34 703

Source: compiled by the authors based on materials [5]

Table 6

Imports of major agricultural products in value terms

Product	A unit of measurement	1995	2013
Semi-finished goods	million. \$ US	476	1,906
thous. tons		263	662
Wine	million. \$ US	324	1,699
thous. tons		148	350
Chocolate	million. \$ US	224	757
thous. tons		82	164
Raw sugar, centrifugal	million. \$ US	258	718
thous. tons		920	963
Beverages, distilled	million. \$ US	190	665
thous. tons		24	42
Alcoholic	million. \$ US	465	620
thous. tons		172	127
Beef	million. \$ US	64	610
thous. tons		86	341
Beverages, nonalcoholic	million. \$ US	79	571
thous. tons		104	524
Total value of imports agricultural products million. \$ US		9 080	27 180

Source: compiled by the authors based on materials [5]

be \$68,498, an all-time high. The food retail and wholesale industry accounted for the largest share (1.8 %), followed by the food, beverage and tobacco (FBT) processing industry (1.7 %). Employment in most industries in the AAFC continued to grow. In 2013, the AAFC provided one in eight jobs in Canada, employing over 2.1 million people. The foodservice industry was the largest employer in the AAFC, accounting for 5.2 % of all Canadian jobs in 2013.

In general, the market revenues for the period from 2002 to 2013 increased in price by 55.9 % and the implementation of special crops more than doubled. Proceeds from the sale of red meat, nevertheless, fell over this period. Farm productivity, measured as income from farming and net worth continues to be strong on the whole. Expressed in dollar terms, government expenditures (federal and provincial) in support of the agriculture and agri-food sector are expected to increase to \$6.8 billion in 2013–14. However, as a share of the agriculture GDP, government expenditures are estimated to be 22.1 % in 2013–14. Research and inspection expenditures and program payments at the federal level make up the largest portion of government support to the agriculture and agri-food sector. Public investments in research and development (R&D) in the agriculture and agri-food sector represent a critical source of innovation and productivity growth. R&D expenditures, of which the majority are incurred by the federal government, are estimated to rise to \$602 million in 2014–15.

Global Context

The performance of the agriculture and agri-food industries depends on their ability to compete both in domestic and international markets over the long-term. Canada continues to remain relatively competitive in such markets. Canadian export sales grew by

8.1 % in 2013. While the U.S. remains Canada's most important agriculture and agri-food export destination, Canadian exports to China increased by 84.2 % in 2013 to \$5.0 billion, and accounted for much of the export growth in non-U.S. markets. With export sales of \$43.6 billion, Canada overtook Argentina to become the world's fifth-largest exporter, accounting for 3.5 % of the total value of world agriculture and agri-food exports. While the U.S. continues to be Canada's most important trading partner, China surpassed Japan in 2013 to become Canada's second-largest agriculture and agri-food export destination. Of the total value of Canadian agriculture and agri-food exports, the U.S. accounted for 48.4 % and China, 11.4 %.

With import sales of \$32.3 billion in 2013 – an increase of 4.2% over the previous year – Canada remained the world's sixth-largest importer, accounting for 2.7 % of the total value of world agriculture and agri-food imports. The U.S. accounted for 61.2 % of the value of all Canadian agriculture and agri-food imports. It is estimated that approximately half of the value of primary agriculture production in Canada is exported, either as primary commodities or processed food and beverage products. The processed foods industry is particularly export-dependent and Canadian exports of processed food products increased by 6.0 % to \$21.7 billion in 2013.

In response to challenges, opportunities and changing market conditions, the agriculture and agri – food system continues to transform and restructure. Favourable market conditions have enabled the sector to grow and allowed a number of farms to diversify their production to include non-traditional crops. In particular, drought in the U.S. in the summer of 2012 drove up grain and oilseed prices. Grain and oilseed receipts increased by \$13.1 billion between 2002 and 2013, and accounted for the largest share (41.3%) of the total value of all farm market receipts in 2012.

Ukraine also has experience in the implementation of common projects in agriculture with Canada. And modern states are interested in establishing a new project to create a warehouse for grain, deducing it on the market and organizing appropriate specialized cooperatives. The project involves the development of small and medium-sized producers of grain in Ukraine's regions by creating cooperatives. For their members they would be able to provide services for the storage, processing and marketing. The second direction, which will develop sides meat and dairy cattle. In particular, the Ukrainian side has invited Canadian specialists in breeding business visit Ukraine and to share their own experiences. For 11 months of 2013 trade of agricultural products between Ukraine and Canada accounted for almost 87 million dollars.

Despite these positive results, as experts note, every ninth person in the world still suffer from chronic malnutrition. The United Nations World Food Programme (WFP) provides food assistance to more than 80 million people in 75 of the world's poorest

countries each year. Its operations reach some of the most remote, dangerous and neglected areas of the world. WFP's unique role as the UN's frontline agency addressing hunger would not be possible without the financial support from donors such as Canada. Canada actively supports WFP's unique dual mandate to respond to humanitarian crises through emergency operations that fill food gaps in the short-term, and promote long-term development via programmes designed to break the deeply rooted hunger-poverty cycle.

Canada and WFP share several common objectives in working towards a world with zero hunger

- starting with saving lives and protecting livelihoods in emergencies;
- preventing hunger and investing in disaster preparedness and mitigation;
- restoring and rebuilding lives and livelihoods after wars and disasters;
- reducing chronic hunger and undernutrition and strengthening the ability of nations to curb hunger.

The Government of Canada, through the Department of Foreign Affairs, Trade and Development (DFATD), is one of WFP's strongest supporters and has consistently been among WFP's top three donors over the last five years. As a voluntarily funded organization, with funds contributed by governments, the private sector and the general public, Canada's support is critical to WFP's success. In addition, Canada is a key member of WFP's Executive Board and has been instrumental in enhancing WFP's commitment to, amongst other issues, gender equality, results-based management and nutrition.

In 2013, Canada contributed over \$370 million to WFP's operations, making it one of WFP's top 3 donors, alongside the US and the UK. With the support of Canada and other donors in 2013, WFP:

- Reached 80.9 million people in 75 countries with food assistance
- Provided school meals to 18.6 million children in 62 countries
- Provided 7.8 million malnourished children with special nutrition Support Responding to Crises in 2014

Increasing incidences of natural disasters, crises due to conflict, and on-going instability continue to reinforce the demand for rapid and effective emergency responses available on short notice. Thanks to the stable and predictable funding from donors such as Canada, in 2013 WFP was on the ground providing humanitarian assistance to vulnerable people in high profile and seemingly forgotten crises around the world. Four large-scale emergencies required significantly scaled-up operations in 2014, namely crises in the Philippines, the Central African Republic, South Sudan and Syria [4].

Canada's initial \$4 million contribution (out of an overall total of \$6.5 million) to the emergency operations in 2013 helped to meet the immediate needs of affected people. Canada also supported efforts led by WFP that moved more than 35,000 metric tons of relief

items by land, sea and air for 39 different humanitarian organizations. The Emergency Telecommunications Cluster was among the first on the ground and provided services to 6,200 humanitarian workers, including voice communication and internet connectivity.

The conflict in the Central African Republic (CAR) has driven hundreds of thousands of people from their homes, adding a new layer of hardship in a country where many people were already struggling to find their next meal. Farmers have not been able to harvest their crops and many have lost their livelihoods [7]. In 2013, Canada contributed \$1.7 million to WFP's operations in CAR: \$1 million in nutritional support for children under 5 years and basic food items for internally displaced people (IDPs), with the remaining \$700,000 for the UN Humanitarian Air Service (UNHAS) operated by WFP. The number of IDPs in CAR rose sharply due to the conflict so WFP prioritized life-saving assistance to all those affected, addressing their immediate food and nutrition needs. Thanks to the support of Canada and other donors, WFP reached more than 600,000 vulnerable people, including 130,000 children under five in 2013. In view of increasing insecurity, WFP scaled up assistance to more than 1 million beneficiaries in 2014.

In South Sudan, conflict and insecurity has forced tens of thousands of people to flee their homes. With the support of Canada – \$23 million in 2013 – and other donors, WFP provided food to over 2.4 million vulnerable people in South Sudan during 2013. This operation focused on people affected by conflict, including internally displaced persons (IDPs), returnees, refugees and vulnerable groups such as malnourished children under the age of five, and pregnant and lactating women. WFP also provided assistance in order to protect and rebuild livelihoods and to enhance the resilience of households and communities through social safety nets, including school meals and community-based asset creation [3].

Inside Syria, amid widespread violence, WFP's operation scaled up almost three-fold from the beginning of 2013 to the end. By December 2013, WFP was supplying food to 3.7 million vulnerable people inside Syria, including special nutritious food to children under five years. In collective shelters and highly insecure areas, partners conducted door-to-door distributions [1].

Beyond Syria's borders, WFP is assisting refugees in Iraq, Jordan, Lebanon, Egypt and Turkey, primarily by distributing vouchers that can be redeemed for food in local shops. Food vouchers enable individuals to exercise choice and strengthen local markets where food is available. In 2013, WFP reached almost 1.5 million people across all five countries, 78 percent of whom were women and children. Canada, one of WFP's top donors in the region, has been a strong supporter of this innovative initiative. Canada's flexible funding allows WFP to provide choice and dignity to people who are suffering.

Nearly half of the world's population is under 25 but, in many areas, a basic education is not even an option.

Some 57 million children, 54 percent of them girls, have no access to school [2]. A further 6.6 million children die before reaching their fifth birthday – nearly half of these deaths are due to undernutrition. WFP and Canada are focusing on maternal and child nutrition, alongside school meals to support access to education, to ensure a better future for the younger generation.

Canada is WFP's second largest supporter of school meals globally. In 2013, Canada provided over \$45 million to WFP school meals programmers around the globe that are based on a simple principle: nurturing the next generation of farmers, teachers, doctors and presidents means feeding bodies as well as minds. WFP's school feeding programme provides a nutritious meal or snack to 18.6 million children in 62 different countries. School feeding increases enrolment and attendance and can help children learn more effectively. In a growing number of countries, WFP is beginning to hand over school meal programmes to the governments and communities it partners with leading to long-term sustainability.

Canada invests in WFP, in part, because of its expertise in a range of areas including nutrition, food procurement, logistics and its ability to identify and reach the most vulnerable people in times of crisis. WFP is constantly working to ensure it is implementing the most efficient and effective solutions for the world's hungry [1].

As a founding partner of WFP's Purchase for Progress (P4P) initiative, Canada is supporting efforts to transform the way WFP purchases food in developing countries, giving small-scale farmers access to reliable markets and the opportunity to sell their surplus at competitive prices. So far, hundreds of thousands of small-scale farmers have benefited from efforts to improve how their crops are grown, harvested and marketed. Canada is actively supporting P4P in Afghanistan, Ghana, Guatemala, Nicaragua and Cuba.

The P4P pilot has allowed WFP to find new ways of leveraging its purchasing power to support agricultural and market development in developing countries. In its first five years, P4P has transformed the lives of farmers, especially women, in 20 countries. Since September 2008, P4P has [5]:

- contracted over 430,000 metric tons of food under P4P activities for a value exceeding US\$167 million from farmers' organizations, small and medium traders, food processors, Commodity Exchanges and Warehouse Receipt Systems;
- resulted in cost savings of over US\$54 million by purchasing locally instead of importing food from abroad;
- trained more than 500,000 farmers, warehouse operators, and small and medium traders and school staff in agricultural production, post-harvest handling, quality assurance, marketing and finance.

By providing a market to smallholder farmers, supporting the improvement of crop quality to increase their sales to WFP as well as other buyers, P4P has transformed WFP's local procurement into a vital tool to address hunger [6].

WFP delivers hundreds of thousands of tons of food each year, and increasingly provides cash and vouchers for food purchases. Canada is a partner of WFP in the use of these new food assistance tools. Cash transfers and vouchers can be redeemed for food items or used in selected shops to help struggling individuals provide for their families. They are used to address hunger in

places where there is food available in the marketplace, but where poor people cannot afford to buy it [7].

Food insecurity is one of the most crucial issues we are facing in the world today and WFP is a leader in that fight. They have a massive impact in a multitude of ways including the will and the capacity to handle emergency situations as well as long-term sustainable development.

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