



For the first time, genetically-modified salmon is approved to be sold in the Canadian markets

Genetically-engineered Atlantic salmon (AquAdvantage® salmon) has reached the Canadian market after being approved by Health Canada and the Canadian Food Inspection Agency in May 2016. The modified fish was developed in AquaBounty Technologies labs, Massachusetts, USA. It took the company 25 years of research to produce AquAdvantage® salmon, which are currently being raised in tanks in a small facility in Panama and a fish farm in Indiana, USA.



Photo credit: Randychlu (via flickr)

Although the US Food and Drug Administration (FDA) had also approved the salmon for consumption in November 2015, it has not made its way to American tables yet because of the ongoing debate over the labeling procedures for genetically modified products. The genome of the wild Atlantic salmon, containing some 40,000 genes, was modified by adding a growth-hormone gene from a Pacific salmon. In addition, a gene regulator from an ocean pout was added to the genome of the modified fish. AquAdvantage® salmon was basically engineered to grow faster and larger than normal salmon and to reach the marketable size in approximately half the time. Selling transgenic products in Canada is seriously opposed by many Canadian, though 4.5 tonnes of non-labeled AquAdvantage® salmon was sold in July 2017.

Waltz, E. (2017, August 04). First genetically engineered salmon sold in Canada. *Nature*. Retrieved from <https://www.nature.com/news/first-genetically-engineered-salmon-sold-in-canada-1.22116>

Is food insecurity really affecting our mental health?



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Although global food production has increased noticeably over the past decades, more than 795 million people are undernourished worldwide and affected directly by food insecurity. Homeless people are under vulnerable condition in developed countries as well. Their living standards are precarious. A new study based on data from 149 countries and published in the *American Journal of Preventive Medicine* revealed a significant association between food insecurity and poorer mental health as well as specific psychosocial stressors worldwide. Nearly one third of the earth's population experiences a common mental disorder during their lifetime, such as depression, anxiety, and somatic symptom disorders. The researcher, Andrew D. Jones from the University of Michigan, USA, suggests that food insecurity may contribute to common mental disorders in three ways. First, by generating uncertainty over the ability to maintain food supplies or to acquire sufficient food in the future, food insecurity can provoke a stress response that may contribute to anxiety and depression. Second, acquiring foods in socially unacceptable ways can induce feelings of alienation, powerlessness, shame, and guilt that are associated with depression. Finally, food insecurity may magnify socioeconomic disparities within households and communities that



could increase cultural sensitivities and influence overall mental well-being. The research was conducted based on data from the 2014 Gallup World Poll, which is a series of nationally representative surveys of adult individuals and covers urban and rural areas. Mental health status was determined using the Negative Experience Index and the Positive Experience Index, and two five-question surveys that examined topics such as pain, sadness, enjoyment, feelings of respect, and other factors.

Medical Xpress. (2017, April). Food insecurity can affect your mental health. Medical Xpress. Retrieved from <https://medicalxpress.com/news/2017-04-food-insecurity-affect-mental-health.html>

Jones, A. D. (2017). Food insecurity and mental health status: A global analysis of 149 countries. *American Journal of Preventive Medicine*, 53(2), 264-273.

The 3rd German Future Earth Summit (2018): A platform that turns Knowledge into Action



The German Future Earth Summit (2018) in Berlin, the 3rd of its kind, is a national gathering that provides an opportunity for German researchers and stakeholders to network and exchange ideas on global sustainability. The main focus of the 2018 Summit, held on February 8th and 9th, will be Future Earth Knowledge Action Networks (KANs). The German Committee Future Earth is now inviting the German Future Earth and World Climate

Research Programme communities, as well as all researchers and stakeholders interested in discussing topics related to Health, Natural Assets, Ocean, Sustainable Consumption & Production, Sustainable Development Goals, Transformations, Urban, Water-Energy-Food Nexus, and Finance & Economics in the context of the Knowledge Action Networks. More information at <https://www.dknsummit18.org>

Tropentag 2017, Bonn, Germany

Tropentag is an annual, international, interdisciplinary conference on research in tropical and subtropical agriculture, natural resource management and rural development. This year, the 19th annual Tropentag was held in Bonn, Germany on September 20 - 22, 2017. It was organized by the University of Bonn and the Center for Development Research in cooperation with the University of Berlin, University of Göttingen, University of Hohenheim, University of Kassel-Witzenhausen, University of Hamburg, ZALF e.V., ETH Zurich, Czech University of Life Sciences in Prague, University of Natural Resources and Life Sciences in Vienna, the Council for Tropical and Subtropical Research, and the GIZ Advisory Service on Agricultural Research for Development.

The main theme was "Future Agriculture: Social-ecological transitions and bio-cultural shifts," but this main topic carried with it around 30 diverse subtopics including biodiversity, institutions and livelihood, soil and soil fertility, land use and land use change, agricultural and food technology, markets and many others. As in every year, Tropentag opened the door for participation, contribution and discussion among all people who are interested and engaged in agricultural research and rural development in transition, including students, Ph.D. students, scientists, extension workers, decision makers, politicians and practical farmers. Over 1,000 registered participants from more than 68 countries were assembled to discuss the vision of a new path for agriculture. More than 260 poster presentations, 170 oral presentations and 8 workshops took place. Many interactive and interesting discussions were held after each session. In addition, different questions related to the implications of recent developments and change processes for food security, resource base quality, rural well-being, and the future of agriculture in general were addressed during the plenary presentations and key note lectures in thematic sessions. During the three days of the conference, the audience was excited and enthusiastic to listen and discuss. Sometimes one and a half hours, which is the general session time, was not enough for all the researchers to present their work and



discuss all the questions that were raised.

Photo credit: Tropentag (via flickr)



TT 2017 organizers tried their best to provide all the necessary resources for the speakers and participants, such as organizing pre-workshops, providing a good internet connection and even offering a child care service. TT 2017 was covered on social media by a special team of “Student Reporters” who dedicated their time and efforts to cover all activities, workshops, oral presentations and poster sessions. In addition, they conducted interviews with participants and keynotes speakers to learn more about their future contribution to achieving more sustainable agriculture, and recorded the audience’s expectations and feedback about the conference.

On the second day, a social dinner was organized to give a chance for the junior scientists to socialize and make connections with other participants and organizations. The dinner was a huge gathering for researchers from all over the world to meet, discuss their interests, socialize, and exchange knowledge. This year, TT 2017 was, as usual, a huge scientific meeting that paves the way for youth, junior and senior scientists to make the best contribution towards a better future.