



CELEBRATE THE INTERNATIONAL YEAR OF PULSES 2016 | [WWW.IYP2016.org](http://WWW.IYP2016.org) | #LovePulses  
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## Thematic Areas

Many, many partners were part of the IYP2016 success and the Global Pulse Confederation was honoured to be a co-ordinator for committees covering for thematic areas regarding pulses and its IYP2016 partners identified a series of thematic areas that were the focus for activities during the 2016 International Year of Pulses. These areas represent the key issues where new and increased efforts could help make a difference in promoting sustainable agriculture and livelihoods, as well as healthy diets, through increased production, trade and consumption of pulses.

Hundreds of activities and projects related to IYP occurred under these four thematic areas including but not limited to branding, school programs, recipes, and market access. Fifteen external partners were recruited to work on the year, from major science centres, health institutes, academia to farm groups. Additionally, a total of 38 national committees had activities in every continent.

These activities were built around four thematic areas:

- Creating Awareness
- Food Security, Nutrition & Innovation
- Market Access & Stability
- Productivity & Environmental Sustainability

Outlined below is the accomplishments of each of the thematic areas throughout the year.

### Food Security, Nutrition & Innovation

#### **Purpose and objective:**

Increased production and consumption of pulses can help reduce hunger, food insecurity and address nutrition issues both in developed and developing countries. Pulses are a key part of diets in many countries. They offer a nutrient dense, low fat, low glycemic index food ingredient with high levels of complex carbohydrates including fiber, and are a good source of protein. They are also low-cost and non-perishable which is important to poor consumers around the world.

The International Year of Pulses presented a tremendous opportunity for collaborations between the pulse industry and food manufacturers, the research community, health & humanitarian organizations, governments and public policy makers to increase pulse demand, production and drive product reformulation to include more pulses.





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**Workplan:**

Projects	Deliverables
<p><b>Sackler Institute Event (NYC) November 19 2015</b></p> <p>Signature Event</p> <p>1 day scientific conference in NYC at the New York Academy of Science, NYAS</p> <p>1 day side-event to focus on research outcomes</p> <p><i>Presented by The Sackler Institute for Nutrition Science and Bush Brothers &amp; Company. Organizing sponsors include the Global Pulse Confederation, American Pulse</i></p>	<p><i>Little Beans, Big Opportunities, Realizing the Potential of Pulses to Meet Today's Global Health Challenges</i></p> <p>Objective: Highlight potential for pulses to address key issues related to over and under nutrition, promote research gaps (survey existing scientific research re pulses and FS; research and document local, regional, national pulse products, production techniques, etc)</p> <ul style="list-style-type: none"> <li>• The conference looked at the contribution of pulses in healthy and sustainable diets, examined how pulses can make significant impacts on public health, and explored opportunities for enhancing these benefits broadly through food system innovations.</li> <li>• Keynote by Sonny Ramaswamy, PhD, USDA National Institute of Food and Agriculture on Population, Public Health, Pulses and Partnership</li> <li>• Attracted over 150 participants</li> <li>• Featured 11 speakers from leading scientific institutions and 3 sessions.</li> <li>• Side-event with 20 pulse experts took place the day after the conference to focus on actionable programs.</li> <li>• Article published in Huffington Post by then director of the Sackler Institute for Nutrition Science.</li> <li>• Proceedings to be published in 2017 in Annals by the New York Academy of Sciences</li> </ul>





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<p><i>Association, and Pulse Canada.</i></p>	
<p><b>“LovePulses Product Showcase”</b></p> <p>Promote pulses as an important component of good nutrition in both situations of malnutrition and over-nutrition. Drive innovation and increase interest in using pulses in new food products.</p>	<p>The competition had two streams:</p> <p>1- National physical competitions hosted by volunteer institutions</p> <p>2- A virtual competition for teams in countries not hosting a national competition</p> <ul style="list-style-type: none"> <li>• Virtual Competition: 3 winners from UK, Uganda and Zimbabwe selected by jury panel with 6 judges chaired by Dr Mahmoud Solh.</li> <li>• 7 national competitions completed in Australia, Ethiopia, Canada, India, Japan, Morocco, USA</li> <li>• Showcase at IFT in Chicago with 4 winning teams from national competitions (USA, Canada, India, Australia) and 2 winners from the virtual competition.</li> <li>• Teams made presentations to an audience of 200 people as part of the main hall of the trade show, which attracts 20,000+ people</li> <li>• Social media campaign with all winning teams authoring blog posts about their innovations and featured on <a href="http://iyp2016.org">iyp2016.org</a> and in the Huffington Post</li> </ul>
<p><b>Pulse Conclave, Jaipur, 17-20 February 2016</b></p> <p>Signature event</p> <p><i>Organized by IPGA</i></p>	<ul style="list-style-type: none"> <li>• The conference highlighted the importance of the pulse market in India through a policy dialogue on the role of pulses in furthering food and nutrition security, with a specific attention paid to the impact of changing consumer preferences in developing and emerging economies.</li> <li>• Attracted 1,000+ participants from India and 24 countries, including Australia, USA, Canada, Russia, Spain, Pakistan, Myanmar</li> <li>• MoU signed between Myanmar Overseas Trade Association and IPGA to work jointly to promoting trade</li> <li>• Agreement signed between IPGA and the International Trade Center (ITC) to promote small pulse businesses in developing countries.</li> <li>• Agreement signed between IPGA and ICRISAT to improve pulse productivity.</li> </ul>
<p><b>Promoting</b></p>	<ul style="list-style-type: none"> <li>• World Food Prize: 5 candidates from the pulse sector sent nominations. GPC</li> </ul>





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<p><b>pulses through the World Food Prize</b></p>	<p>sponsored Dr Mahmoud Solh of ICARDA and Chair of the FSNI Committee. No pulse candidate selected in 2016 but hope remains for future years.</p> <ul style="list-style-type: none"> <li>• Borlaug Dialogue, Des Moines, October 2016 : Dr Solh spoke in 2 sessions on “Research Under Fire in Syria” and “Food Security in Crisis”</li> </ul>
<p><b>Establishment of a Global Pulse Nutrition Society</b></p> <p>Engage researchers working on pulse nutrition and health as members of a Global Pulse Nutrition Research Society.</p>	<p>Objective: To increase awareness among the international community of pulse nutrition and health research scientists of work being conducted internationally and pulse industry research priorities and assist with integrating this group with the pulse research community focused on breeding, genetics</p> <ul style="list-style-type: none"> <li>• Pulse Research Database developed to highlight global research projects currently underway related to nutrition and health.</li> <li>• Database available to pulse research funders and scientists  <a href="http://pulsecanada.clickonce.ca/site_customs/research/">http://pulsecanada.clickonce.ca/site_customs/research/</a></li> </ul>
<p><b>International Conference on the role of Pulses for Health, Nutrition and Sustainable Agriculture in Drylands, 18-20 April 2016, Marrakech, Morocco</b></p> <p><i>Held under the auspices of the Ministry of Agriculture</i></p>	<ul style="list-style-type: none"> <li>• Conference provided a platform to discuss the various contributions of pulses to food and nutritional security and ecosystem health. Challenges ahead to driving greater production and benefits for all will be addressed with a focus on Central and West Asia, and North Africa.</li> <li>• Conference featured:       <ul style="list-style-type: none"> <li>○ Six technical sessions with keynote addresses by distinguished scientists</li> <li>○ A poster exhibition around major themes</li> <li>○ A knowledge-sharing event on country experiences for mutual learning</li> <li>○ A field visit to research experiments on pulse crops at the Marchouch Research Station and farmers’ fields</li> </ul> </li> <li>• Attracted 340 delegates from 36 different countries participated</li> <li>• Roadmap developed for increasing productivity and profitability of pulses through diversification and intensification of cereal/livestock-based cropping systems.</li> <li>• Morocco declaration on Pulses as Solutions to Food and Nutrition</li> </ul>





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<p><i>and Fisheries of Morocco. Organized by International Centre for Agricultural Research in the Dry Areas (ICARDA), Institut National de la Recherche Agronomique (INRA)-Morocco, OCP Foundation, International Fund for Agricultural Development (IFAD), The Food and Agriculture Organization of the United Nations (FAO), and CGIAR Research Program on Grain Legumes</i></p>	<p>Security, Agricultural Sustainability and Climate Change Adaptation</p> <ul style="list-style-type: none"> <li>• Morocco Declaration recommends to increase global pulses production by 20% from the current level by 2030 through closing the yield gaps, expansion in new niches that include intensification of rice fallows with pulses, and short season windows in existing intensive cropping systems; it also reaffirms the need for partnerships amongst countries in scientific and technical arenas.</li> <li>• Declaration signed by Ministry of Agriculture and Fisheries of the Kingdom of Morocco, the International Center for Agricultural Research in the Dry Areas (ICARDA), Institut National de la Recherche Agronomique-Morocco, OCP-Foundation, the Institute of Agronomy and Veterinary Science, The International Fund for Agricultural Development (IFAD), the Food and Agriculture Organization (FAO) of the United Nations and the CGIAR Research Program on Grain Legumes.</li> <li>• Available: <a href="http://www.icarda.org/sites/default/files/MoroccoPulsesDeclaration-ICP2016.pdf">http://www.icarda.org/sites/default/files/MoroccoPulsesDeclaration-ICP2016.pdf</a></li> </ul>
<p><b>Annals publication</b>  Publication of a Special issue of Annals of the New York Academy of Science.</p>	<ul style="list-style-type: none"> <li>• Annals drew on the sessions held during the Sackler event. Includes a meta-analysis of current data regarding pulse consumption to reduce undernutrition and malnutrition.</li> <li>• 11 manuscripts submitted under peer reviewed</li> <li>• Pulse Canada and Sackler Institute authored introductory note based on the results of the side-event</li> <li>• Expected publication in early 2017</li> </ul>





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<p><i>Lead by Pulse Canada</i></p>	
<p><b>INFOODS: Pulse Composition Database</b></p> <p>Develop a global database on food compositional data for pulses grown around the world.</p> <p><i>Developed by the FAO, Ruth Chardonnière is the lead staff member.</i></p>	<ul style="list-style-type: none"> <li>• Database includes values for macronutrients (total carbohydrate, fiber, fat, protein including amino acid profile), and vitamins, minerals and select bioactive fractions for 23 different species of pea, lentil, chickpea, beans, and lupins.</li> <li>• Collection of analytical data completed and in the process of being published in the <a href="#">FAO/INFOODS Database</a> (BioFoodComp3.0 and AnFooD1.1).</li> <li>• Compilation of analytical data, the development of a user interface/database still in progress and will include food entries to different countries as well as data for some processed pulses. These data and material will be used in the context of the IYP to promote pulses, to develop new recipes or value existing recipes for their nutrient contents. The data can also be used to advise member states on breeding programmes on pulses for higher nutrient contents of these crops as well as on agriculture projects, programmes and policies.</li> </ul>
<p><b>Nutritional Expert Panel (NEW PROJECT ADDED JULY 2016)</b></p> <p><i>Lead by Pulse Canada</i></p>	<p>Coordinate an expert panel of nutritionists that work in population health, dietary guideline committees, and more from around the world to create a global consumption amount based on nutrient intake</p> <ul style="list-style-type: none"> <li>• The panel reviewed how pulses are positioned in food guidelines around the world and examined the recommendations of nutrient intake in different countries, as there was no consistent recommendation for pulse consumption globally.</li> <li>• The panel experts came from India, Africa, Australia, Canada, and the United States.</li> </ul> <p>Panel completed its recommendation and established that 100 g (1/2 cup) of pulses will provide the correct amount to make a nutritional impact on the consumer's diet.</p> <ul style="list-style-type: none"> <li>• Final manuscript almost completed and will then face rebuttal of peer review.</li> <li>• Expected to be finalized in early 2017</li> </ul>
<p><b>Participation in other events (at side events or</b></p>	<p>Symposium on pulses during AACC (October, 2015 and 2016)</p> <ul style="list-style-type: none"> <li>• Kicked off the Year, and increased awareness.</li> </ul> <p>Session on pulses during Experimental Biology (April, 2016)</p> <ul style="list-style-type: none"> <li>• Presentation made by Donna Winham on research on tepary beans (American Society of Nutrition)</li> </ul>





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<b>sessions in conjunction with larger events)</b>	<ul style="list-style-type: none"> <li>• Session was well attended</li> </ul> <p>Booth exhibits and/or session on pulses during Academy of Nutrition and Dietetics (October, 2016)</p> <ul style="list-style-type: none"> <li>• Large presence</li> <li>• Food and Nutrition Conference and Expo</li> </ul>
	<p>Booth Exhibits and technical session on pulses during IFT (July, 2016)</p> <ul style="list-style-type: none"> <li>• LovePulses Product Showcase at IFT brought 4 winning teams from national competitions (USA, Canada, India, Australia) and 2 winners of the Virtual global competition (Charlotte Reynolds of the UK and Harriet Lowalem of Uganda) on July 19 in Chicago.</li> <li>• Showcase lasted 90 minutes in the main hall with attendance from 100 individuals (IFT attracts 22,000 people) who saw presentations of all new products. It was moderated by Georgie Aley.</li> <li>• Social media promotional campaign took place virtually to disseminate further the great work of teams around the world. All winners contributed blog posts on iyp2016.org.</li> <li>• Teams not able to travel to Chicago still presented at the showcase with product flyers and video displays.</li> </ul>
	<p>Reception during IFT (July, 2016)</p> <ul style="list-style-type: none"> <li>• A reception hosted by Pulse Canada and the US Dry Pea and Lentil Council with all the winning teams of the LovePulses Product Showcase prior to the IFT Showcase in Chicago.</li> </ul>
	<p>Technical session on “<i>Food Convergent Innovation: Reinventing Value Addition for the Health of People, Planet, and Economy</i>” at the International Union of Food Science and Technology <b>IUFoST</b>, 16<sup>th</sup> World Congress event (Dublin, August, 2016) (led by Pulse Canada)</p> <ul style="list-style-type: none"> <li>• Session coordinated by McGill University,</li> <li>• Chaired by John McDermott (IFPRI) and Hosahalli Ramaswamy (McGill).</li> <li>• Featured 5 speakers from McGill, Pulse Canada, ETH, Guelph and the University of Washington.</li> </ul>
	<p>Pulse Nutrition and Health Session at the International Legume Society Conference 2 in Portugal (led by INRA)</p> <ul style="list-style-type: none"> <li>• Key lecture delivered by Hakan Bahceci on Forging a New Future for Pulses: Addressing research challenges with the momentum of the UN International Year of Pulses</li> <li>• French INRA session on Legumes and environment</li> </ul>
	<p>1ères Rencontres Francophones sur les Légumineuses, May 31- June 1, Dijon.  <i>Organized by INRA, CIRAD, Terres Univia and Terres Inovia</i></p> <ul style="list-style-type: none"> <li>• 2-day scientific symposium attended by over 280 people.</li> </ul>





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<ul style="list-style-type: none"> <li>• INRA hosted a <a href="#">press conference</a> at its headquarters in Paris prior to the conference that attracted many journalists who covered the importance of pulses, IYP and the upcoming subjects of the conference.</li> </ul>
<p>Session on <b>“Innovation with Pulses as Egg Replacers”</b> at the Research Chefs Association Conference in March, 2016, Denver, Colorado (USADPLA and PulseCanada)</p> <ul style="list-style-type: none"> <li>• Session highlighted how pulse flours and pulse extracts can replace eggs in bakery and meat product formulations.</li> <li>• Corporate Chef Subra from Griffith Foods, and Pastry Chef Geoff of Prairie Ink Bakery on behalf of Best Cooking Pulses made cooking demonstrations.</li> <li>• Food scientists explained the science behind why pulses make functional ingredients.</li> <li>• 120 people attended the session</li> <li>• Session demonstrated the versatility of pulse ingredients and provided the proof-of-concept chefs need to think outside the box.</li> </ul>
<p>Demo/booth/session on pulses at the International Association of Culinary Professionals event in March, 2016 (led by USADPLC and Saskatchewan Pulse Growers)</p> <ul style="list-style-type: none"> <li>• 4 companies from the US and Canada promoted pulses at their booths.</li> <li>• Food and ingredient companies organized 3 pulse sessions featuring pulse nutrition, health and functionality.</li> <li>• Pulse Canada unveiled the 2017 Journal of Cereal Chemistry edition on pulses - a technical journal that will be launched Jan 2017.</li> </ul>
<p>IYP &amp; IYS          Lead: FAO          Select an “event” from IYS and provide a paper or panel discussion on soil fertility and health using pulses for nitrogen fixation-promoting IYP</p> <ul style="list-style-type: none"> <li>• FAO hosted on December 5 the very first International Day of Soils, a continuation of the year-long celebrations of the 2015 International Year of Soils. The day emphasized the close links between IYS and IYP: the symbiosis between soil and pulses for contributing to food security and nutrition, and the achievement of the Sustainable Development Goals (SDGs).</li> <li>• Launch of book <i>“Soils and pulses: symbiosis for life. A contribution to the 2030 Agenda”</i>, which offers key scientific facts and technical recommendations regarding the symbiosis between soils and pulses.</li> <li>• Dinner co-hosted by GPC and Argentina at a restaurant in Rome with the presence of 42 guests.</li> </ul>
<p>FAO facilitated a special event on World Soil Day in Rome and also in New York highlighting the role of pulses on soil quality</p>







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## Creating Awareness

### Purpose & Objectives

This committee aimed to increase awareness and global demand for pulses. During the Year, reach exceed 5 billion, beyond the most audacious goals of the committee, which worked tirelessly to reach people using social media, websites and global media outreach.

The committee also provided the infrastructure for national committees and signature events to help with their outreach.

### Workplan:

Projects	Deliverables
<b>Message Maps</b>	<ul style="list-style-type: none"> <li>• First version of message map circulated in November 2015.</li> <li>• Second version with three new sustainability sections circulated in November 2016.</li> <li>• Creating a message map for the International Year. This involves researching the likely set of questions to be asked (FAQ development)</li> </ul>
<b>IYP16 Brochure</b>	<ul style="list-style-type: none"> <li>• FAO developed a brochure that was also shared with all stakeholders and posted on pulses.org</li> </ul>
<b>Websites Pulses.org</b>	<ul style="list-style-type: none"> <li>• 3.8 million website sessions were generated across pulses.org, iyp2016.org and the North American website pulsepledge.com</li> <li>• The creation of a consumer-facing website to act as a home information on pulses, on ongoing IYP2016.org developed for IYP activities for the year.</li> </ul>
<b>Recipe Resources</b>	<ul style="list-style-type: none"> <li>• 400+ recipes collected and posted available on pulses.org</li> <li>• 29 World's Greatest Pulse Dishes</li> <li>• 29 Best of India dishes</li> <li>• 27 Gourmet Guru profiles and recipes</li> <li>• 40 recipe films available on YouTube</li> <li>• The development of a Recipe-based website with two major features – A large scale recipe database which includes any recipe submitted by a national committee, and a National Signature recipe feature, which will highlight one recipe from each National Committee. It proved to be one of the most</li> </ul>





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	popular desserts during the year.
<b>School Programme</b>	<ul style="list-style-type: none"> <li>• Lesson plans made available for download on pulses.org</li> <li>• The development of lesson plans for schools to use in teaching students about the benefits of pulses. These materials were made available to IYP National Committees. Committees in Australia, Canada, Singapore and the USA made use of the material</li> </ul>
<b>Hotels/Airlines</b>	<ul style="list-style-type: none"> <li>• Outreach to airlines and hotels to utilize pulses in their operations as much as possible done by Secretariat in November 2015</li> </ul>
<b>Photo resource bank</b>	<ul style="list-style-type: none"> <li>• The creation of a photo bank of pulse-related photography for use in promotional materials for any IYP Activities</li> <li>• Photo bank available on both IYP2016.org and pulses.org</li> <li>• 19,299 photo gallery page views</li> </ul>
<b>Global Media Outreach</b>	<ul style="list-style-type: none"> <li>• +2500 articles published to date referring to IYP and pulses.</li> <li>• Equivalent to 7 articles every day of the Year</li> </ul>
<b>IYP Event Kit</b>	<ul style="list-style-type: none"> <li>• Creation of a standard package of materials available globally for people interested in hosting IYP Events</li> <li>• Event kit made available on iyp2016.org and used at most signature events.</li> </ul>
<b>Promotional Videos</b>	<ul style="list-style-type: none"> <li>• Videos Featured on pulses.org</li> <li>• 4.1 million video views</li> <li>• 65 different videos, including 40 recipe demo films and promotional videos on YouTube</li> <li>• Diversity of subjects</li> <li>• “My pulses” series featured farmers</li> </ul>
<b>IYP Windup</b>	<ul style="list-style-type: none"> <li>• IYP Regional and Global Dialogues, featuring the GPC Call to Action and 14 scientists involved in the 10-Year Research Strategy.</li> <li>• Event during on December 5 World Soil Day in Rome with a celebration by FAO and a dinner hosted by GPC and the government of Argentina</li> <li>• Official closing ceremony in Burkina Faso February 10-11 2017.</li> </ul>





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<b>Celebrity Spokespeople</b>	<ul style="list-style-type: none"> <li>• Acquiring the endorsement/participation of celebrity chefs or spokespeople</li> <li>• Celebrity chefs: blogs, social media activity, recipe donation</li> <li>• Volunteer submissions by chefs, outreach from global campaign.</li> <li>• Creation of new Gourmet Guru section of pulses.org featuring 27 guest chefs.</li> </ul>
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### Market Access & Stability

Access to international markets is critical for continued profitability and growth of the global pulse industry. Creating greater efficiencies by ensuring open access to markets and predictability of trade is of benefit to all members of the value chain, from farmers to the end consumer. The *International Year of Pulses* activities can draw attention to and work to resolve market access issues that impact the profitability of the sector as well as consumer prices. The objective of market access related initiatives is to make the case to governments and international bodies that price stability and food security can be enhanced via initiatives that address:

- improvements in trade rules that create an enabling regulatory environment
- value chain challenges in moving product to market (sorting, transport, storage, processing, marketing)
- information gaps (price risk and price discovery)
- other value chain challenges

### Workplan:

Project (priority ranked)	Project components	Deliverables
<b>Creating an enabling regulatory environment</b>		<ul style="list-style-type: none"> <li>• Strategy paper developed.</li> </ul>
		<ul style="list-style-type: none"> <li>• White Paper disseminated to 77 countries</li> </ul>
	By addressing the problems in trade of Pulses, improved efficiency of Codex was	<ul style="list-style-type: none"> <li>• Coalition built in 2016 counting 18 members and 9 observers.</li> <li>• 3 coalition calls held.</li> <li>• Migration to IAFN Umbrella in 2017 to ensure legacy.</li> <li>• 19 countries approached (Australia, Canada, Cameroon, China, Egypt, Ethiopia, Hungary, India, Indonesia, Iran, Japan, Kenya, Kuwait, Mexico, New</li> </ul>





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identified as a top priority.		<p>Zealand, Nigeria, Switzerland, Uganda, United States.)</p> <ul style="list-style-type: none"> <li>• 27 official letters sent</li> <li>• 54 companies and organizations were contacted</li> <li>• Bilateral meetings were organised with 7 countries</li> </ul>
	<p><b>Capacity building for GPC members</b>          Training workshop during Global Pulse Convention in Turkey for GPC members on Codex Reform and MRLs</p>	<ul style="list-style-type: none"> <li>• Training on market access issues with 12 participants</li> </ul>
	<p><b>Advocacy activities on MRLs &amp; Codex members</b>          Participate in key meetings of Codex commission, by both members of coalition and by an ‘ambassador’ of the group</p>	<ul style="list-style-type: none"> <li>• CCP Side event 2014 and in October 2016</li> <li>• Side event at CCPR (Codex Committee on Pesticide Residues – meets annually) in 2015</li> <li>• Codex Alimentarius commission July 2015</li> <li>• CCPR Meeting April 2016</li> <li>• Codex Alimentarius commission July 2015</li> <li>• FAO Committee on Commodity Problems Side Event October 2016</li> <li>• WTO SPS Workshop October 2016</li> <li>• CCLAC Side Event November 2016</li> <li>• 19 countries approached (Australia, Canada, Cameroon, China, Egypt, Ethiopia, Hungary, India, Indonesia, Iran, Japan, Kenya, Kuwait, Mexico, New Zealand, Nigeria, Switzerland, Uganda, United States.)</li> <li>• 27 official letters sent</li> <li>• 54 companies and organizations were contacted</li> <li>• Bilateral meetings were organised with 7 countries</li> </ul>
	<p><b>Advocacy activities on MRLs &amp; Codex (continued)</b>          National Outreach to Codex, FAO and WHO member states (in capital and to WHO, FAO and Codex missions)</p>	<ul style="list-style-type: none"> <li>• Bilateral meetings at FAO May 2015</li> <li>• Bilateral meetings at FAO Oct 2015</li> <li>• Country outreach at CCPR April 2016</li> <li>• Bilateral meetings at FAO CCP and CFS October 2016</li> <li>• 19 countries met during bilateral meetings</li> </ul>





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Addressing barriers to farmers access to market in developing countries		IFPRI-led research program on providing Market Information for Pulses: Can Information Affect Crop Choice?
		<ul style="list-style-type: none"> <li>• IFPRI, CIAT and other CGIAR researchers participated actively in all IYP Thematic area committees, in signature events and hosted their own events on pulses.</li> <li>• Pulses for Sustainable Agriculture and Human Health Event (May 31, 2016 – June 1, 2016)               <ul style="list-style-type: none"> <li>○ Organized by International Food Policy Research Institute (IFPRI), National Academy of Agricultural Sciences (NAAS), TCi of Cornell University (TCi-CU) and Agriculture Today</li> </ul> </li> </ul> <p>CIAT-led research projects:</p> <ul style="list-style-type: none"> <li>○ “Making Value Chains Work for Food and Nutrition Security of Vulnerable Populations in East Africa,” aims to reach around five million small holder farmers in Uganda and Kenya by the end of the project, benefiting 50,000 rural and urban consumers.</li> </ul>
		<ul style="list-style-type: none"> <li>• Value Chain’s for Nutrition Project: <a href="http://dapa.ciat.cgiar.org/announcing-a-new-value-chains-for-nutrition-project-for-2016-2018/">http://dapa.ciat.cgiar.org/announcing-a-new-value-chains-for-nutrition-project-for-2016-2018/</a></li> <li>• Kenya’s first solar-powered “bubble” drier, which improves bean quality and commercial value, retaining nutritious qualities before they are turned into a porridge flour, were installed <a href="http://blog.ciat.cgiar.org/12382/">http://blog.ciat.cgiar.org/12382/</a></li> <li>• CIAT and HarvestPlus Project: 18-week study involving iron-deficient women in Rwanda</li> </ul>
	Using native American beans conserved in the CIAT genebank that are naturally high in iron, scientists crossbred them to adapt them to tropical environments	<ul style="list-style-type: none"> <li>• Study showed that eating “biofortified” beans bred to contain more iron has a significant impact on iron levels in the blood. Beans are shown to be an excellent vehicle for delivering long-term, low-cost solutions to a major health problem. This has profound implications for global nutrition, and public health policy.</li> </ul>





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	<p>and to ensure acceptable grain colour, among other traits. These beans were then shipped to Rwanda</p>	<ul style="list-style-type: none"> <li>Hosted by the University of Rwanda’s Faculty of Medicine, scientists then gave two bean-based meals each day to 239 female students aged 18-27, many of who were iron deficient. None of the participants knew if they were serving or eating normal beans or the biofortified variety. The study found that the estimated body iron increase was 0.50mg per kilogram higher in women that consumed the biofortified beans compared to the control group.</li> </ul> <p><a href="http://blog.ciat.cgiar.org/eating-high-iron-beans-reduces-iron-deficiency-in-just-a-few-months/">http://blog.ciat.cgiar.org/eating-high-iron-beans-reduces-iron-deficiency-in-just-a-few-months/</a></p> <p>CIAT, the Pan-Africa Bean Research Alliance, the National Agricultural Research Organization in Uganda, the Kenya Agriculture and Livestock Research Organization (KALRO) and the Kenyan company Lasting Solution Ltd Project: CultiAf project ‘Precooked beans for food, nutrition, and income in Kenya and Uganda:</p>
		<ul style="list-style-type: none"> <li>Partnership guarantees farmers an income from continuous production – and Lasting Solutions a supply of the quick-cooking beans.</li> </ul> <p><a href="http://blog.ciat.cgiar.org/the-business-of-quick-cook-beans/">http://blog.ciat.cgiar.org/the-business-of-quick-cook-beans/</a></p>

### Productivity and Sustainability

Pulse crops are high-protein, nutrient-dense foods that improve the quality of the food supply and also improve productivity of farming systems in the developing and developed nations alike. Pulses, as legume crops, have the ability to fix nitrogen from the air, significantly reducing commercial nitrogen requirements. They improve soil health, require less water to grow and reduce greenhouse gas emissions from farming systems. Yet, despite this potential, global pulse crop production has remained relatively stagnant in yield per acre, acres planted and total volume produced. The Productivity and Sustainability Theme of the International Year of the Pulses will highlight the advantages pulses provide to agriculture systems and to sustainable food production.





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Projects (priority ranked)	Project components	Deliverables
<b>10-year Research Strategy for Pulse Crops</b>	Prepared a strategy to accelerate coordinated research around a shared vision and to set a 10-year global agenda, resulting in increased investment in strategic pulse research.	<ul style="list-style-type: none"> <li>▪ Capstone committee achievement completed with funding from IDRC, leadership by 7 report authors, and technical input by 75 multi-disciplinary pulse experts.</li> <li>▪ 33 interviews conducted.</li> <li>▪ Write-shop (17 scientists) held at International Legume Society conference (Portugal).</li> <li>▪ Comprehensive external report review, revision, and presentation at FAO-hosted IYP Global Dialogue (Rome).</li> <li>▪ Final report published.</li> <li>▪ 7 blog posts drafted that received more than 500 hits</li> <li>▪ The report was already downloaded more than 3000 times.</li> </ul>
<b>Pan-African Grain Legume Research Conference (and World Cowpea Conference)</b>	Contribute to planning and provide sponsorship support (USAID support through Legume Innovation Lab will be pursuing additional funding from both public and private sources).	<ul style="list-style-type: none"> <li>▪ Conference on "Sustainable Grain Legume Systems for Food, Income, and Nutritional Security in a Rapidly Changing Climate" convened 400+ multi-disciplinary pulse scientists (Feb 28-March 4 2016, Zambia).</li> <li>▪ <i>Partner institutions: CGIAR Grain Legume Program, IITA, ICRISAT, CIAT, Pan Africa Bean Research Alliance (PABRA), Sub-regional Programs (CCARDESA, ASARECA, CORAF), and NARS (Zambia Agriculture Research Institute).</i></li> </ul>
<b>Global Research and Funding Survey on Pulse Productivity and Sustainability</b> <i>(originally</i>	Produce a targeted overview of pulse research gaps and current research investments, based on structured interviews with multi-disciplinary scientists, which will be a cornerstone	<ul style="list-style-type: none"> <li>▪ Information gathered from 37 experts from research (22) and funding (15) organizations.</li> <li>▪ 70-page report completed, published on <a href="http://www.iyp2016.org">www.iyp2016.org</a>.</li> </ul>





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<p><i>Scientific Publications Plan)</i></p>	<p>element of the 10-Year Research Strategy white paper.</p>	<ul style="list-style-type: none"> <li>▪ Estimated annual research investment of USD 175M.</li> <li>▪ Global press release, blog post distributed. <span style="background-color: yellow;">[add social media stats]</span></li> </ul>
<p><b>Leveraging Events</b></p>	<p>Dissemination of IYP-related messages through participation and presentations at events around the world.</p>	<ul style="list-style-type: none"> <li>▪ IYP Global Dialogues (Nov 22-23 2016, Rome): presentation by Robin Buruchara.</li> <li>▪ Second International Legume Society conference (Oct 12-15 2016, Portugal): presentations by Noel Ellis, Tom Warkentin, Gerard Duc.</li> <li>▪ 10th Canadian Pulse Research Workshop (Oct 25-28 2016, Winnipeg): presentation by Tom Warkentin.</li> <li>▪ Ethiopian Institute on Agricultural Research legume conference (Sept 20-23 2016, Ethiopia).</li> <li>▪ Agriculture BioScience International Conference (Sept 19 2016, North Dakota, USA): presentation by Irv Widders.</li> <li>▪ CIAT 2-day meeting on common bean (Aug 25-26 2016, Colombia, 70+ attendees).</li> <li>▪ Spanish language pulse conference (Aug 11 2016, Chile).</li> <li>▪ First Francophone Legume Meeting (May 31-June 1 2016, Dijon, 270 attendees from 14 countries): Gerard Duc co-organized.</li> <li>▪ International Conference on Pulses for Health, Nutrition and Sustainable Agriculture in Drylands (Apr 18-20 2016, Morocco): presentation by Noel Ellis.</li> <li>▪ Central American Cooperative Program for Crops and Animal Improvements, PCCMCA (Apr 5-8 2016 Costa Rica, 300 attendees): Day-long session on pulses.</li> </ul>







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		<ul style="list-style-type: none"> <li>▪ USAID AgExchange on Grain Legumes (March 22-23 2016, 148 online participants from 35 countries): Noel Ellis co-moderated.</li> <li>▪ Graines 2015 (Oct 27-29, France): presentation by Gerard Duc.</li> <li>▪ PCCMCA conference (May 4-7 2015, Guatemala): keynote by Irv Widders.</li> <li>▪ 2nd Adam Kondorosi Symposium (Dec 2014, France). 2nd Adam Kondorosi Symposium on the Frontiers in Legume Biology (Dec 11-12 2014, France, ~150 attendees): IYP slides developed by Gerard Duc.</li> </ul>
<b>Sustainability Messaging</b>	Collect body of knowledge about sustainability characteristics of pulses. Methodically review scientific literature on contribution of pulses crops to agricultural sustainability. Develop key messages for IYP stakeholder audiences. Develop dissemination strategy including key messages and supporting information.	<ul style="list-style-type: none"> <li>▪ “Contribution of Pulse Crops to Agricultural Sustainability: Literature Review and Messaging” project completed in Q4 2015 including reports on methodology, annotated bibliography, synthesis of evidence, and key messages.</li> <li>▪ Materials used to inform: (i) successful fundraising proposal; (ii) Research Strategy report; (iii) revised Message Map (5 new questions on SDGs, climate change, sustainably maximizing production); (iv) pulse sustainability blog series (13 posts).</li> </ul>
<b>Pulse genome sequencing infographic</b> <i>(originally Pea and Lentil Genome Sequence Comms Strategy)</i>	Develop communication tools (e.g. infographic) to highlight major benefits of pulse genome sequencing. Primary audience: school-age children.	<ul style="list-style-type: none"> <li>▪ 7-page infographic on “How will mapping pulse genomes help feed a global need?” produced, reviewed for technical accuracy, and published on <a href="http://www.iyp2016.org">www.iyp2016.org</a>. [<i>add social media stats</i>]</li> </ul>
<b>Food industry-focused white paper and sessions on</b>	Produce a white paper that proposes a rigorous framework, applied in two case study agricultural systems, for	<ul style="list-style-type: none"> <li>▪ 64-page report on “Pulse Crops and Sustainability: A Model Framework to Evaluate Multiple Benefits”</li> </ul>





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<p><b>pulse crops and sustainability</b></p>	<p>characterizing the role of pulses in addressing pressing sustainability issues.</p>	<p>produced and published on <a href="http://www.iyp2016.org">www.iyp2016.org</a>.</p> <ul style="list-style-type: none"> <li>▪ Featured 2 comprehensive regional case studies (Saskatchewan and Africa).</li> <li>▪ Global press release, blog post distributed.</li> <li>▪ <a href="#">[add social media stats]</a>.</li> </ul>
	<p>Work with food industry sustainability organizations to convene a pulse-focused session during a 2016 annual meeting (e.g. Sustainable Food Lab Summit; Sustainable Agriculture Initiative conference).</p>	<ul style="list-style-type: none"> <li>▪ Extended discussions held with Sustainable Food Lab to convene a pulse-focused session at Summit in Tanzania (Nov 2016).</li> <li>▪ Pulse Canada undertaking life cycle analysis for pulse-containing products (focus: greenhouse gas emissions from Great Plains cropping systems).</li> </ul>
<p><b>Symposium at American Society of Agronomy</b></p>	<p>Develop speakers, program, and agenda for Symposium at ASA-CSSA-SSSA Meetings, Minneapolis, USA (Nov 2015).</p>	<ul style="list-style-type: none"> <li>▪ Symposium on "Improving Pulse Crops for Nutrition and Health" delivered, with presentations by 2 committee members (Nov 18, 2015 in Minneapolis).</li> <li>▪ <i>CSA News</i> story on "Improving the nutritional value of pulses" featured committee member Tom Warkentin (Oct 2016).</li> </ul>

