



Participants from 42 countries gathered to focus on pulses in Dubrovnik, Croatia.

RESEARCH

APG research staff participate in key international legume discussions

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Alberta Pulse Growers Commission's research team participated in the Fifth International Legume Society Conference (ILS5), which was held from June 8-12, 2026 in Dubrovnik, Croatia. The conference was organized by the International Legume Society (ILS) in cooperation with the University of Zagreb Faculty of Agriculture. APG also sponsored the conference. Participants from 42 nations gathered on one pulse-focused stage in Dubrovnik.

Building on the success of previous conferences held in Novi Sad (2013), Tróia (2016), Poznań (2019), and Granada (2023), ILS5 brought together researchers, academics, industry representatives, and professionals from around the world to discuss recent developments and innovations in legume science and production.

The conference provided an excellent platform for knowledge exchange and professional networking. Participants were able to engage with leading international experts and learn about the latest research and industry advancements in the legume sector. The scientific program was comprehensive and covered a wide range of topics, including:

- Legume breeding and genomics;
- High-throughput phenotyping;
- Sustainable cropping systems;
- Biotic and abiotic stress resistance;
- Health and nutritional benefits of legumes;
- Pulse crop value chains; and
- Emerging technologies and innovations in legume research.

The presentations and discussions offered valuable insights into current challenges and opportunities in legume production, contributing to a deeper understanding of the role of legumes in sustainable agriculture, food security and human nutrition.

APG Research and Extension Manager Dr. Jenn Walker chaired a session titled "Crop Breeding: Challenges, Tools, Strategies And Achievements." This session showcased the latest advances in legume genetics, genomics and breeding technologies, with a strong focus on improving yield, herbicide tolerance, resource-use efficiency, adaptation, and crop performance.

Presentations highlighted the use of modern tools such as genome-wide association studies, QTL mapping, knowledge graphs, transformation and genome-editing technol-

ogies, and simulation-based breeding strategies to accelerate genetic gains in pulse crops.

Overall, the session emphasized how integrating genetic diversity, advanced analytics, and innovative breeding approaches can support the development of more productive, resilient, and sustainable legume varieties.

Dr. Jagroop Gill Kahlon, APG's Research Program Manager and Field Scale Research Lead, chaired a session titled "Biodiversity and Beneficial Plant-Microbe Interactions." As the title suggests, this session focused on plant-microbe interactions, symbiotic nitrogen fixation, and the role of microbial communities in legume adaptation and productivity.

Presentations explored how legumes interact with rhizobia, mycorrhizae, and soil microbiomes, highlighting advances in high-throughput screening, genomics, metabolomics, and gene-editing approaches to improve biological nitrogen fixation and crop resilience. Overall, the session emphasized leveraging both plant and microbial diversity to enhance sustainable agricultural systems and reduce reliance on synthetic nitrogen inputs.

In addition to the scientific sessions, the conference featured several social and networking events that fostered collaboration among participants. One of the highlights was the Legume Football Cup, which encouraged informal interaction and team spirit among attendees. The gala dinner provided an opportunity to connect with colleagues and

establish new professional relationships in a relaxed setting.

Canada was well represented at the conference. Posters and presentations were given by Agriculture and Agri-Food Canada staff from Lacombe, Lethbridge and Guelph, in addition to scientists from Lakeland College and University of Saskatchewan. Opportunities like these are rare when the legume/pulse community comes together from all around the world to discuss the common issues in production and marketing of various pulse crops. It also serves as an important venue to exchange ideas and the latest cutting-edge technologies in pulse crop research.

The conference was hosted in the historic city of Dubrovnik, one of the Mediterranean's most renowned destinations and a UNESCO World Heritage Site. The city's impressive medieval architecture, fortified old town, and scenic coastal setting enhanced the overall conference experience and provided a unique cultural backdrop for the event. Pulses are an important piece of Mediterranean and Adriatic diet, and it was reflected well in the cuisines served at the conference.

Overall, participation in the Fifth International Legume Society Conference was highly rewarding. The event successfully facilitated the exchange of scientific knowledge, showcased cutting-edge research and industry developments, and strengthened international collaborations within the global legume community. The experience provided valuable insights and connection that will support future research, innovation, and application in the field of legumes. 🌱



APG Research and Extension Manager Dr. Jenn Walker (left) chaired a session titled "Crop Breeding: Challenges, Tools, Strategies And Achievements."



Dr. Jagroop Gill Kahlon, APG's Research Program Manager and Field Scale Research Lead, chaired a session titled "Biodiversity and Beneficial Plant-Microbe Interactions."