

Bridging pulse tradition and modern innovation to accelerate food solutions to sustainable development: A convergent innovation research and action strategy

By Laurette Dubé, Vilas Shirhatti, and Sushil K Chaturvedi

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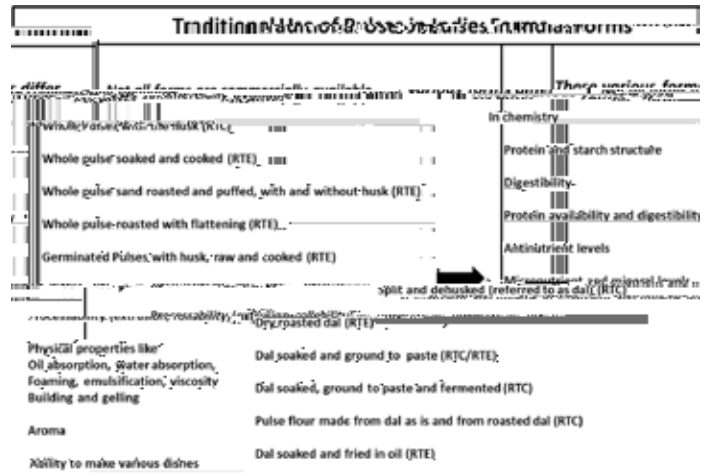
over the course of the IYP, we build upon this three-pronged legacy and offer a complementary convergent innovation research and action strategy to scale up and accelerate what pulses can contribute as food solutions to sustainable development.

Ambitious sustainable development goals (SDGs) have recently been set by the United Nations in a “One World” agenda that combines the three themes of health of people, environment, and economy as integrative target in a strategic vision that bridge traditions with new products, processes and practices in a diversity of sectors in novel ways. With the IYP having positioned pulse as the future of food, clearly high potential for scale in integrating traditional pulse forms and processes into modern food innovation. Some traditional products, like roasted chick peas in India, are now inspiring modern food “renovation” in product categories like snacks that have gained over time a “junk food” label in consumer mind because of their generally low nutrient density (see nearby figure). However, such synergy between pulse tradition and modern food innovation is still limited in its scale as traditional recipes and processes remains practiced largely at home level, or at best at small scale in local unorganised markets.

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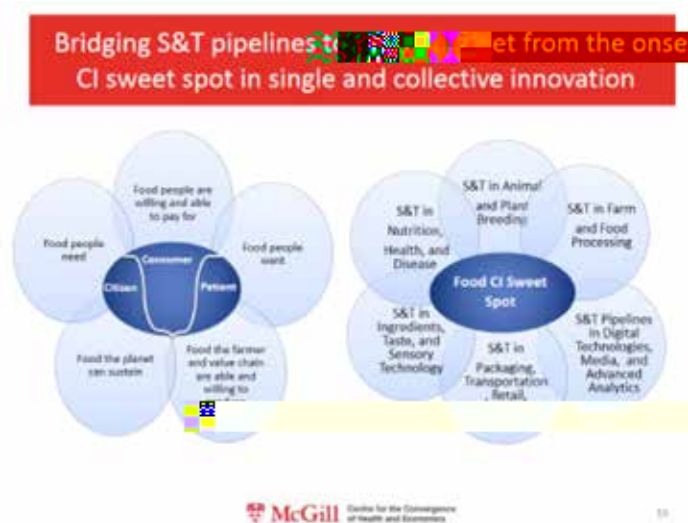
nd other nutritional value flavour and sensory



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Research and action are needed that bridge science and technology pipelines to advance traditional knowledge and accelerate the convergence of their single and collective investment on the production and consumption of whole and value added pulses products that address the health of people and planet while meeting consumers want at an appropriate price point for targeted markets and providing appealing incentives for farms and food businesses (what we have called the convergent innovation sweet spot).

Such food of the future can enrich food categories with modern appeals, like pasta, breakfast cereals, snack, breads and others. Research is needed that traces the exact change in the physic-



(adapted from Boye, Global PIP workshop, 2016)

The approach combines pull and push efforts to foster better balance and more reciprocity between traditions and modern technologies and practices within and across crop, farm, food, wellness, health, medicine, and healthcare sectors. Transformation

at scale though such strategy is facilitated by digital technologies and anchored into the most cutting edge science and tools from the behavioral, commercial and social sciences.



Dr. Dubé is a Full Professor and holds the James McGill Chair of consumer and lifestyle psychology and marketing at the Desautels Faculty of Management of McGill University, Canada. Her research interest bears on the study of affects and behavioural economic processes underlying consumption and lifestyle behaviour and how such knowledge can inspire more effective health and marketing communications in both real-life and technology-supported media. She is the Founding Chair and Scientific Director of the McGill Centre for the Convergence of Health and Economics. The MCCHE was created to foster partnerships among scientists and decision-makers from all sectors of society to encourage a more ambitious notion of what can be done for more effective health management and novel pathways for social and business innovation.



Dr. Vilas Ramrao Shirhatti is Chief Advisor, Nutritional Solutions Business, at Tata Chemicals Limited, Mumbai, where he develops strategy for building health food ingredients business, identify future opportunities for this business, scale up and commercialisation of in-house technologies developed at the company's innovation centre, ensure regulatory compliance and develop marketing strategies and new platforms for the new ingredients. He worked in various capacities at Marico, Godrej Consumer Products, GE Technology Centre, Colgate Palmolive, Hindustan Unilever, National Institute of Health, USA and Dai-Ichi Karkaria where he started his career as research scientist in 1977.



Dr. Sushil K Chaturvedi, Former Head, Division of Crop Improvement, ICAR-Institute of Pulses Research, Kanpur (India) has vast experience on development of large number of pulses varieties including chickpea. He has worked extensively for management of quality seed production chain. He initiated research on development of extra large seeded kabuli chickpea varieties, varieties for high input management conditions, high temperature & drought tolerance, post emergence herbicide tolerance, and development of varieties for amenability to machine harvesting, etc. As Visiting Scientist, he has served for six months at University of Western Australia. He has participated in different scientific programs held in Canada, Spain, Kenya and Syria. He is PhD in mutation breeding in soybean from GBPUA&T, Pantnagar. He is currently serving as Principal Scientist (Chickpea Breeding) & Nodal Officer (Seed-Hubs) and coordinating quality seed production activities at 150 Seed-Hubs spreaded over 24 states of India.



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