Dr. Gurbir Singh Bhullar

I was brought up on a small/medium-sized farm in the north Indian state of Punjab, which is a predominantly agricultural region. That offered me the chance to do almost every farm operation with my own hands and anchored my affinity to agriculture. After finishing basic schooling, I wanted to be an engineer, since I didn't even know that there is a science and a formal educational path to study agricultural science. I came to learn about it while I was exploring the possibility of applying for an engineering degree, and immediately became interested. I was thinking that in case I didn't find a decent job, I could always go back to my family farm and apply what I'd learnt there. The bachelor's degree in Agricultural Science offered me a chance to learn a wide range of subjects: engineering, biology, economics, biochemistry, climatology, soil science, even a bit of history. That's the exciting part about this study stream – as a student you are exposed to a wide range of knowledge.

Following my bachelor's degree, because of my applied agriculture background, I chose to focus on agronomy as part of my master's at Panjab Agricultural University. My master's thesis project was on weed management. Fortunately, the next day after finishing my master's I had two job offers. I had the choice between a large multinational company working in the pesticide market and a much smaller company in the organic sector. I chose the second. For two years I travelled all over India speaking with farmers, giving lectures, and being exposed to a variety of production systems.

Subsequently, I enrolled in the Environmental Sciences department at the ETH Zurich for a PhD focussing on plant ecology. The most interesting part of this PhD programme for me was my change in perspective. Coming from an agricultural science background, I regarded crops as "friends" and weeds as "enemies". When I studied plant ecology, I learnt that plants are plants. This distinction between friends and enemies is not so clear cut, at least from the ecosystem perspective. For my PhD, I compared greenhouse gas emissions from different plants in natural wetlands in Switzerland. During this study, I had the idea to try out some of the so-called weed plants as part of the cropping system. The study proved that some types of weeds, specifically the aquatic herbs that I used, can be co-cultivated with rice to minimize greenhouse gas emissions, along with the potential of some economic advantage. I received a SFIAR award in 2013 for this study. During this study I travelled to China and the Philippines to identify and learn more about these aquatic species, which have been part of local diets in that part of the world since ancient times.

In 2013, I received an offer from FiBL to lead their long-term farming systems comparison trial in India. Within a year I was promoted to lead the entire thematic area of tropical agriculture, which also included Kenya and Bolivia. For eight years I worked in agricultural research for development cooperation. I gained first-hand experience in participatory research and stakeholder engagement including public and private sectors. I had opportunities to also engage with policy institutions e.g. with the EU, FAO, SDC, GIZ and Indian policy and agricultural research institutions. During this time, I also collaborated with many universities in the Global South and in Europe, supervising master's and PhD student work, and taught at the ETH. This is quite prestigious work for which our team was also awarded the SFIAR team award in 2019.