

FROM THE GROUND UP THE SOCIAL IMPACTS OF PLANT SCIENCE ON SMALLHOLDER FARMS

AGRICULTURAL INPUTS



CROP PROTECTION

Improves yields and quality by managing pests while reducing need for physically demanding hand weeding. This in turn protects against disease and improves soil quality by reducing need for tilling.



PLANT BIOTECH

Increases yields and crop quality and some varieties can reduce applications of pesticides, while others offer increased climate and weather resilience. By targeting specific pests, insect and small animal biodiversity can flourish around fields and contribute to protecting against viruses and diseases.



AGRICULTURAL EQUIPMENT

Reduces physically demanding workloads for farmers, speeding the harvest process and reducing chance of spoilage. GPS powered precision planting and irrigation in combination with drones and other high-tech equipment maximises the potential of farmland.



SOCIAL OUTPUTS



MORE OPPORTUNITIES FOR MARKET ENTRY

Reducing the burden of weed management and access to improved and hardier seed varieties allows for farmers to produce higher yields and quality crops. This allows them to enter the agricultural value chain, linking them to markets and establishing trade relationships.



FAMILY WELLBEING

Reducing physical requirements related to harvest and weeding in agriculture has an outside positive impact on women who often form the bulk of this type of manual labour on smallholder farms. Studies show that women workers reinvest recovered time in their families and communities.



LAND USE

CP products enable conservation tillage, reduced erosion, preservation of vital topsoil and improved food security. Healthier topsoil improves yield and quality of crops and has positive environmental impacts that feed back into the community for generations.



COMMUNITY INVESTMENT

Higher incomes allow for smallholders to invest in agricultural equipment and seed varieties, post-harvest storage facilities and renewable energy generation that can benefit entire communities.



HEALTH AND NUTRITION

Higher yields mean more food available for local communities, reducing hunger. Crops with higher nutritional and vitamin content mean healthier communities, particularly for children, pregnant women and older people.



ACCESS TO EDUCATION

Reduced field work allows for children to attend school, as well as more money for school fees and books. This also allows time and funds for agricultural training.



QUALITY OF LIFE

Reduced workloads and higher incomes improve quality of life, raising families and communities out of poverty.



CLIMATE CHANGE RESILIENCE

Less vulnerability to unpredictable weather conditions improves food security – maintaining crop yields.