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Soybean Improvement in Australia

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The Australian soybean improvement program seeks to deliver improved varieties and agronomic methods over a roughly 3000 Km north-south range. We also seek to overcome or alleviate a wide range of challenges to deliver benefits to the Australian industry. Key among these challenges is the need for broad adaptation to both latitude and planting date so that single varieties can be grown over a large geographic footprint. Our industry is largely based on supply of soybean to higher value human consumption markets and therefore both higher culinary quality traits and freedom from genetic modification is required. We have developed a critical understanding of which culinary traits have a direct effect on processing performance in food and beverage manufacture and which environments allow best expression for quality. However, in places the Australian environment also generates challenges to soybean cropping. Key among these is the damage caused by pre-harvest weathering of grain and challenges to cropping caused by periods of extended heat and drought. In addition cropping systems are changing as growers seek to intensify their production and become more water use efficient. A change in the frequency of diseases such as *Phytophthora*, Soybean Rust and Powdery Mildew has followed. The breeding program is proactive in seeking out new culinary quality traits, sources of pre-harvest weathering tolerance, disease resistances and genetics able to be yield responsive to new agronomics.