Pillars of a world-class breeding program

Focus on developing products and adoption for impact

› Double the rate of genetic gain
› All breeding activities are targeted by clear targeted product profiles that define customers and their needs
› Target market segments are defined and linked to distinct germplasm pools and breeding schemes

Optimized breeding schemes

› Variety development, parent development, identification and validation of novel genetic diversity are distinct and separate activities
› Breeding cycles are shortened towards the biological limit
› A stage gate system is implemented to manage breeding activities

Data accuracy, cost & throughput

› Appropriate use of technology to increase genetic gain per dollar invested
› Selections made on high-quality trials
› Continuous and accurate data collection
› Current best practice data management and quality control
› Breeding costs known and readily retrieved

Crossing linked to breeding strategy

› Parental selections made and genetic diversity managed according to the breeding strategy
› Variety development strictly based on elite-by-elite crosses
› Genetic diversity is measured and actively managed

Maximized evaluation accuracy

› Genetic gains assessed annually
› Best practice implementation of trial designs
› Reliable generation of data representative of targeted population of environments to select parents earlier
› Latest phenotyping and envirotyping technologies exploited

Accurate selection

› Annual advancement meeting
› Selection index aligned with product profile
› Best practice trial analyses to estimate breeding values and genetic merit
› Visualization tools support decision-making
› Selection intensity and genetic diversity considered in parent selection

Impactful breeding pipeline

› A defined pipeline is established to deliver high-quality germplasm from first cross to adopted varieties
› Sufficient data is generated and available to enable customers and growers to make informed variety choices

Continuous improvement culture

› Full use of external trialing and germplasm
› Breeding teams are the experts
› Clear pathway and metrics to deploy new and successful breeding methods
› Annual review of performance metrics
› Respect and safety for all employees