

THE ECONOMIC IMPACT OF CROP DEVELOPMENT



The Crop Development Centre (CDC) at the University of Saskatchewan develops new crop varieties that bring value to the agriculture sector, through the development and application of scientific knowledge and technologies, in partnership with stakeholders across the agriculture value chain. It generates a return on investment to its major stakeholder groups – producers, industry and government.

The CDC is a world-class crop improvement centre that delivers crop genetics for the benefit of society. A combination of crop improvement expertise, facilities and land—all in one place.

A recent economic assessment of the CDC has revealed substantial economic returns from research, and significant local, regional and international impact through research outputs and market share of CDC varieties in western Canada.

ECONOMIC IMPACT



500+
CROP VARIETIES
RELEASED
SINCE 1971



\$6.4
BILLION
CONTRIBUTED TO THE WESTERN
CANADIAN ECONOMY



5,900
JOBS
SUPPORTED FROM
CDC'S IMPACT

APPLIED RESEARCH IMPACT



1,500+
SCIENTIFIC ARTICLES PUBLISHED
WORLD-CLASS RESEARCH
BREEDING INNOVATION AND TECHNOLOGIES



10
DIFFERENT CROP KINDS
GLOBAL SCIENCE BREAKTHROUGHS
CRACKING THE WHEAT GENETIC CODE

ALUMNI IMPACT

The connection of the CDC to the College of Agriculture and Bioresources supports strong undergraduate and graduate training programs in crop improvement. In addition to training undergraduate students, CDC faculty have trained over **380** graduate students, many of whom have worked or continue to work as leaders in the agriculture industry. Training the next generation of plant breeders is essential to meet the demands of a hungry and growing world.



41%
OF THE ACREAGE IN
WESTERN CANADA
GROWS CDC VARIETIES

LENTIL



99.8%
OF THE PLANTED AREA IN
CANADA ARE CDC VARIETIES

BARLEY



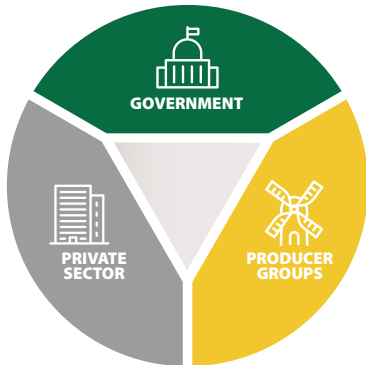
45%
THE TOTAL BARLEY ACREAGE
OCCUPIED BY CDC VARIETIES



\$21+
MILLION
IN RESEARCH FUNDING
EACH YEAR

BE WHAT THE WORLD NEEDS

INVESTMENT ANALYSIS



The CDC's research and crop development programs are supported by many stakeholders across the value chain, including Government, Producer Groups, and the Private Sector.

\$3.8
BILLION
INCREASE IN PRODUCER
PROFITABILITY
1991-2015

\$12
RETURN ON
INVESTMENT
FOR EACH \$1 INVESTED
IN PLANT BREEDING

\$44
RETURN TO
GROWERS
FOR EACH \$1 INVESTED IN
PEA, LENTIL CHICKPEA,
AND DRY BEAN BREEDING

BRINGING A NEW CROP VARIETY TO MARKET

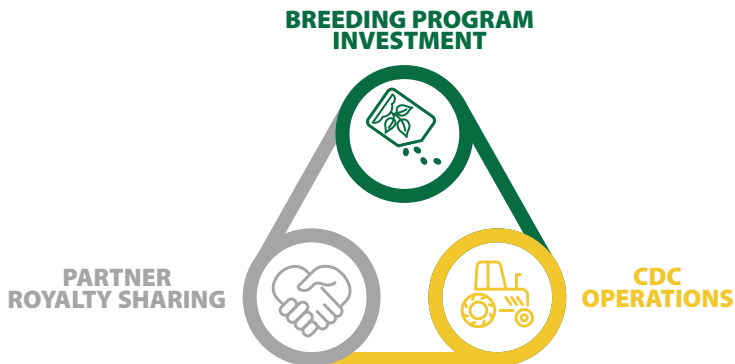
It can take 10-12 years to release a new variety to be grown on farmers' fields. The CDC crop development programs combine conventional and state-of-the-art technologies and processes to support crop development, including use of genomic, digital phenotyping and computational decision-support technologies.



COMMERCIALIZATION

The CDC partners with seed companies to commercialize new varieties. In return, the Centre receives royalties that are invested directly back into its research and breeding activities.

RE-INVESTMENT OF ROYALTIES



PLANT PATHOLOGY
SUSTAINABLE PRODUCTION
SYSTEMS



SK LEADS THE WORLD
IN EXPORTING OF PEA,
LENTIL, AND CHICKPEA
staple foods in fast-growing countries such as
India, China, Bangladesh, and northern Africa



\$100
MILLION

IN EXPORTS OF CANARY SEED
Developed the first hairless canary seed
which helped make SK the world's leading
producer and exporter of canary seed



50-60%
GLOBAL DURUM WHEAT EXPORTS
Canada is the world's largest single producer
and export of durum wheat



**GRAINS INNOVATION
LABORATORY**
A STATE-OF-THE-ART FACILITY
THAT SUPPORTS TESTING OF
END-USES, QUALITY AND
NUTRITIONAL CONTENT

BE WHAT THE WORLD NEEDS