

SE4ALL HIGH IMPACT OPPORTUNITY

BIOENERGY

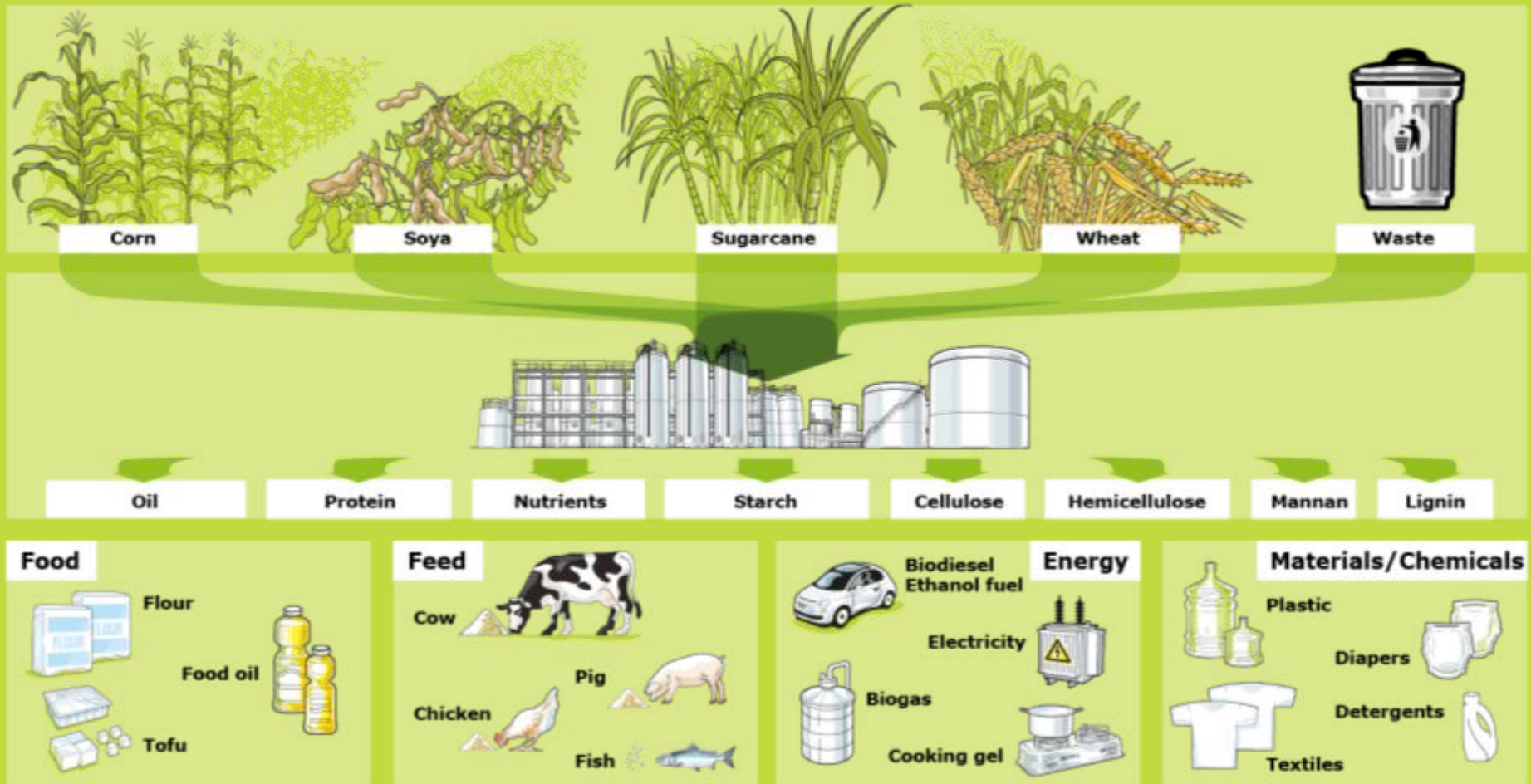
Pedro Luiz Fernandes

Regional President, Novozymes Latin America Ltda.



- 14% of sales re-invested in R&D
- >7000 patents granted or pending
- >1300 employees in R&D (>20%)

HOW A BIOREFINERY WORKS



CHILE'S ENERGY MATRIX

BIOETHANOL FROM WOOD CHIPS AND ALGAES

Government, Academia and Private Sector pilot initiatives :

2G - Cellulosic Consortiums

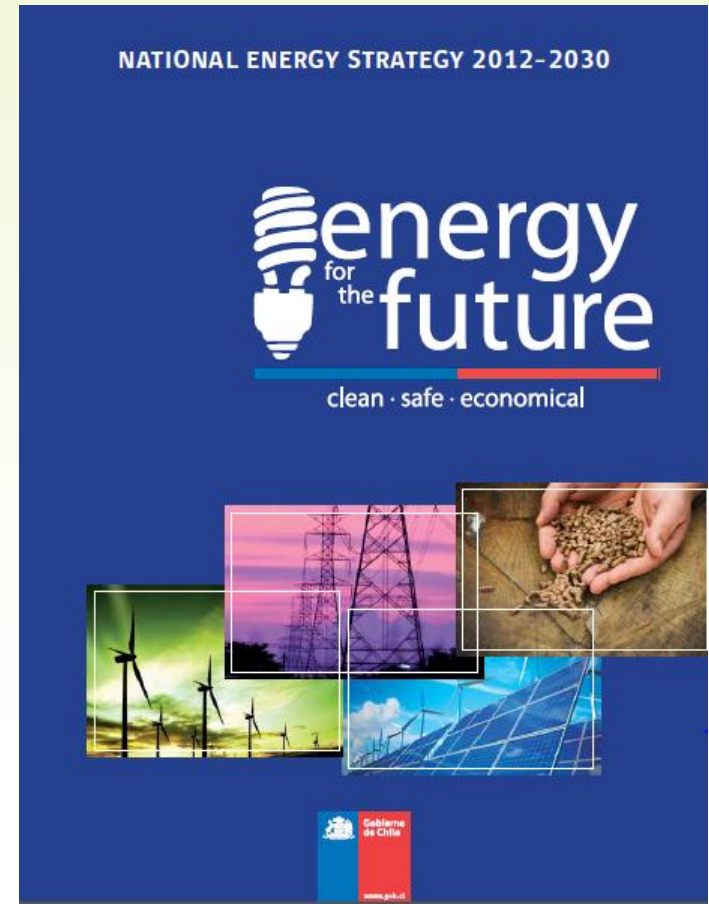
Forestry Industry

- BIOENERCEL

3G – Algae

- BAL BIOFUELS

COPEC, PETROBRAS, PETROALGAE



ACROSS THE WORLD CELLULOSIC "2G" ETHANOL IS FAVORED AS AN ALTERNATIVE TO FOSSIL FUEL





novozymes®
Rethink Tomorrow

NOVOZYMES CAN CONTRIBUTE TO 2G ETHANOL DEPLOYMENT IN CHILE



Feedstock



**Enzyme
cost**



**Capital
intensive**



**Offtake
decision**