

Testing climate innovations that tackle the twin challenges of climate change and gender inequality: a case of potato and sweetpotato agri-food systems

3 December 2023 - COP28 Side Event

Vivian Polar
v.polar@cgiar.org

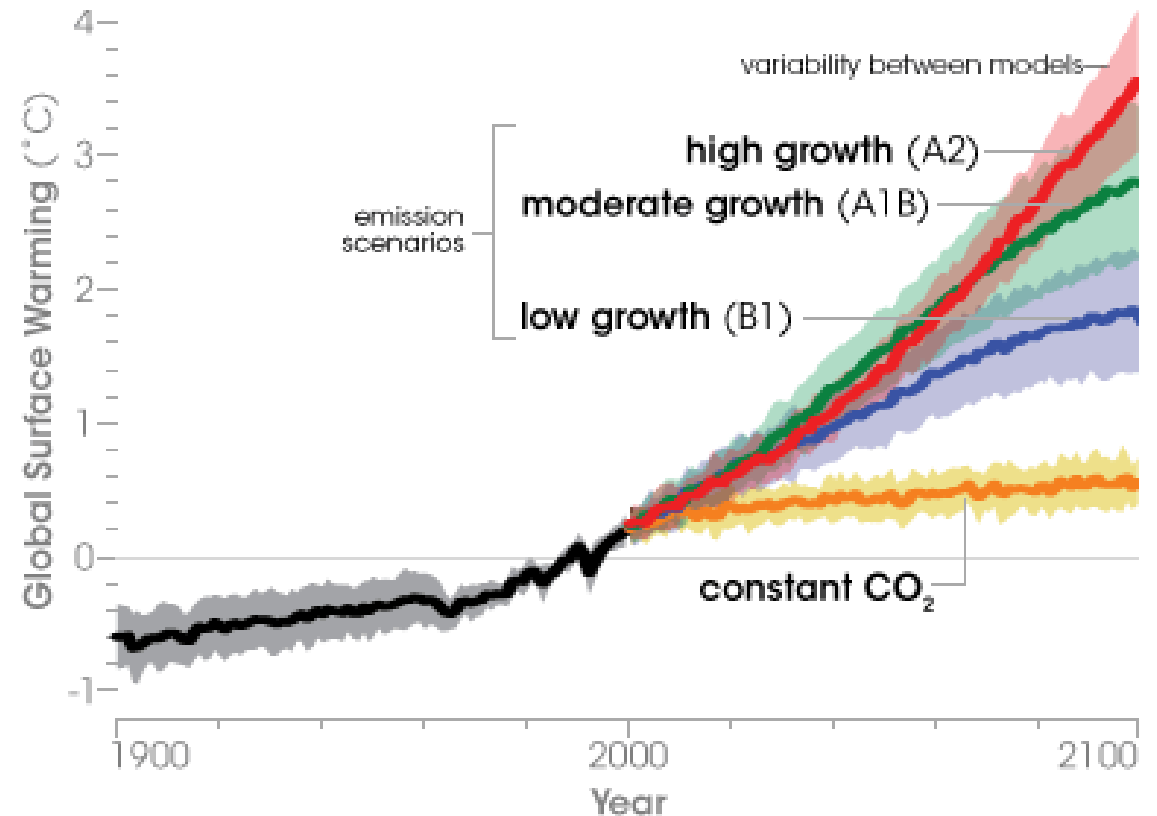


CIP
INTERNATIONAL
POTATO CENTER



The climate change challenges

- expected temperature rise of 1 to 6°C by 2070
- the **heat-wave amplitude** expected to increase by about 2 to 5 °C by the late twenty-first century, depending on the region and emissions scenario
- projected increase in **heat-wave frequency** by 1.7 -13 per decade in worst case scenario with rising GHG emissions



Impact on root and tuber production

- Higher temperatures affect tuber formation in potato, root storage, initiation and formation in sweetpotato
- Changes in pest (insects, nematodes) and disease (e.g., late blight in potato; SPVD in sweetpotato)
- Changes of planting time, spatial distribution and choice of cultivars
- Potato cultivation has moved upward in Central Peru by an average of 306 m since 1975.





Generating technical alternatives

Breeding for new traits for:

- Heat stress tolerance
- Drought tolerance
- Enable fast growth/early maturation
- Disease resistance

Screening existing diversity and crop wild relatives

Designing adjusting production practices

- Zero tillage
- Decision support tools

The challenges of gender inequality

Access and use...

land (stability, quality, quantity), access to inputs, financing, markets, agricultural training and education, suitable working conditions

The impact on climate change

Adaptation and mitigation alternatives run the risk of not being adopted!!

Technological alternatives run the risk of exacerbating poverty and inequality



Addressing gender in technology design and deployment

Using tools to analyze the **positive and potential negative implications** of technologies (varieties, traits, practices) on gender inequality

- Use of inputs of unequal access
- Implications on labour
- Use of products or by-products



Zero tillage potato
in rice based
systems



Sweet potato varieties
that address food
quality traits and by-
product usage

Addressing access to
seed and markets





Expanding the experience

- Technology is NOT GENDER-NEUTRAL
- A comprehensive and systematic attention to gender in technology design and deployment... across the value chain.
- An attention to policy frameworks to facilitate equitable benefits for women and men from climate smart technological solutions