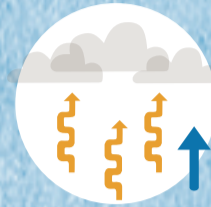




# PULSES AND CLIMATE CHANGE



Climate change puts **global food security at risk** and **heightens the dangers of undernutrition in poor regions.**



## Climate change: a threat to food security

Whether in the form of droughts, floods or hurricanes **climate change impacts every level of food production.**

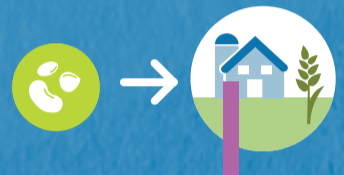


## FOOD PRODUCTION AND CLIMATE CHANGE

Food production, food security and climate change are intrinsically linked.



The changing climate will continue to put pressure on agricultural ecosystems, **particularly in regions and for populations that are particularly vulnerable.**



**Introducing pulses into crop production can be key to increasing resilience to climate change.**

## WHY PULSES?

Pulses are climate smart as they simultaneously adapt to climate change and contribute towards mitigating its effects.

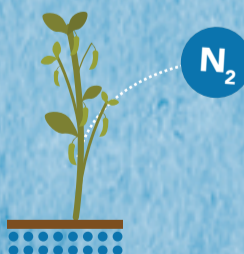


### Pulses can fix atmospheric nitrogen and provide it to the soil

This **reduces the need for synthetic nitrogen fertilizers** and contributes in reducing greenhouse gas emissions.



**85 million ha of pulses** have contributed globally to fixating **3 - 6 million tonnes** of nitrogen in soils.\*



### Better varieties

Pulses have a **broad genetic diversity.**



This diversity is a particularly important attribute because **more climate-resilient pulse varieties can be developed.**

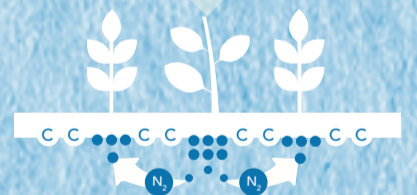
## INCREASING RESILIENCE

### Pulse-based cropping systems

Including pulses in crop rotations **exploits symbiotic microbes to fix nitrogen**, partly transferring it to subsequent crops, increasing their yields.



Intercropping has a **higher soil carbon sequestration** potential than monocrop systems.



### Pulses and agroforestry systems



Growing pulses such as pigeon peas simultaneously with other crops, **improve farmers' food security**, by helping them to diversify their nutrition and sources of income.



### Pulses in animal nutrition

When included in livestock feed, pulse by-products **contribute to improve feed conversion ratio** while, reducing greenhouse gas emissions at the same time.



**Decreased methane emissions from ruminants.**

