

# WORLD PULSES DAY FEBRUARY 10

## PULSES AND CLIMATE CHANGE

**Climate change: a threat to food security**

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

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

### 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 in regions with particularly vulnerable populations.



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 take nitrogen from the air and fix it to the soil.**

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



**Better varieties**

Pulses have a broad genetic diversity.

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



N<sub>2</sub>

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



### INCREASING RESILIENCE



**Pulse-based cropping system**

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



**Pulses and agroforestry systems**

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

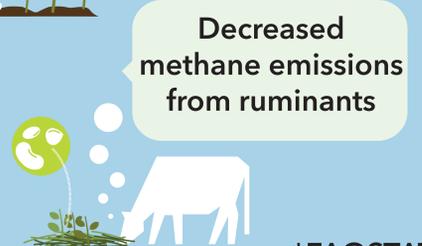


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**Pulses in animal nutrition**

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



Decreased methane emissions from ruminants

\*FAOSTAT