Drought tolerant maize to hugely benefit Africa: study

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* Drought tolerant maize boosts yields up to 25 percent

* Gains from full adoption: $907 million - $1.53 billion

* Africa suffers worsening drought linked to climate change

By Tim Cocks

ABIDJAN (Reuters) - Distributing new varieties of drought tolerant maize to African farmers could save more than $1.5 billion dollars, boost yields by up to a quarter and lift some of the world's poorest out of poverty, a study found.

The study published on Thursday by the Mexico-based International Maize and Wheat Improvement Center (CIMMYT), with input from other food research institutes, focused on 13 African countries in which it has been handing out drought tolerant maize to farmers over the past four years.

It described maize as "the most important cereal crop in Africa," a lifeline to 300 million vulnerable people.

The Drought Tolerant Maize for Africa plan aims to hasten the adoption of maize varieties that withstand dry weather.

"The vision of this project is to generate by 2016 drought tolerant maize that ... increases the average productivity of maize under smallholder farmer conditions by 20-30 percent on adopting farms (and) reaches 30-40 million people."

It also aims to add an annual average of $160 - $200 million worth of additional grain to Africa's harvest, it said.

Wilfred Mwangi, a Kenyan agricultural economist on the project, said the drought resistant maize shows comparative yields that beat other varieties even if there's no drought.

"We are saying that comparing with whatever farmers are growing now, these varieties will outperform what they are doing," he told Reuters in a telephone interview.

DRY CONTINENT

Africa's droughts are worsening.

Many scientists blame climate change they say is linked to human emissions of greenhouse gases like carbon dioxide, but climate talks since last year have failed to yield binding emissions targets, thrusting climate adaptation to the fore.

Repeated droughts have scorched millions of hectares of food crops in southern Africa, the Horn of Africa and the Sahel belt from Mauritania to Sudan in the past decade. Niger and Chad have been particularly badly affected after rains failed this year, with millions facing hunger.

The study found that in zones with the lowest drought risk, the tolerant maize varieties could translate into yields 22-25 percent higher than 2007, when the project started, by 2016.

But in very dry, disaster-prone areas where crops fail 40 percent of the time, the improvement was only 7-10 percent.

In case of the existing maize being fully replaced, the extra maize grown would gross $907 million on a conservative estimate. On an optimistic one, it could bring $1.53 billion.

Even if farmers only replace their plants with what the maize project hands out, it would bring $532 million to $876 million on the conservative and optimistic views, respectively.

The biggest percentage gainers in production would be Kenya, Zambia and Zimbabwe, it said.

(Editing by Jon Hemming)