Why dryland cereals?

Staple foods in many areas of Africa and Asia

Millet and Sorghum are one of the major sources of staple diets in the semi-arid tropical regions of South Asia and sub-Saharan Africa.

Drought tolerant and few other alternatives exist in the drylands

Dryland cereals are the most hardy, resilient and climate adaptable crops for harsh, hot and dry environments. Other cereal crops yield poorly or fail in such climates. As climates get hotter and drier, the dryland cereals will become increasingly suited to areas where other crops are grown.

Easier to produce

Can have large yield increases through improved farm conditions.

Grows quickly.

Can adapt to a wide range of soil conditions.

Requires lower external inputs.

Good response to sustainable application of fertilizers and water.

Highly nutritious: Important for fighting malnutrition in developing countries

High levels of iron in sorghum and millet can reduce anemia.

High levels of zinc in sorghum and millet can help reduce stunting.

100g of finger millet has nearly 1/3 of the daily calcium requirement.

100g of pearl millet has nearly 1/2 of the daily iron requirement.

Millet

High levels of zinc in sorghum and millet can help reduce stunting.

Finger millet is very high in calcium and iron making it important for lactating women and children.

Often revered by nutritionists as the key to finally solving Africa’s malnutrition problem.

Multiple uses

Offering many livelihood opportunities for farmers and agribusiness entrepreneurs.

Net returns from sorghum increased 3 fold by keeping sorghum stover and feeding it to the dairy animals. And increasing their production value from:

USD 484/ha

USD 1,241/ha

Emerging new products: nutrifoods, nutrametics, health foods and bakeries.

Food

Pearl millet for pops and crunchy snacks, and flat breads.

Sorghum for couscous, dumplings, instant porridge, and semi-leavened bread.

Biofuels

Fodder

Net returns from sorghum increased 3 fold by keeping sorghum stover and feeding it to the dairy animals and increasing their production value from:

USD 484/ha

USD 1,241/ha

Needs

Policy support is needed

Value addition in dryland cereals needs policy support.

Access to better farm practices, technologies and markets.

Policy support is needed to develop the industry and provide livelihoods to the farmers.

Improved varieties are needed

Currently rainfed sorghum can yield as low as 0.6 t/ha. Yet yields on farmland potential is more than 3 times this.

Only about 20-30% of seeds used in sub-Saharan Africa are improved varieties that yield and are climate resistant.

Optimism:

Pearl millet hybrid, bred in India, led to a to a doubling of productivity from 530kg/ha in 1988 to 1,044kg/ha within two decades.

Food

Biofuels

Fodder

Economies of scale and approach to 90% and higher yields can result in a 40%, 50% and 60% increase in world production over the world of the HYV project in the drylands of Maharashtra in India.

500 million people in more than 30 countries are reliant on sorghum as a staple diet.

>90 million people in Africa and Asia are reliant on millet as a staple diet.