You can live on legumes alone

GOOD LIVING

BY SOLOMON KARANJA

Grains and legumes often grow well together in the field and go well together on the plate, too.

A special type of bacteria, called rhizobium, develops in the roots of the botanical family, leguminosae. These bacteria can convert atmospheric nitrogen, an inert gas, into nitrogenous compounds such as ammonia and nitrates. For this reason, cultivating legumes need no nitrogenous fertilisers. They also supplement the soil for other crops without this ability.

On the plate, legumes and grains combine well. Legumes are deficient in methionine but rich in lysine, an amino acid that occurs in nature that is an essential nutrient in human and animal diet. Grains lack lysine but contain copious amounts of methionine, a sulphur-containing amino acid that occurs in proteins. Eating them combined provides all the amino acids necessary to synthesise proteins, with no risk of cholesterol as they contain little fat.

Eating legumes sometimes causes flatulence — excess gas in the stomach and intestines. Humans do not have enzymes capable of digesting the carbohydrates contained in the thin skin of legumes. The bacteria clostridium, found in the large intestines converts them to carbon dioxide, hydrogen and methane. To avoid these gases forming:

- Soak the legumes, changing water once or twice 12 hours before boiling.
- Remove the skins of legumes before cooking.
- Taking Beano tablets, which contain the enzyme alpha and galactosidase, which digests the carbohydrates before they reach the large intestines.

Advantages of legumes

- Legumes provide abundant protein and fibre while containing very little fat and no cholesterol. They are nutritious.
- If the same amount of money used to buy certain amounts of meat were to buy legumes, the amount purchased would be several times greater in terms of calories, vitamins and minerals.
- They are ecologically profitable since one hectare dedicated to legume production provides up to seven times more calories and protein than if it were used to raise livestock for milk or meat. Besides, they provide natural fertiliser to the soil.
- Legumes reduce cholesterol, making them medicinal plants. A study by participating medical students who ate 120 grams of cooked beans a day for three weeks had their cholesterol and triglyceride levels reduced by 10 per cent, according to the American journal of clinical nutrition.
- Legumes have a low glycaemia index: they raise the blood glucose levels very little. They also reduce the need for insulin in diabetics and constitute a bona fide diabetic preventive, according to studies done in Madrid in 1995 and reported in the International Journal of Food Science and Nutrition.
- They prevent constipation by promoting proper bowel function due to their high fibre content.
- Their low levels of sodium and high levels of potassium help to prevent arterial hypertension.
- Legumes lower the risk of gallstones since they promote the elimination of bile salts, which are the raw materials in the formation of gallstones in the bile ducts and gall bladder.
- Due to their high fibre content, they reduce the risk of colon cancer.

Disadvantages

They lack vitamin A, C and B12; they cannot be eaten raw and they contain purine that transforms into uric acid. They should be avoided by gout patients.

It is not for nothing that githeri and mukimo are the dishes of choice in many homesteads and institutions. It is nutritious. A combination of legumes and grains provide biologically high quality protein that contains all essential amino acids in proper proportion. This fact has led to an increase in their consumption.

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