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## kenyan sukuma wiki (kales) Recipe

### ***the preparation of sukuma wiki (kales) from farm to fork.***

**Sukuma wiki** (kales) are one of kenyan's most demanded green vegetables especially due to their nutritional values. I will provide tips on how to produce organic sukuma wiki (kales) recipe which belong to the brassicaceae family, sukuma wiki(kales) are leafy vegetables that generally favor cooler climates from farm to fork. Kale is very easy to grow in a varieties of climate but it tastes good and healthy when it is very well managed.

“The objectives such as protecting the biodiversity, fighting climate change, developing local economies and small-scale production and safeguarding local knowledge traditions and culture should not be interpreted separately. Instead each goal must be set and pursued as part of an overall strategy that takes all the other elements into account simultaneously. We need a holistic approach because food is living system that means we have to deal with it considering complexity as its main constitutional characteristics (Petrini.C 2007).”

### ***Ecological conditions of the sukuma wiki (kales) recipe.***

The field for the nursery bed should be where the vegetable in the same family as kale have not been grown for 2 years. In wet areas and sites with heavy soils, raised beds are recommended to prevent water logging.

The field is then prepared until fine tilth to allow the ease of roots penetration, water infiltration and drainage as well as the air circulation in the soil. Organic manure should be applied and worked well into the soil. Manure improve the soil structure, improve the soil organic matter and increase soil nutrients.

The drills are made across the beds at a spacing of 10-15 cm apart and 2cm deep. The seeds should be sown thinly and covered lightly with soil. Cover the nursery bed with a thin layer of dry grass (mulch), mulch helps to preserve moisture, suppress the weeds, maintain soil structure and the addition of organic matter in the soil.

Nursery should be 1-meter-wide so as to allow cultural activities to take place e.g. weeding, irrigation thinning, gapping, etc. crowded seedlings compete for the nutrients resulting into weak seedlings, crowding also create conducive environment for dumping off disease e.g fungal disease mildew attack.

The seedlings are transplanted when four to five true leaves are formed. This takes a period of about one month. Keep fields free of weeds to reduce competition for nutrients, light and space also to reduce pests and diseases infestation.

The time frame for harvesting sukuma wiki (kales) is a personal decision, loosely based on flavor preferences. For those that require a lighter side to kale's taste, younger leaves will suffice. Time frame for harvesting is a personal decision based on flavor preferences.

## **Marketing.**

Market is an area or arena where commercial activities takes place for the exchange of goods and service, under the rules and regulations of the markets policies. The value, cost and prices of items traded are as per forces of demand and supply in a market. The market maybe a physical entity, or may be virtual. It maybe local or international, perfect or imperfect. Sukuma wiki (kales) are nutritious, fresh and healthy vegetables that prefers the cold environment and if taken cared for very well can produce a surplus of leaves throughout the season.

## Externalities

The social aspects cannot be looked at separately from the economic aspects of



sustainability. If the price of food is too low, it can only mean that the farmer is not being paid a fair price, or that the production costs are higher than the final price and compensated through subsidies, or that along the production and distribution chain some type of unfairness has occurred.

Voluntary Exchange between two parties in the market should benefit to both. But the price paid for the goods and service often does not adequately reflect the cost and benefit of the society at large of producing or consuming it.

When this is the case, the economists use the term externality to refer to those cost or benefits that are not captured by the market price, these may be negative where a farmer uses (pesticides, synthetic chemical, herbicides generating further health cost) or externalities can be positive (where an urban farmer creates attractive green space) such externalities may be seen as evidence of what is termed market failure meaning that in this instance the market has failed to produce an optimal outcome from the point of view of society at large.

Food security exists when all people, at all times, have physical, (social) and economic access to sufficient, safe and nutritious food which meet their dietary needs and food preferences for an active and healthy life (FAO 1996).

### ***Cultural values and preparation of the sukuma wiki (kales) and its health benefits.***

Culturally speaking, in essence, what one eats defines who one is and is not in the society. Eating is a pleasure and it is a human right. Traditional cultures have created a vast heritage of recipes and ways of preparing and processing local or easily accessible food. This is true even in those areas in the world that are today most seriously affected by the problems of malnutrition.

Sukuma(kales) is very high in beta carotene, vitamin K, vitamin C, roughage and reasonably rich in iron, phosphorus, beta carotene, magnesium and calcium. The

leaves are widely utilized mainly alone or in mixture with other vegetables, meat and pulses to increase the nutritional values.

In Kenya or in most of the southern hemisphere culturally women were the one responsible for cooking and carrying out the household activities. And these had been from generation to generation because it had been believed that women were good in cooking while men were not. A food's flavor and aroma is the fruit of the competence of the producer and of the choice of raw and fresh materials and production methods, which should not alter its integrity.

The principle of "good" refers to a fresh, healthy and flavorsome seasonal diet that is part of a local culture. Individuals need to bring food culture to light in order to understand if something is good or not. Sukuma wiki (kale) is normally cooked with some spices (e.g. nutmeg, black pepper, horse-radish and mustard) these are mainly important in the cuisine due to their antioxidant activities, helps digestion and their chemoprevention activities.

Some other ingredients include tomatoes and onions to increase the flavor, sukuma wiki (kales) normally takes ten to fifteen minutes in the stove and then served with "ugali" a type of stiff porridge made by mixing corn flour with the boiling water which is mainly eaten in Kenya. Traditionally people eat by the use of hand without cutleries because there were no cutleries in the household of the poor.

Food has symbolic meanings based on association with other meaningful experiences. An example of food with the symbolic meanings which can be found in many of our society is the "bread". bread is a good example of the symbolism found in foods. When people sit together with friends at a meal they are said to break bread with one another.

This expression symbolizes a setting where friends come together in a warm, inviting and jovial manner to eat. Bread has been called the staff of life. The type of bread consumed by a person has been known to indicate social status. For instance, white bread has traditionally been eaten by the upper class (also known as the upper crust) while dark bread was consumed by the poor. Whole wheat bread is the bread of choice in today's society by persons concerned more with their health than their status.

In Kenya sukuma wiki (kales) had been used mainly by the poor people because it was easily available especially during the famine and could be eaten every week hence the name sukuma wiki (push the week) in Swahili language. But due the

improvised way of cooking by the addition of meat, other vegetables or pulse it has been accepted by the whole society and it is now the daily bread of the Kenyan meal (vegetable). Culture is defined as the beliefs, values, and attitudes practiced and accepted by members of a group or community. Culture is not inherited; it is learned. The food choices of different cultural groups are often connected to ethnic behaviors and religious beliefs. Kittler, P.G., Sucher, K.P., & Nelms (2012).

- food is a symbolic system, it is a symbol of the geography, the culture, the people, the economy and the terror.
- Food is more than what we eat; it should be good for our ecosystem, clean for the human use and the nutritional status and fair for the for the society.

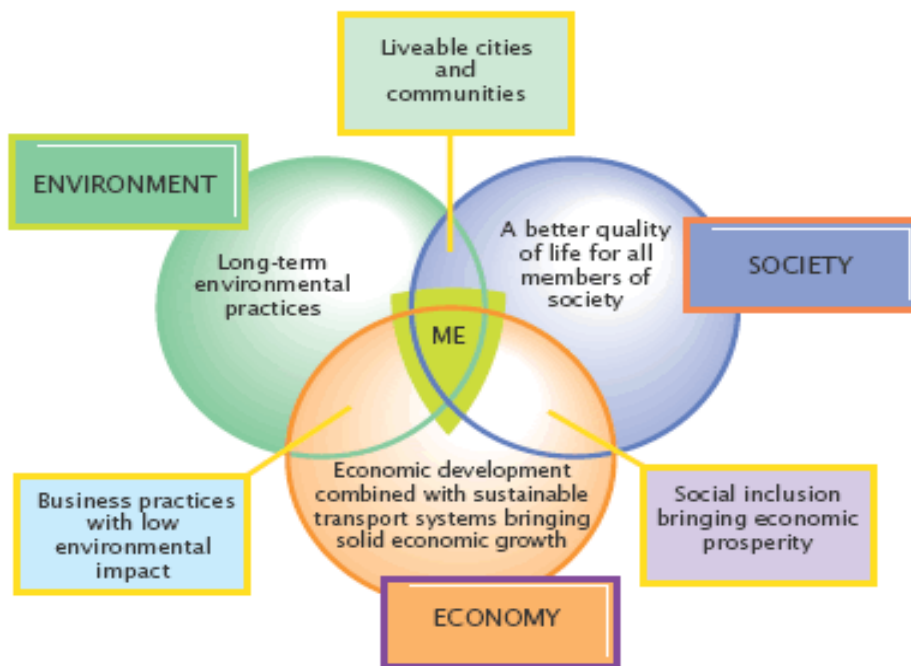


The volume of food being transported around the world has increased, although the distance travelled is almost never reflected in its final price. The global distribution system is dominated by just a few big operators who draw strength from their financial structure has filled the production chain with innumerable intermediaries, thus causing the increase in the distance (physical and cultural) between consumer and producer.

The issue of considering food distribution is therefore of crucial and import; it is an essential task if we are to attain a sustainable food system. Prices should be fair, both for producers and consumers. High prices without good reasons do not help either the producers or the consumer and do not contribute to the attainment of a sustainable system.

Prices should be transparent to meet the production labor and should be well explained: short supply chains can help in this respect by creating a healthy system whereby the producer is able to provide good and healthy products, as well as to help producers to ask for a fair price, to explain it and to find the right markets for their products and to create a co-producer chain system which is a vital objective for the future generation.

To attain food sustainability, we need to embrace the principles of food sustainability



Therefore, the food system we want is:

- a) Environmentally sustainable: it maintains the quality and renewability of natural resources over time, preserves biodiversity and guarantees the integrity of ecosystems.
- b) Economically sustainable: it generates long term income and workplaces, reaches eco-efficiency, and provides a competitive environment, where quality prevails over quantity and prices reflect the true value of food. the decisions that we make should be a long term decisions which will be able to accommodate the seventh generation to come.
- c) Socio-culturally sustainable: it guarantees fair access to fundamental rights (safety, health, inclusivity, good working conditions, etc.) and conditions of well being (education, social relations, equity, equal distribution of the natural resources, etc.) within a community, provides opportunities to create and develop internal and external relations involving the community, and recognizes the cultural value of a product. The packaging should also be eco-friendly, (renewable, reusable and recyclable, so that there is no much waste in the environment.

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