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NGURE

Transplanting maize for food security

Food security is a pressing concern for the Third World and Kenya ranks high in the list. The food security situation is rapidly deteriorating and the number of undernourished people keep rising in sub-Saharan Africa. Food production need to be increased to keep pace with population. Ironically, this has to be done in a way that counteracts the current rapid degradation of natural resources.

Diets in Kenya are based primarily on maize eg *ugali*, *githeri*, porridges etc. The cereal is sweet and can also

be modified to suit individual tastes. Crops that remain at the farms and industries are important livestock feed.

In sub-Saharan Africa and other parts of the world, most inputs important for maize production such as good seeds, fertilizer, pesticides, herbicides and water are becoming either more expensive or less available.

Some countries have responded to the famine and undernourishment by investing money in research. Examples of their achievements are well

documented. They include breeding for; drought tolerance, high yields, shorter growing period or early maturing, disease resistant among others. High standard in management are also required to boost yields.

In Vietnam, China and Mexico transplanting maize has emerged as a management practice that not only gives good results but one that is quickly penetrating other maize growing regions of the world. A lot of people in Kenya are familiar with transplanted cabbages, tomatoes, spinach, tree and fruit seedlings among others. This practice can

be extended to other crops like maize if there are proven benefits in other areas.

Transplanting maize would require the farmer to germinate seeds in a nursery some few days before the expected date of rainfall onset. In Mexico, 15 days from the date the seedling emerges (emergence) is considered as the normal age for transplanting. Due to delayed onset, seedlings are not always transplanted on this day. They are occasionally delayed for up to or more additional days in the nursery. The report from Mexico further indicates

there is no difference in yield between those transplanted 15 and 25 days after emergence.

The nursery for maize is prepared using a wooden frame that is 1 metre wide. The length of the nursery is determined by the number of seedlings desired. The bottom is lined with polythene paper. The polythene ensures there is little root damage while uprooting. It also prevents water and nutrient loss through deep percolation and leaching respectively. Polythene paper bags have also been used. At transplanting the paper bag is removed without disturbing the

soil holding the roots. The seedlings are then planted in a hole together with the soil.

Where the seedlings have been used to establish a crop, the benefits are many. In all cases, the success of transplanting is explained by the increased probability of transplanted maize completing flowering before the onset of drought. It is a well known fact that the flowering and grain filling stages are essential for large yields and good grain quality. There must be enough water available at flowering for fertilisation to take place.

***The writer is a member of the Kenya Rainwater Association.**