

He said during the congress,

development and policy issues for the and cassava resistant to CBSD.

trending now> GET TO KNOW HOW YOUR CROP 'THINKS'

A crop has no way of 'knowing' or 'sensing' your good intentions. Instead, it responds to the prevailing conditions as a means of self-preservation.

If you intervene too late to correct a problem, the plant would already have made other provisions to help it survive, but with a reduced yield.

Plants in the wild are in fierce competition with one another and face numerous hazards: bad weather, infertile soil, hungry pests and more. It all comes down to survival of the fittest, and the ability of a species to survive and reproduce is stamped into its genetic make-up.

Many 'survival genes' from wild, ancestral forms are present in modern domesticated crop plants. Understand this and you will be able to manage a crop in a way that will maximise production.

The first step is to remember that once the seed is in the ground, the plant immediately 'plans' how it will respond to prevailing conditions.

If something is lacking, the plant switches to

'survival mode'; the plant will thus survive, but with restricted growth.

Producing a large frame will require more inputs such as water and fertiliser. These might not be forthcoming and the plant could die without having produced seed to ensure the next generation.

A smaller frame is more likely to ensure survival, at least until it can produce those all-important seeds.

You can apply this knowledge in practice by ensuring that the crop has all it needs to thrive from the start. For example, if you wait too long before applying nitrogen to cabbage, the crop will adapt to the prevailing 'lack' by producing a smaller frame. It is, of course, unaware that you are going to rectify the situation next Wednesday!

At the same time, because conditions vary from day to day, plants have evolved so that they do not switch to survival mode too hastily.

Being aware of this can act in your favour; when you see a plant showing symptoms of deficiency, whether water, nutrients or anything else, you have

only a little time before the plant responds in a way that affects your expected yield.

During the recent rainy period, many farmers found that nitrogen was leaching out of the soil.

I came across many crops showing severe nitrogen deficiency. However, farmers with a good understanding of how plants 'think' had applied nitrogen long before signs of nitrogen deficiency became visible.

These farmers were aware of what would happen and applied nitrogen as soon as possible. Some even applied it several times over the rainy period.

Reducing risks

To sum up, once a crop shows you that something is preventing optimal growth, it is highly likely there has already been a loss of potential yield. Understanding a crop and the conditions that influence its behaviour and growth can reduce some of the risks.

[Farmers' weekly]