## African Christian asks: Is genetic engineering contrary to the Bible?

Some people portray genetic engineering as being ungodly, something not to venture into, claiming they are trying to subdue nature to human's advantage. Apostle Paul in his letter to the Romans likened Christians or gentiles to the wild olive branch that had been grafted contrary to nature onto the cultivated type to the family of God. This implies grafting or tissue culture is an old practice which has progressed from tissues, to cells and now at intra-cell level, a phenomenon known as genetic engineering, modern biotechnology or DNA recombinant technology.

Does this portrayal hold up under scrutiny?

A cell at some point has the potential to develop into a full organism, what is referred to as tissue culture. It should not be strange to Christians that in the biblical account of creation, God made a clone from a tissue of a human being he had already created. He sent man into deep sleep before performing his complex surgical operation. Human cloning, a form of genetic engineering, is very similar to the first creation as evidenced in Adam's awesome wonder when he declared "flesh of my flesh and bone of my bone". Eve was a clone. These days it's possible to come up with clones be it in crops or animals and that does not hinder reproduction through seed.

Gregor Mendel, the Austrian monk, who is regarded as the father of modern genetics, in his flower gardens observed similar plants with flowers of different petal colors. When he crossed them and replanted the seeds he came up with variations. He came to a conclusion that there were factors in the plants that were responsible for the variations. Subsequently, what Mendel referred to as a factor turned out to be a double helix nucleic acid called DNA that is responsible for storing hereditary information.

The strength of science is in understanding what is already in existence. If one is religious, it means what God has already made possible. The understanding that chromosomes can split and recombine in what is termed recombinant DNA has enabled scientist to introduce new genes of specific characteristics in the genome of crops. Genes are codes that when rearranged like in the letters of the alphabet produce different "words" with different meanings. Like letter C, A, and T in CAT could be ACT or TACT if T is doubled.

The subject of genetic engineering is fertile for debate, but to oppose it without understanding the science behind it is a disservice to African farmers who are losing valuable crops and livelihoods to pests and diseases that cannot be addressed using traditional means. To do this while claiming one is acting in concert with God is particularly troubling.

It should also be noted that the definition of species as organisms that are able to mate and reproduce fertile offspring is limited and only convenient as it excludes other organisms that reproduce without mating—crops like bananas, cassava and sweet potatoes do not require pollination to reproduce themselves and in most cases their seeds are not readily viable.

From the Christian perspective, we can only work with a living cell and once it dies that's the end of it. In

human beings, in cells, man possesses the soul (intellect and emotions) and spirit. When man was created from the soil, it was the breath of God that gave life; the same breath, Apostle Paul said, raised Jesus to life. When that breath returns to the owner, man becomes organic matter, a component of soil.

Considering everything, there is no reason to believe genetic engineering is contrary to Christian belief.

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