

"Bio-Fertilizer" Synopsis

獎別:**Second Award**

科別:**Applied Science**

國別:**Namibia**

學校:**St Paul's College**

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NAMIBIA HAS POOR SOILS AND BECAUSE OF THEIR INABILITY TO HOLD AND RETAIN NUTRIENTS IT IS DIFFICULT TO PRODUCE GOOD YIELDS EVEN WHEN IRRIGATION AND FERTILISATION IS ATTEMPTED.

NAMIBIA BECAUSE ITS SMALL POPULATION CANNOT SUSTAIN A FERTILIZER INDUSTRY BASED ON THE LOCAL MARKET AND IMPORTED FERTIZERS ARE VERY EXPENSIVE. TO TRY AND SOLVE THE PROBLEM WE HAVE DEVELOPED BIOLOGICALLY DERIVED NUTRIENTS WHICH HAVE BEEN LOADED ONTO NATURAL ZEOLITES FOUND IN NAMIBIA.

THE FERTILIZERS ARE PRODUCED FROM THE DIGESTION OF CATTLE FAECES AND THE RELEASE OF THE NUTRIENTS INTO AN AQUEOUS PHASE. ANOTHER SOURCE OF NUTRIENTS IS DERIVED FROM WOOD ASH.

THESE NUTRIENTS ARE ABSORBED ONTO THE ZEOLITES WHICH FORM THE CARRIER FOR THE PLANT NUTRIENTS.

THESE ZEOLITES IN ADDITION TO THE NUTRIENT CONTENT ALSO IMPROVE THE STRUCTURE OF THE SOIL IN THAT THEY IMPROVE ITS WATER RETENTION CAPABILITY AND ALSO PREVENT THE LOSS OF NUTRIENTS DUE TO LEACHING.