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A Note on Application of Biophysical Methods used in Agriculture

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Sustainable agriculture has different meanings for different people. For some of them it means continuing present farming styles, for others it demands new efforts in exploration, development and perpetration on ecological integrity. Recapitulating all meanings of sustainable husbandry, it's a operation system for renewable natural resource for food product, income and livelihood for present and future generations, maintaining and improving profitable productivity and the ecosystem. Sustainable agriculture is a function of numerous factors including a concept of stewardship. For effective implementation and operationalization of sustainable agriculture in each country it's necessary to be institutionalized and given long- term fiscal support.

The goal of the sustainable agriculture is to use diseases, chemicals, ordure effectiveness through the use of soil testing, innovative crop operation ways, and integrated pest operation, use of natural growing regulators and bio stimulators and control of water and air pollution. Today, for product of one unit of product from husbandry is spent ten times further energy than at the morning of the last century, hence numerous agricultural experts look for possibilities to increase further effectiveness and effective factory operation of energy [1]. Hence biophysics methods are useful for plants suitable to vegetate at an advanced energy position. It's grounded on the fact that drugs methods increase the energy account by internal metamorphosis of energy, independent of their origin, into electrical and adding the electro eventuality of the membrane. Biophysical stimulation on the seed and plants, through including the vitality adjust and heightened of the trade of materials and enactment of the development and yield forms.

An analysis and understanding of the intimate connections between the rainfall, soils and agricultural product systems, and especially the complications associated with the variability and distribution of rainfall and soil type are essential rudiments in perfecting crop product and agricultural planning decision timber [2]. In the present paper, knowledge from the analysis of literal rainfall records and predictive information grounded on the " response farming" approach have been combined with GIS and biophysical simulation modelling of soil water adjust and edit production functions to survey the agro climatic exhibitions of a 90- day millet cultivars in Madiama, Mali. For each of two groups of rainfall onset date (early and late), the crop water stress, crop yields as well as overall stress indices in reference to yield implicit permitted by different soils under low and optimum nitrogen input situations have been dissembled [3], anatomized and counterplotted to illustrate how this approach could work for counsels and farmers in the study region. From the analysis of the rainfall records good connections are plant between rain onset dates and seasonal rain quantities and duration. Also, the Cropping System Simulation Model (Crop cyst) used in combination with the rainfall analysis is plant to be a useful tool in aiding determine soil suitability of crops, screen technologies and make recommendations packages for a response farming type approach.

The characterization of molecular structure, the measurement of molecular properties, and the observation of molecular behaviour presents an enormous challenge for natural scientists. A wide range of biophysical ways has been developed to study molecules in crystals, in result [4], in cells, and in organisms. These biophysical ways provide information about the electronic structure, size, shape, dynamics, opposition, and modes of commerce of natural molecules. Some of the most instigative ways give images of cells, subcellular structures, and indeed individual molecules. It's now possible, for example, to directly observe the biological behaviour and physical properties of single protein or DNA molecules within a living cell and determine how the behaviour of the single molecule influences the biological function of the organism.

Biophysics methods applicable in agriculture

The once century was an age of advanced chemical operation in husbandry as well in other and different areas of ultramodern living, and negative effects on food products and on the environment are generally known. Thus, numerous scientists believe that this century will be the age of biophysical system operation. The influence of physical factors on natural organisms affects the dielectric characteristics of bio membranes. The capability for polarization and therefore the capability to cross from lower to advanced electrical position, under the different physical, chemical or mechanical influences are introductory characteristics of dielectrics. In fact, the influence of physical factors on live organisms is based on the increment of the energy balance through metamorphosis of the energy, independent of its origin, into electrical and effecting into increasing of the electro eventuality of bio membranes [5]. The simulative influence of physical factors is reduced on adding of the energy balance of live organisms and intensification of exchanges of materials and activation of the processes of growing and developing. Inrushing in 1990 wrote that the survival of the ultramodern wisdom must undergo a "cosmic" evaluation on all processes on our earth. It's necessary to discover the interrelations between forces and accoutrements, connecting and elaborating astrophysics and astrochemical phenomena together with biophysical and biochemical processes of the forces of Cosmo biology. From the present and accessible literature sources, it's possible to elect colourful exploration results of the operation of different biophysical methods on plant production.

1. Radiation of live organisms with ultraviolet (UV- beams), gamma beams, ultrasound, ionized radiationa.t.s

2. Radiation with laser light

3. Dialectical separation and stimulation of seed

4. Resonance motivation electromagnetic incitement of seed and plants

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5. Magnetic stimulation

6. Electromagnetic stimulation

7. Application of impact of "gold crossing" of electromagnetic fields and Principe of "Keeps Pyramid".

8. Weed control with high electro frequency

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Conflict of Interest

The authors declare that they are no conflict of interest.

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