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[Energy] Taiwan's Biodiversity Advantage Is Suitable for Developing the Sustainable Alternative Energy Crop – Miscanthus Sinensis

[Energy] Taiwan's Biodiversity Advantage Is Suitable for Developing the Sustainable Alternative Energy Crop – Miscanthus Sinensis (Chinese Versin)

National Education Radio (2011/05/25) Miscanthus sinensis (also called Chinese silver grass or maiden grass), which can be easily found in Taiwan, has recently been widely used as a sustainable alternative energy crop together with coal for thermal power generation in the Europe. In response to this, some local scholar suggests to construct a large national platform for genomic analysis to select useful natural genes, enlarging Taiwan's advantage of rich biodiversity. With such a platform, scientists can develop more and more medical or livelihood value-added applications.

According to the estimation by Peter H. RAVEN, Vise President of National Academy of Sciences of the U.S., Taiwan possesses about 200,000 to 250,000 species, one third or one fourth of which are especially native ones. Since people cultivate the livelihood by taming the surrounding bio-resources and finding useful materials such as grains, vegetables, fruits, etc., from them, the genome sequencing technology via which the useful genes are selected, is very important. With the technology, the medical or livelihood biotechnology could be largely enhanced by rich biodiversity.

Professor Tzen-Yuh CHIANG at the Department of Life Sciences, National Cheng Kung University, points out, according to the study of some Irish scientist, as long as Miscanthus sinensis is planted on 10% of the farming lands in the Europe, 9% to 10% of the electricity demand in the EU countries will be supplied. Taiwan has plenty species of Miscanthus sinensis. The species and genetic biodiversity provide us with more fine strains. For instance, Miscanthus condensatus scattering in the East coast has high salt tolerance. Scientist may find useful genes in such a rich bio-resources or the operation mechanisms and apply the findings to this crop industry.

Professor Tzen-Yuh CHIANG suggests to construct a large national platform for genomic analysis. If a complete genome database of Taiwan's rich natural resources could be built, the best effective use of the priceless natural resources of the nation could be rendered possible.

Reference:
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