



Sufficiency Economy Philosophy to Sustainable Development Goals (SEP to SDGs)
การขับเคลื่อนสืบสานศาสตร์พระราชา ปรัชญาของเศรษฐกิจพอเพียงสู่เป้าหมายความยั่งยืนโลก

Hua Na Model Organic Agriculture according to the King's Philosophy of Sustainable Soil Development

(PHO SI SAMRAN ORGANIC AGRICULTURE LEARNING CENTER)



HUA NA MODEL ORGANIC AGRICULTURE ACCORDING TO THE KING'S PHILOSOPHY OF SUSTAINABLE SOIL DEVELOPMENT

The late H.M. King Bhumibol Adulyadej the Great has been held in high esteem universally for his vision on sustainable management of soil resources. As he was always deeply interested in soil sciences and his continued success in soil management has been concretely recognized both at home and abroad, an international day to celebrate soil, focus attention on the importance of healthy soil (as required for the survival of the human race and the environment) and advocate for the sustainable management of soil resources (World Soil Day) was recommended by the International Union of Soil Sciences and officially endorsed by the United Nations (UN) to be held on 5 December because it corresponds with his official birthday.

HUA NA SUB-DISTRICT CHANGE LEADER AND SOIL DEVELOPMENT ACCORDING TO SUFFICIENCY WAY

Hua Na sub-district was in the past a land rich in natural resources; namely soil, water, forest, wildlife and aquatic animals. Thanks in particular to soil fertility, the villagers' farming resulted in excellent yields with high quality, good taste and low cost. Nevertheless, when chemicals (chemical fertilizers, hormones, pesticides and herbicides) were later introduced to village farms and forests were cleared to grow field crops, such as sugarcane, cassava and corn, the soil began to degrade rapidly causing a decrease in yields, quality and taste and an increase in cost.



Faced with this alarming problem, Pho Si Samran Organic Agriculture Group decided to apply the philosophy of sufficiency economy to regenerate and conserve soil by:

1. Terracing vetiver grass alongside garden vegetable at Kut Ta Maew Public Pond to minimize soil erosion, maintain moisture and provide microorganisms beneficial to vegetable growth
2. Using organic compost and bio-fermented liquid to increase soil nutrients, loosen soil structure and improve soil ventilation
3. Planting legumes, such as mung bean and sunn hemp, in both fields and paddies before plowing over to add nutrients and organic materials to the soil
4. Mixing biochar with soil or putting it in planting holes to help retain water and increase soil nutrients beneficial for soil quality, crop strength, resistance to drought and taste
5. Resting the soil or planting vegetable alternately in the plot to reduce plant diseases and nutrient depletion

We can see that soil regeneration requires different nature-based interventions, all of which abided by self-sufficiency principles of the philosophy of sufficiency economy such as mainly using locally available materials to reduce the importation of external factors. This approach can be slow but guarantees a sustainable soil improvement. As a result, organic vegetable gardens at Pho Si Samran have produced an excellent yield for almost a decade now. The pride of these farmers, however, is the fact they were chosen to participate in Change Leadership Development Program in 2021. This opportunity will enable community leaders to fully develop their potentials, apply the knowledge of soil rehabilitation further in their own plots and extend good results to everyone in their community in order to achieve food security according to the philosophy of sufficiency economy.





8 Benefits of Soil Biodiversity

1. Supporting soil nutrient cycling, plant growth, flowering and fruiting
2. Increasing water absorption and filtration in soil
3. Contributing to resistance to disease and insects
4. Maintaining the ecosystem
5. Reducing and alleviating global warming
6. Contributing to soil contamination remediation
7. Being a source of medicine used to enhance human health
8. Creating soil and improving soil structure

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