

## **Forage-livestock industry is a fundamental issue for ecologic and economic win-win in the Loess plateau , China**

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**Introduction** The Loess plateau , China is a one of the poorest areas by the most severe soil erosion and has the most fragile ecological environment in China . Revegetation , reforming of agricultural system and the development of forage-livestock industry are essential measures for ecologic sustainability .

**Material and methods** Severe soil erosion , destroyed vegetation , infertile soil and low income could be controlled by developing forage-livestock industry , and reformulating agricultural system , which are the most fundamental measures . In the Loess plateau , forestry vegetation disappeared , soil fertility degradation and low income of farmers were mainly caused due to internal war for a long time , cultivating from forestry and pasture , grain planting system dominant . Thus , transforming traditional " grain dominant farming agriculture " , converting grain land into woodland or pasture , restoration of vegetation , to reform agricultural system should be the most fundamental measures in controlling soil erosion .

Acceleration forage-livestock industry can achieve ecology and economic win-win . The adequate agriculture industrial layouts in the Loess plateau should be " the favorable farming , protective forestry , commercial forage-livestock industry " . So grain crop planting area should be reduced , reasonable area for forestry is suggested , forage planting area should be enhanced , and all of those provide an alternative choice for ecologic and economic win-win .

Integration Green for Grain to forage-livestock industry : Green for Grain and forage-livestock industry , poverty reduction , development forage-livestock industry and improvement farmers' income will be continuously implemented for ecologic construction .

Alfalfa will be one of important forage to establish forage and feed supply system , producing high quality and high yield forage to meet livestock demand . Sowing pasture establishment , expanding legume pasture area , forage-crop rotation will make up the gap of protein feed stuff shortage . Afterwards , Techniques for alfalfa harvesting time , transportation , processing machinery , silage making in high rainfall area are major issue .

Beef Cattle and sheep are primarily dominant livestock to accelerate for development herbivore and domestic animal of production system industrialization . Establishing forage-meat lamb and beef cattle production system based on local , domestic and international market-oriented and forming industrial development .

Setting up eco-economic system for harmonious development between human and nature in the Loess plateau area by forage and livestock interaction and regional resources coupling : Fully utilizing the neighboring region's resources in livestock , feed stuff and market , a giant , harmonious forage-livestock industry base will be establishing in the Loess plateau through regional advantage compensation and system coupling .

### **Reference**

Qin Dahe , 2002 . The Evaluation of Western Region Environmental Evolvement in China . Beijing , China . 94-113 .