

ABSTRACT

Medicinal plants is the raw material of Traditional Chinese Medicine(TCM) and botanical drug .Demand increase cause amount decrease and even encountered endangered. The medicinal plants conservation is the crux of industry sustainable development. The strategy both on medicinal plants conservation an industry sustainable development in under researched in the world.

Macau's traditional health food, TCM product and all the TCM industry related business build up the certain scale of TCM industrial chain. The local industrial chain many are the middle reaches and downstream work such as TCM produce and sale, but deficient in the upstream work such as TCM good breed selection and breeding and also the raw material producing. Macau has a variety amount of medicinal plants could be the raw material of TCM and botanical drug product. Macau may try to develop the seed industry, seedling industry and cultivation industry of medicinal plant.

The thesis object is base on Natural Resource Management and conforming to Macau's situation, study on the feasibility strategy to take care of both conservation and development according to the study method of literature and case study.

Medicinal plants biodiversity conservation and industry development have according to Natural Resource Management to achieve the sustainable development of Ecological value, Economic value and Social value. The study analysis the medicinal plant biodiversity conservation and industry development among China, Japan and Taiwan as the reference, for example the TCM GAP base's standardized production in China, the "Medicinal Plant Factory" cultivation pattern under the land and medicinal plant resource restriction in Japan and the "Government-Industry-Learning-Research" Cooperation cultivation pattern of Biotechnology Industry form the complete industry

chain in Taiwan.

Chapter 4 analysis both medicinal plant resource conservation and industry development strategy in Macau, point out the conservation strategy such as in-situ conservation, ex-situ conservation and germplasm resources bank, and also the feasibility strategy of the seed industry, seedling industry and cultivation industry. The seed industry will refer to the American development pattern. The cultivation industry should follow up the Good Agriculture Practice, cultivate suitable planting South Chinese Medicine and woodland cultivated TCM through the GAP base selection.

Under the restrictive factor as inferior quality germplasm and land deficiency in Macau, GAP base and woodland cultivated pattern should have to facing the risks of the poor environmental elements. The conclusion of Chapter 5 suggest the “Medicinal Plant Factory” is the more feasibility way to solving the problems on land resource and quality control restriction. Macau may try to develop the “Medicinal Plant Seedling Factory” pattern seedling industry, carry out the suitable centralized technology and small scale cultivated pattern, the medicinal plant test tube seedling industry.

The discussion suggest that Macau could develop the medicinal industry as the procedures “Setting up the policies and regulations, fine germplasm screening, seed and seedling breeding, small scale industrial production implementation, technology transfer, large-scale industrial production cultivation, the local medicinal plant industrial development.” And may refer to the government and the research institute in charge of the policy, germplasm conservation, technology development and producing implementation, then transfer the upstream research product to the downstream industrial field, continue to the product development with the “Government- Industry-Learning-Research” Cooperation industrial chain pattern.