

The Development of a Ginseng Industry in New Zealand

J.M. Follett

New Zealand Institute for Crop & Food Research Ltd., Ruakura Agricultural Centre, Hamilton

INTRODUCTION

Ginseng, a perennial herb belonging to the Aralia family, is cultivated for its highly valued root although all parts of the plant can be used. In New Zealand, two economically important species are currently being established for commercial production: they are American ginseng (*Panax quinquefolius*) and Korean ginseng (*P. ginseng*). Both are commonly used as medicinal herbs and are marketed to the world through Hong Kong trading companies (But et al., 1995).

In the late 1980s, ginseng was identified as a potential new crop for New Zealand (Douglas, 1991). As a result a comprehensive research programme was established and ginseng was promoted to the primary industries as a possible new crop.

HISTORY

American ginseng was first evaluated in New Zealand in Canterbury in 1973 (Palmer and Hurndell, 1986). In July 1973 stratified seed was sown into seed boxes and left to germinate in a shaded unheated glasshouse. In 1975 the dormant seedlings were transplanted into a shade house where light levels had been reduced to less than 50% of ambient. In 1979 the roots were harvested, washed, and dried, and sent to Singapore for evaluation. The roots were considered too short with excessive branching of the tap root possibly caused by the ginseng being propagated in seed boxes then transplanted after 2 years. The hot dry föhn wind also caused some plants to drop their leaves possibly reducing growth rate and root size.

In the late 1970s a commercial evaluation of American ginseng was undertaken near Mosgiel (J. Wallis, pers. comm.). Seedlings were grown between two rows of black currant (*Ribes nigrum*) bushes. An evaluation of the 2-year-old roots by a Singapore buyer was favourable. However, subsequent commercial scale plantings failed probably because of insufficient knowledge of the crop's agronomic requirements.

At the same time the crop was also trialled by growers on the West Coast of the South Island in the natural shade of New Zealand native bush (H. Bezar, pers. comm.). The high rainfall of this region probably caused the severe disease problems that occurred in the trial.

Small scale plantings continued to be established throughout the country during the 1980s for both commercial evaluation and personal medicinal use (S. Hamilton, pers. comm.) but no commercial development followed.

RESEARCH

The current Public Good or Government-funded research programme on ginseng was established in 1989 in the Waikato, Rotorua, and Otago regions (Follett et al., 1995). Initially the programme was designed to evaluate production of American and Korean ginseng over a range of New Zealand climates. Results indicated that both species of ginseng would grow well in the colder drier regions of New Zealand such as Central Otago (Smallfield et. al., 1995). American ginseng was also found

to grow satisfactorily in the milder more humid regions of New Zealand provided adequate attention was paid to pest and disease control (Follett and Douglas, 1997). Ultimately the current research programme should be able to define the environmental and physiological constraints to ginseng production in a New Zealand maritime environment, and to develop production strategies to overcome those constraints.

STEPS TO ESTABLISH AN INDUSTRY

Crops for Southland. Crops for Southland (CfS) is an incorporated society (operating under the auspices of the Southland District Council) established to assist in the development of privately owned, market-based commercial horticulture to a significant scale in Southern New Zealand (Henderson and Hutchinson, 1996). Crops for Southland provides some funding and a strategic plan for the evaluation and possible development of a new crop. It aims to bring together all sectors (growers, processors, marketers, and researchers) of the industry. One of the first crops identified for evaluation and development was ginseng. In conjunction with the New Zealand Institute for Crop & Food Research (Crop & Food Research), CfS developed a Ginseng Starter Pack Programme to assist potential ginseng growers to establish a first trial planting. The hope is that as these trialists gain experience and confidence with the crop they will increase the area planted until production reaches the size of an economic unit. In 1996 all 21 trialists in the programme were in the South Island, with production in most cases under a forest canopy. Well attended seminars on ginseng have been held and CfS and Crop & Food Research have helped to establish the Ginseng New Zealand Association.

Ginseng New Zealand Association. The inaugural meeting of the Ginseng New Zealand Association was held on 30 Oct. 1996. The main objective of the association is to establish, foster, and develop the ginseng farming industry and the interests of all persons and companies engaged in the industry. To date the association has organised seminars and field days. Currently (1997) the association has 52 members. Several of the members have been growing ginseng for many years but most sowed their first seed in 1996.

INDUSTRY DEVELOPMENT

Accurate figures on the state of the ginseng industry are difficult to come by given the secretive nature of many growers. The industry is still in a development stage with product not yet available in sufficient quantities to make export economical. In addition to the starter pack trialists, forestry companies, and overseas investment companies are also trialling the crop. A number of independent growers successfully producing small quantities of ginseng are now looking to significantly increase production.

INDUSTRY PROSPECTS

Ginseng has a high price profile on the international market. While New Zealand growers are unlikely to grow intensively produced ginseng as economically as the large North American growers there is the possibility of producing ginseng for smaller but highly lucrative niche markets (Follett, 1997). These include forest-grown ginseng for the Asian market, and organically produced ginseng for the

American, European, and Asian markets. Ginseng is still a very new crop in New Zealand. Researchers and growers have still to discover how well this subcanopy herb, native to the deciduous forests and continental climate of North America and Asia, will cope with New Zealand's evergreen forests and maritime climate. Our initial results, while indicating many problems, has also provided a degree of quiet optimism.

CONCLUSIONS

The ginseng industry to date has developed through the combined efforts of the Southland District Council's active promotion of new crops, along with technical expertise from Crop & Food Research. Together these organisations have actively promoted ginseng to an audience already jaded by the number of new crops that have failed to live up to expectations. To counter this discouraging experience ginseng has been promoted as a crop with high risk and a long rotation time which requires a high level of commitment from the grower. Only time will determine whether it becomes a significant industry for New Zealand.

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