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THE UTILIZATION OF WASTE RAVINE LAND ON TEA PLANTATIONS FOR HIGH-YIELDING FODDER GRASS PRODUCTION

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Ill-drained ravine lands on tea plantations constitute 5-10 percent of the total area of about 72,846 hectares situated over 1000 m amsl. In the course of this study a system of effective drainage has been developed to render these lands suitable for the growth of the better-known fodder grasses. The grass weeds *Panicum repens* L. and *Ischemum indicum* L. are commonly found in ravine lands and are used to feed cattle. These grasses not only give poor yields but are also of poor nutritive value. This study was directed towards the growing of high-yielding high nutritive grasses on presently under-utilized land.

All undesirable weeds were eradicated by a programme of chemical weed control.

Twenty-three fodder species were grown in these ravines and initially evaluated visually for growth and frost tolerance. Nine chosen species were planted on two hectares of ravine lands to test the most suitable method of planting, frost tolerance and adaptability to ravine conditions. Five species were found to be promising. These were screened for yield and nutritive value. A comparison of their relative performance showed that *Setaria sphacelata* (Schumach) Stapf and Hubbard (Nandi setaria) and *Pennisetum purpurium* Shum (Napier) yielded the highest. *S. sphacelata* yielded 102 tonnes of fresh herbage per hectare and Napier 103 tonnes per hectare. Their crude protein was 14.9 and 14.6 respectively. These results were obtained under frost-free conditions. However, in the other two experiments which were influenced by widespread frost, *S. sphacelata* clearly established its superiority as the best fodder for the upcountry ravines on tea plantations.

If this technique can be popularized it will go a long way towards improving Sri Lanka's beef, milk and leather production.