The Study of Survival Rates and Unit Costs of Vetiver Grass in terms of Transportation and Packing to Schools under the Border Petrol Police Across the Country Including the Progress Project

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Abstract

Vetiver grass cultivation in soil and water conservation in primary schools under the BPP is hardly to achieve the goal because of transportation problems as vetiver grass sprouts have to be delivered from Doi Tung nursery to remote destinations. Therefore, this research aims to study the proper methods for sprout distribution, survival rates and transportation costs. The initiation of the project is training concerned officers in propagation, dispatching to target areas by truck or plane including sprout packing. During delivery, officers receiving vetiver grass have to record entire information and photos. The result was shown that there were 93 officers from all border patrol police participating propagation training. Packing the sprouts in plastic bags for distribution either by plane or car in normal cold temperature, almost sprouts (73%) were slightly damage and could recuperate for transplanting afterward. However, it was found that the sprouts distributed by plane were in usual condition whereas by truck, they were a little loss. The appropriate time for dispatching either by plane or car were 3 days which started from preparation place to destinations. The average cost supported by Doi Tung Development Project in packing equipments and wage was 0.0479 Baht/slip, Thai Airways Int'l 0.0226 Baht/slip and the BBP 0.0574 Baht/slip. Thus, the whole cost in dispatching the grass to 5 regions: 183 destinations was approximately 0.1144 Baht/slip or 167,831.00 Baht for 1,464,000 grass.

In monitoring the progress of the project during 1997-2005 by using questionnaire, it was found that the vetiver grass was continuously produced, promoted and used in all schools under the BPP. In 1996, there were 183 schools, who had obtained 1,464,000 seedlings (average 8,000 seedlings per school) from Doi Tung Development Project, and this year it was increased to 188 schools. Additionally, there were 5 vetiver grass nurseries under the BPP from the total numbers of 16 offices and that made totally 193 nurseries across the country. As a result, in 9 years, the Border Petrol Police Offices who were capable to cultivate more than 1,000,000 seedlings of vetiver cultivation, namely 1) the 32nd Border Petrol Police Office (Chiang Rai, Payao and Nan) growing 1,716,265 seedlings

from18 schools, 2) the 41st Border Petrol Police Office (Chumporn and Suratthani) growing 1,509,520 seedlings from 10 schools, 3) the 22nd Border Petrol Police Office (Umnajcharoen, Ubolrachathani and Yasothorn) growing 1,158,000 seedlings from 10 schools, 4) the 21st Border Petrol Police Office (Prajuabkireekan) growing 1,133,557 seedlings from 7 schools and 5) the 12th Border Petrol Police Office (Sakaew and Chachengsao) growing 1,098,980 seedlings from 13 schools. Considering the entire vetiver grass cultivated during the time, there were 12,366,713 seedling or average 1,374,079 seedlings per annum which was represented 126.5 Rai of cultivated area. The 35% or 4,372,448 seedlings were supported by the Office of Local Land Development, Land Development Department and the balance 65% or 7,994,265 were produced by the 193 mentioned nurseries above. The most 5 productive Border Petrol Police Offices, there were 1) the 41st Border Petrol Police office (Chumporn and Suratthani) producing 1,504,585 seedlings per 10 schools, 2) the 21st Border Petrol Police office (Surin) producing 1,116,595 seedlings per 7 schools, 3) the 12th Border Petrol Police office (Sakaew and Chachengsao) producing 1,035,320 seedlings per 10 schools, 4) the 23rd Border Petrol Police office (Nakornpanom and Mukdaharn) producing 793,330 seedlings per 7 schools and 5) the 24th Border Petrol Police office (Loei, Udornthani and Nongkai) producing 644,020 seedlings per 13 schools.

According to the study, the entire schools planting vetiver grass in soil and water conservation gained considerable benefits from leaves for instance: ground cover and mulch under fruit trees and spread over vegetable plots, composed fertilizer, and raw materials for making handicrafts. Some of them applied vetiver leaves, instead of cogongrass, as roof thatching for animal sheds and temporary shelters. However, some problems were recognised. Some found the inappropriate species. In this case, the Srilanka (V4) specie was replaced as it is drought and cold tolerant and able to grow in unfertile soil on the upland areas rather than Suratthani specie. The cultivation on slope area was destroyed by heavy rain. Additionally, the sprouts grass was taken by cattle. Although it was lack of community coorperation, the overall result ranks at 3.10 from total 4 marks. This presents that the project continuously runs in high progress. At present, all schools under the BPP achieved in launching the campaigns and promoting the advantages of having vetiver grass in their communities. They perceive that vetiver grass plays an important role in soil and water conservation. By this reason, we should advance the project by focusing on community participatory.