

Latin America Vetiver Network (LAVN), Problems and Prospects.

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Abstract: A brief history of the development of Vetiver Systems, VS, through The Vetiver Network, TVN and their associated networks in Latin America is presented. These networks have performed a successful strategy to spread Vetiver Grass Technology at global, regional and national level. Latin America Vetiver Network LAVN has evolved thanks to the continuous support of TVN and the acceptance and participation of many individuals and organizations within the region. Main changes have come from a centralized structure in its beginnings, and settled in Costa Rica from 1995 to year 2000, to a decentralized organization, with many local and regional networks within the region, and a coordination node in Maracay, Venezuela. Agricultural and bioengineering applications of vetiver were the main topics of technology dissemination during the first years.

Nowadays, bioremediation, water related issues and other environmental applications have becoming central topics of the vetiver system benefits. Promotion of community development, despite the particular application of the technology, has always being present, and alternative uses of vetiver like handicrafts or construction material has been a key for the acceptance of the technology. LAVN bulletin, in printed or digital version, has been the main resource of VS dissemination and information of the network activities. Translation of materials to Spanish from experiences around the world with VS is an important role of LAVN, but we expect more exchange within Latin America region and to export regional experiences to the rest of the world in the future. Digital products will be encouraged as the main tool for exchange of information and dissemination at the regional level. An online course in Spanish on VS is a priority for LAVN. It is concluded that VS is a proven technology that can effectively promote the conservation of the environment and community development and that it is necessary a continuous effort to disseminate and promote VS, because it is not known or accepted by many potential users, and it is also needed more research and development programs as well, to improve its capabilities within different environmental conditions and applications. To achieve this goal, local and regional networks in Latin America must be more active and have more interactions among them and at the global level.

Keywords: vetiver network, Latin America, soil and water conservation, vetiver grass technology, vetiver system

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1 INTRODUCTION

The Vetiver Network, TVN, was the result of an initiative started in the eighties for the promotion of Vetiver Grass Technology VS, first in Asia, and later at global level. In 1995, a network structure based in USA as an NGO, and Richard Grimshaw as its president, started an independent activity to promote VS around the world. Regional networks were established, Latin America Vetiver Network among them, with its first director, James Smyle and Joan Miller as its

coordinator. Volunteer work and small grants for local research-development projects started to produce results during the first years of LAVN. Establishment of nurseries and direct contact with NGOs pushed VS, particularly in Central America. Local experiences at the national and regional levels were disseminated through the network via a printed bulletin in Spanish, and also basic aspects and applications of VGT from other regions, particularly Asia, were facilitated to Latin America potential or actual users.

In the year 2000, many changes occurred and James Smyle was appointed as the President of TVN, and Joan Miller as its coordinator. LAVN was decentralized and many national and regional networks were established in Latin America. Coordination activities were moved from San José, Costa Rica to Maracay, Venezuela and Oscar Rodríguez was nominated as its coordinator. This structure has been kept the same since then, with 11 national and regional networks within Latin America, and it is expected that new local networks will be incorporated as the networks expand within the region. (Miller, 2002).

2 EVOLUTION OF INTERESTS IN VGT APPLICATION IN LATIN AMERICA

During the first years of the LAVN, main topics of interests in VS applications were oriented to agricultural applications and bioengineering. Erosion control and slope stabilizations were widely accepted as effective applications of VS. Agriculture on slopes is a common scene in mountainous and rolling areas of Latin America, where erosion processes occur as a consequence of inadequate conservation practices or the absence of them. VS has been welcomed as a practical tool to control erosion on agricultural fields in an economical and efficient way, alone or associated with other conservation technologies. Where VS has been tested or applied, positive results have been obtained in many agricultural systems. A workshop held in San Salvador, El Salvador in 1999 (Bioengineering Workshop for Post Hurricane Mitch Reconstruction-Experiences with Utilization of Vetiver Grass for Infrastructure Protection and Stabilization. RLAV, 1999) and its products (Memories book, video and CD) represent the great interest and the needs of users within the region at that moment, after a catastrophic event occur. Throughout Latin America, agricultural and bioengineer applications of VS are still of great interest and need, but other VS applications are demanded in terms of local and regional environmental problems.

In the last few years, and increasing interest in bioremediation and contamination control has raised around the world as well as in Latin America. Mining extraction is causing contamination problems in many countries in Latin America. VS as a bioremediation tool is being introduced as an alternative to control or ameliorate such kind of negative consequences from mining industries. Paul Truong and other researchers experience in this field, can be used as a technical reference for VS application in the region, but local research-development projects are needed to support this approach. In contrast to applications of erosion control, where users can visualize results in a more tangible way, chemicals immobilization and absorption must be demonstrated by laboratory analyses and follow up research judged by experts. The same can also be extended to other environmental applications of VS related to contamination of soil and water resources. Nevertheless, the same also apply to other technologies used for the same purpose. VS offers a simple and economical way to prevent and remediate the contamination of soil and water resources, an environmental problem that needs attention and is increasingly recognized by communities as a threaten to their survival and sustainable development. In Venezuela, a research-development project conducted by Polar Foundation is tackling water remediation applications of VGT on industrial and dwellings situations. From their experiences, particularly at the rural and suburban community levels, we can say that direct use of vetiver fiber for handicrafts and construction material is seen as a key for the acceptance of the technology, because many people are involved, the youngest, the older, the women, the teachers in the schools, among others, and the environmental benefits of the technology are gradually assimilated and understood. Final adoption

of VS is then obtained. Commercial stands of vetiver handicrafts can be found beside the roads, managed by vetiver projects beneficiaries.

3 ACTIVITIES OF LATIN AMÉRICA VETIVER NETWORK LAVN (2000-2003)

Latin America Vetiver Network has been involved in the dissemination of VS through some particular activities. The production of the *Boletín Vetiver*, in printed and digital version, has been the most important in terms of effort and impact. It is distributed approximately among 800 lectors, most of them within the region. The frequency has been annual and each one has 24 pages of information about the VS and also about the activities of the network, including a directory of national and regional networks in Latin America. It also serves as a bridge between LAVN and other Vetiver Networks around the world with TVN as the central node. Material produced by PRVN, specially their technical bulletins, have been of great interest to be translated into Spanish and reproduced in our bulletin, in terms of its quality and abundance of topics where there is a demand of knowledge and a potential for its application in Latin America. The publication of the bulletin more frequently, would be the ideal situation, which will depend of the resources available and the productivity of materials from the national and regional coordinators in Latin America. Of course, materials produced in other regions are always welcomed and useful to disseminate new ideas and applications of VS.

Another activity that is always underway is the interaction, mainly through e-mail, with many network members, who ask for other materials like CDs, brochures and videos or are interested in answer some particular questions about VS. There is a general interest to know where to find planting material, about cost of application of the technology or the financial alternatives to start a project, and to know if their particular local conditions match with the ecological requirements of vetiver grass. Also there is an interest about the commercial production of essential oil, a realm that goes beyond the main objectives of the network, which are the dissemination of the technology to solve environmental problems and alternative uses of the vetiver plant, but still remain an important question, as this has been the most known use of vetiver in the past.

An introductory kit package is sent to new members who are initiating their activities with vetiver. However, LAVN has been working to develop an on-line course on vetiver, which cover the basic aspects of VGT in an interactive way, so many people can be reached and learn the basics of VS in a personal way. This is a priority for LAVN at this moment, and we think it will be a useful material for any of the networks in Latin America to spread the knowledge on VS.

LAVN co-sponsored a national symposia on vetiver held in Venezuela in July 2003, where research and development projects were discussed and a handicraft exposition was shown. Topics were oriented on basics aspects of vetiver propagation and establishment, erosion control in agricultural areas and for infrastructure protection, bioremediation and community development projects. The memories of this meeting will be published and distributed as soon as possible. This symposia is a reflect of how an small grant project sponsored by TVN in Venezuela during 1997-98, have an impact on the application of VS in a country on a long term base, and how other local initiatives born from the original motivational message. (Rodríguez, 2002).

According to Grimshaw (2002), it is expected that networks will continue growing, particularly at the national and regional level, getting more independent from TVN, and with more support from government and non government institutions as well as international organizations. Also, other organizations that not belong to the network will incorporate VGT in their programs and strategies because they will recognize the positive impact of VS, and finally private sector will be involved using TPV as a mean to generate economic benefits. All this expectations are based on the practical usefulness of VS, more than in the set of theories around it.

4 LAVN PROBLEMS

LAVN and its networks face some common general problems:

- The number of vetiver cultivars introduced to the region is relatively small. Adaptation of some particular cultivars to specific local conditions is unknown as well as their ability to tolerate or resist potential pest attacks.
- A good registration of the experiences with VS is not always available, so the added value and transfer is not always facilitated.
- Basic and applied research on Vetiver is available, but still insufficient for a great scale application of the technology in a safe manner. Most of the theory and knowledge is imported from other tropical and subtropical countries, mainly from Asia.
- Operational standards for the VS application are available, but many gaps should be filled yet.
- When limits for VS application are exceeded, others alternatives should be proposed. This is the case of high altitude conditions with low temperature limits, potential attack of new pests unknown in the vetiver centers of origin, shadow conditions, extreme vulnerability to erosion, among others situations.
- Institutional support is not always available, and government institutions work on a very changing pattern, having no continuity in their programs.
- Economic resources have been available, but expansion of activities is only possible if financial resources increase.
- Mail services costs are high and effectiveness of public services low in many countries in Latin America. Private couriers are an alternative but an expensive one.

5 FINANCIAL SUPPORT OF THE NETWORK

LAVN has received from TVN 5500 US \$ during the period 2000-2003. These have been invested mainly for publishing and distribution of the bulletin and mailing materials to interested persons. It gave a small help for the organization of the Vetiver Symposia in Venezuela and is developing on a very small budget base the on-line course on vetiver. About 2/3 of the grants have been exhausted and the remnant will be used to cover the finalization of the on-line course, and the publishing and distribution of one more bulletin. Infrastructure facilities like an office place, internet connection, secretariat work and computer time have been possible thanks to the support of Sociedad Conservacionista Aragua, an environmental oriented NGO and the School of Agronomy, Central University of Venezuela in Maracay.

6 FINAL REMARKS

It can be concluded that VS is a proven technology that can effectively promote the conservation of the environment and community development, and that it is necessary a continuous effort to disseminate and promote VS. This is true, first of all, because the technology is still not known or accepted by many potential users, and, secondly, it is also needed more research and development programs, to improve its capabilities within different environmental conditions and applications. Social and natural conditions in Latin America are very variable and quite different of the situation present in Asia or Africa. Therefore, research-development programs that take into account local conditions and register systematically their successes and failures are needed to adapt and innovate over the basic principles of the Vetiver System. Basic and applied research strategically oriented should support any big scale application of VS to work under safe and confident limits. To achieve this goal, national and regional networks in Latin America must be

more active and have more interactions among them, and at the global level. In this particular aspect, LAVN can play a key role to promote and disseminate VS in Latin America in interaction with TVN and the other vetiver networks, as the networking approach has proved to have good results in disseminate and promote VGT, and supported by the information technologies like internet.

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