

EAGLE FEATHER RESEARCH INSTITUTE



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Welcome, Willkommen, Bienvenue, Bienvenidos, Benvenuto. Welcome to our October newsletter. In this issue we will dedicate space to some important environmental issues. In a era when societies are dependent on oil, politics and money, what are the questions that we have to ask as we look ahead in this XXI century? As population increases, we become aware of the dwindling resources around the world and where we do have areas containing oil, what is the impact to the environment? Case in point is 2.1 million acres owned by the University of Texas system in West Texas. While it produces \$4.4 billion in royalty payments and other mineral income, it also has contaminated more than 7000 acres by salt water, a byproduct of oil and natural gas production. While it is a bonanza for higher education, it has exacted a price from the remote semiarid landscape. Millions of barrels of salt water have killed virtually all vegetation and leaving the land vulnerable to wind and water erosion. Hundreds of mesquite stumps with three feet of exposed roots testify to the dramatic loss of topsoil. Attempts by UT officials to reclaim the moonscape, sometimes called the Texon Scar, have been tried. They have terraced the soil with bulldozers to curb rainfall runoff, planted salt-tolerant species, experimented with fertilizers and even installed underground piping that collects salt water and feeds it to injection wells for disposal deep underground. The results have been mixed. Much of the vegetation still looks scraggly and about 1,200 acres still remain barren. The new strategy is to find the best vegetation to plant. But the ponds of salt water have leaked. Part of the problem had to do with local geology; there is an impermeable layer of caliche about eight feet below the surface, keeping salt water from percolating into the deeper soil. Thus, the salt water spread horizontally forming a permanent layer

above the caliche. The salt water table rises and falls according to the rainfall and evaporation causing salt to be continuously affecting the roots of plants.

While the UT System has spent about one million in land reclamation, the most promising option seems to be terracing the soil and planting salt tolerant species grown from seed in a nearby greenhouse. The idea is to have a head start by planting species with an established root system. Examples include the four-winged salt bush and the willow baccharis. While the salt cedar is undesirable, it is better than nothing according to Steve Hartmann. It at least provides cover for deer and quail. Nonetheless, in other areas the wind-blown soil is whitish-brown and almost devoid of organic material.

Still, when the oil and gas is gone, the land is going to be here. It is a renewable resource rather than the depletable resource. Modern society in the race for growth and progress has very quickly in terms of earth time, contaminated the ecosystem. It is time to begin thinking of renewable and sustainable forms of energy. It is time to protect the ecosystem because all of life in this planet is interdependent. Or as a Chinese philosopher once said “you cut a blade of grass and you shake the universe.”

Happy and Insightful Reading,

Arnoldo Carlos Vento, PhD
Executive Officer