

Education Campaign on Forest Conservation and Reforestation

By ROBERTO VILLANUEVA
c/o Manila Chronicle

Our forest experts claim that for the adequate protection of our land, not less than 40% of our total area must be forest. Others advocate a higher percentage. In the Philippines at present, 38% of our land is forest; in Japan, the proportion is 60%. In order to conserve and expand our forest cover the government is undertaking artificial reforestation at the rate of 1,000 hectares yearly. At this rate, I am told, the job of restoring our denuded areas will take 1,390 years. Clearly the rate of reforestation must be vastly increased if we do not wish to see once fertile lands converted into near-deserts.

Briefly stated, our problem is how to increase the forest cover on our land in the shortest possible time. The problem has two aspects: first, conservation or how to prevent the senseless destruction of valuable forest land, and, second, reforestation or how to rehabilitate destroyed forests and grow trees in denuded areas.

Since the problem is clear, the next question is: Who will solve it? The Department of Agriculture and Natural Resources, and specifically the Bureau of Forestry is in charge. But the job is too big for one bureau with its limited resources in manpower and finance to tackle alone. The job requires the combined efforts of many agencies and groups. In fact, we must mobilize the entire nation, for the solution to this vital program depends to a large extent on the awareness of the people of the real value of trees. The Department of Education must work hand in hand with the Department of Agriculture and Natural Resources

on the task of disseminating information and educating the people. But even if these two departments apply their entire resources to the problem they can do very little without the support of provincial, city or town and barrio officials. The Department of Education can transform the idea of conservation and reforestation into a mass movement by harnessing the enthusiasm and efforts of teachers, students and their parents in every community. Finally, because any general movement needs leadership, we must enlist the support and active sponsorship of business, professional and civic groups. The conservation and reforestation campaign can be conducted with government agencies and officials providing the technical know-how, doing the pre-planning and initial dissemination of information, and shouldering at least the initial financial outlay. As the campaign progresses, and leaders in the community and in the schools are developed, they can take over the wider dissemination of information, much of the actual business of tree planting and the continuing care of the trees. Of course, all this must be done with the support, advice and guidance of our forestry people.

I have just sketched in its barest outlines, the organization of the campaign in terms of human effort. Our attention should next be focused on the specific projects we can undertake.

First, let us consider what can be done in terms of conservation. Although as a project, conservation is not as attractive as reforestation it is fully as important. Refore-

tation will be a waste of human energy if steps are not taken to prevent the systematic and thoughtless plunder of our forest resources.

Three sectors of the population should be the principal targets of our drive for conservation. These are lumbermen, the *kaiñgin* farmers, and the lowland farmers. Everyone is aware of the existence of laws designed to protect our natural resources. These should be strictly enforced especially in dealing with unscrupulous lumbermen and *kaiñgin* farmers. The motivation of the unscrupulous among our lumbermen is quick profit, but certainly they can be made to understand that they will be benefiting themselves in the long run if they observe the laws and limitations imposed on their operations. The conservation of forest lands will naturally redound to their benefit in terms of continuing business.

The question of *kaiñgin* farming is a different matter altogether. Here we can not combat the destruction of forests only through education. Most *kaiñgins* are farmed by migrant families who have no land of their own. Even enforcing the law strictly will not solve this problem unless we want our municipal jails filled with erring *kaiñgineros*. The only way to prevent the destruction wrought by the *kaiñgins* is to settle these people on lands of their own. Provision should be made for them in the government's land resettlement program.

As for farmers who own their lands and who, through ignorance of the value of trees, cut these down for lumber or firewood or to get maximum acreage, education would be the principal remedy. This program of mass education I shall take up presently in the discussion of reforestation projects.

The magnitude of our reforestation work throughout the country and its importance to our national future make it imperative that government agencies and civic organizations properly plan and coordinate their activities in connection with the campaign.

They should know before hand what their objectives are and what their approach should be. I believe that if we are to succeed, the pre-planning stage should be given utmost study and attention.

First, we must recognize that before we can start on the job, we should make people aware of the importance and urgency of reforestation. The Department of Agriculture and Natural Resources and the Department of Education can handle the preliminary spadework along this line. I have no doubt that the Bureau of Forestry has all the data showing the need of conserving our forest. What must be done is to incorporate these data on posters and bulletin board materials which in simple, concise, but striking way, will tell with pictures and words what is happening to our forests now and what could possibly happen if we continue to ignore our forests. Posters should dramatize the soil-conserving and rain-producing functions of trees. This could well be done through the effective use of pictures and cartoons. Other materials suitable for bulletin board display can point out the advantage that some towns have gained by planting trees. Still other poster materials could give information on trees and how to propagate them.

At the same time, brochures and pamphlets should be prepared for the use of leaders of various group levels to generate enthusiasm for the work and give them a working knowledge of the problem and the campaign. In passing, let me impart a friendly warning to those engaged in pamphlet preparation, and it is, that laymen like me, do not have either the time or the patience for Latin terminology or scientific terms. My advice in the preparation of such pamphlets would be: keep it simple, keep it practical and keep it short.

In any project which must rely on mass awareness of the problem as a starting point, one cannot neglect the facilities offered by our educational system. Thus we should enlist the aid of the Department of Education.

It is fortunate that the trend towards the community school which is now being pushed by the Department fits in very well with our campaign. The Department of Education has been conducting experiments in many towns whereby the school makes the study of its own community the core of its social studies. The situation, I may say, is ready-made. All that needs to be done is to incorporate in the social studies curriculum in the elementary level a unit on trees and their value. Geography could stress the value of commercially productive trees in the intermediate grades and in high school, home economics could emphasize the value of a home orchard. Economics in the high school could also develop concern for our forests and General Science could emphasize the relationship between trees and rain, trees and good soil. As a matter of fact, several experimental schools in the public school system have already done their bit. For example, in the agricultural barrio of Cupang, Balanga, the barrio school under the leadership of the Industrial Arts teacher, established a nursery with model greenhouse and model seed boxes. It distributes caimito seedlings, marcotted chico, mango seedlings, etc. at nominal cost. In Mexico and Sta. Ana, Pampanga, the schools have developed orchards and popularized the planting of marungay and katuray trees as sources of feed and to act as wind-breaks and fence-posts. A community school in Cebu is actually engaged in reforestation and soil conservation as a work project.

In conjunction with this development of awareness on the three educational levels, books and pamphlets should be made available in the school libraries.

If this pre-planning activity is carried out among the teachers and students, some of its benefits will no doubt reach the parents. At the same time, the posters and bulletin boards will be reaching the adult population. If the community leaders who have received advance information from the Department of Agriculture and Natural Re-

sources could get together with Department representatives and government officials, they can determine what rules they will play in the projects which they will help to shape. Having prepared the minds of the general public and the student population and having tapped a source for group leadership, the campaign can now be ready to embark on its projects.

These projects may take many different forms. The methods by which people could be induced to plant trees and care for them are limited only by the ingenuity of group leaders and the circumstances obtaining in each area. The variations are endless. I would like to mention a few that have occurred to me.

Let us take a tree planting project which starts in a grade school. In a social studies unit, the children discuss the uses of trees for feed, medicine, shade, soil conservation and rain. This being a farming community, it will be easy for the teacher to stimulate special interest in the relation of trees to soil and rain. The unit discussion may lead to a survey of the students' yard and farms and children may remark on the absence of trees or express a desire to have other useful trees. A resourceful person from among the specially trained group we spoke about in the pre-planning stage could be invited to help set up goals. Meanwhile, children should be encouraged to talk things over with their parents. The next step would be a school program as the unit's culminating activity. Children could prepare a program where they themselves speak on the value of trees and reforestation. A father-son project may evolve from this with fathers setting themselves planting quotas. These self-determined goals should be noted down, and any offers by neighbors of seed or cuttings should immediately be availed of. Enthusiasm may be further bolstered if at this juncture the representative of a civic organization in the town or from the provincial capital could stand up and offer rewards and recognition in a year's time—perhaps dur-

ing the next Arbor Day program. A committee from the civic organization would conduct home visitations every three months to see how the quotas are being fulfilled. The farmers would be more enthusiastic if the awards were practical prizes they could use in the farms. In addition, a certificate for the father-son team to hang in the sala would be appreciated. This is just one of many projects that could be undertaken.

The sources of failure must be guarded against; namely, insufficient check-ups which will cause interest to wane and the setting up of goals too high to meet. Adequate training of both the teacher and the civic leaders should help to temper enthusiasm so that goals set up are realistic and within the reach of the community.

A variation of this project could start with the civic organization itself surveying the community and sponsoring a reforestation contest. This may start on one Arbor Day and end on the next Arbor Day. I shall not go into the details of this program which I am sure any well-organized group can develop for itself.

Then again, instead of having either the school or civic group as the sponsors, town or barrio officials themselves could initiate the program. One town, through its officials, could challenge another, or one *purok* could be in friendly competition with another *purok* of the same town. They could vie for the honor of planting the most trees or developing a beautiful woodland park within a certain period of time. The mechanics for such friendly competition could simply be copied from the Bataan *purok* competitions on sanitation, literacy or poultry raising. The idea of inter-group competition is not new here. We would merely be adopting it to a new purpose. One thing must be remembered, though, before challenges begin to be flung around indiscriminately. Only a town official who enjoys the wholehearted support of his constituents can consider initiating such a competition, for the entire population must be behind him or

the plan will fail since its motivation is civic pride alone.

The barrio assemblies developed by the schools can easily take care of planting trees throughout the *poblacion*. If each household were to be held responsible for planting and caring for a tree in front of the house, there would not be a treeless street in sight within a couple of years. Of course, streets must be so planned as to provide space for trees along both sides. Moreover, with a little direction these tree plantings could yield dividends for the townspeople. A practical town could plant fruit trees and an aesthetically inclined town could plan on flame trees for example, and find these a tourist attraction like Japan's world-famous cherry blossoms.

It may be difficult at the outset to start reforestation projects where but a good beginning may inspire other localities to start projects of their own. For example, a national civic organization may choose one town as a pilot project. It can have an agreement with the town whereby in exchange for a certain number of trees planted and cared for, the national organization will set aside a certain sum of money to undertake one improvement chosen by the town. Perhaps the people want an artesian well, or a reading room, or a better plaza, or a town clock, or an additional schoolroom. They can get it by planting trees. An ideal arrangement would be for a local chapter to take charge of the campaign for its mother organization. The project be publicized with a magazine pictorial of the town and surrounding treeless farms; an account of its proposed undertaking and a map showing where the trees should be planted. At the end of the year, another pictorial article could show what has been accomplished.

One other variation of a tree planting project would be the establishment of a woodland park. If a town or a wealthy philanthropist can set aside an area suitable for development as a woodland park, a youth

(Continued on page 38)

A mulch of manure, dried grass, or even gravel helps to conserve moisture in drier districts.

Cultivation. Young trees require cultivation to keep down weeds, to conserve soil moisture, and to maintain good soil conditions. Single trees can be cultivated with ordinary garden tools, but large scale plantings, such as avenues and windbreaks, require attention with a cultivator or rotary hoe.

Protection from Wind. In exposed positions the young trees may need protection from wind until they are established. Hessian or tea-tree cover can be fastened to stakes to give protection against wind from the worst quarters, but it is not advisable to enclose the plants completely as they would tend to become spindly and drawn up.

Pruning. It is seldom necessary to prune in the early stages of growth. In most cases the growing tree is required to develop a sufficient length of clean trunk and a well-balanced crown, and this can be produced by careful pruning once the young trees are firmly established.

As the young trees develop, some pruning is necessary to produce a well-balanced crown. No hard and fast rules can be given, but the object is to obtain the future framework by removing unwanted branches while young and by shortening tips where necessary.

FOR NEW THOUGHTS

Every boy and girl in school should read one useful book a month. It should be a book of travel, or of adventure, if the adventure is concerning a new people, and gives information. Or it might be a craftbook, which teaches a new hobby, or a useful art. Or it might be a scientific book—on stars, or botany, or some interesting facts concerning inventions. Or it might be a book of history.

Be certain you read one interesting and useful book a month. Don't try one a week with your school work and other obligations. But twelve books a year will cause you to be far better informed than the average boy or girl of today.

EDUCATION . . .

(Continued from page 28)

organization may take over the planting. In consultation with forestry experts they can draw a plan for their woodland park. Some advanced work can be done by leaders to designate places for planting. Then on Arbor Day young people of the town can organize a mass picnic and mass planting of trees. Everyone can then set up a sign with his name to mark the tree he planted. He shall be held responsible for the care of those trees. Other outings can be organized in three month intervals to check up on the growth of the plants and to keep up members' interest.

As I said before, the possibilities are endless, but you will notice they have these points in common which project leaders would do well to remember:

First, the goals are definite and realizable within a short period.

Second, the emphasis is not just on a good start but on a continuing enthusiasm kept up by a carefully planned check-up system;

Third, projects stimulate interest by offering rewards and recognition for achievement;

Fourth, and most important, project leaders do serious and detailed pre-planning before they start the project and do not stop working until it is completed.

The job of reforestation is a big one but there are no insurmountable obstacles before us. If the government and the people work together with well-directed devotion to the cause, there is no reason why we cannot accomplish wonders.

LOYALTY

If you work for a man, in heaven's name work for him! If he pays you wages that supply you your bread and butter, work for him. Speak well of him, think well of him, stand by him, and stand by the institution he represents. If I worked for a man, I would not work for him part of the time, and the rest of time work against him, I would give an undivided service or more. If put of the pinch an ounce of loyalty is worth a pound of cleverness.

—Hubbard