

## How To Grow Rubber Under Philippine Land Laws As They Are: By One Who Does

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(From the *Mindanao Herald*)

There is no reason why Americans can not grow their own rubber. That is, a good portion of it, and in the Philippine Islands, and under present conditions.

Why not examine the conditions? This article is based on more than twenty-six years residence in the Philippines, twenty one of which has been in the growing of rubber.

There is ample unoccupied government land located on the islands of Mindanao, Basilan, Jolo, Tawi Tawi and Palawan to grow all the rubber America requires.

The present land law permits the buying by a corporation of 2,500 acres of agricultural land and the leasing of an equal amount. This area is a good economic unit for rubber planting. Were it permissible to hold larger areas they would certainly be split up into similar sizes for advantageous management. Why not start off in that way? Here is how it could be done, without violation of our land or corporation laws.

We will presume that 50,000 acres are to be planted, and that a Syndicate or Rubber Bank to finance it has been formed, with the necessary capital, that is, \$7,500,000. This shall be incorporated under the laws of the Philippine Islands, for the purpose of financing and promoting rubber planting, acting as agents and advisers and for such other purposes as the by laws and corporation laws permit.

The head of this corporation should be a real executive, and should have on his staff expert planters and agriculturists to act as visiting agents for the various plantations, financed by the agency or rubber bank. Expert buyers, accountants, engineers (civil, mechanical and sanitary) would also be on the staff of the Agency. The Agency would maintain a legal department.

Once our Bank or Agency is in working order, Mr. Juan de la Cruz, associated with four other citizens, Filipino or American, having located an area of 5,000 acres of

excellent land on, say, the south coast of Basilan, approaches the Bank as to the possibilities of financing the project. The Agency's agriculturist inspects the land, their secret service department report favorably on Mr. Juan de la Cruz and his associates, and the legal department prepares and files the papers for the proposed corporation.

The capital stock should be \$750,000. Directors and officers are elected, and an agreement is entered into by the corporation whereby the Bank underwrites the stock of the corporation, and acts as managing agent for the same. To safeguard the Bank's interest, the manager and majority of the Board of Directors would be named by the Bank. As soon as the new corporation is organized, the land is applied for as purchase and lease.

Nine other corporations, organized in the same manner, located at various points on south and east coasts of Basilan, could in this way be served by the agency or bank most efficiently. As the whole business would be in the planting of rubber, all their requirements, would be similar and the agency's buyer, buying in large quantities, would cut down costs greatly. All equipment would be standardized, and each plantation would have the benefit of the agency's planting expert's advice, engineering, legal and medical service at small cost. Each plantation's accounts would be kept by the agency, and a full interchange of ideas between managers would be maintained.

The agency would maintain a large launch at headquarters at Zamboanga for transporting supplies and labor to the various plantations managed by the Bank.

The bank would establish a well equipped hospital at a central location for the joint use of all the plantations at a pro rata charge to each.

As the bank would maintain a recruiting agency in the Visayan Islands, suitable farm labor would always be available to

the various units and as there would be no "crimping" of labor by one plantation from another, labor troubles would be small.

All buildings on the various units would be standardized and business methods coordinated by the bank.

When plantations are in bearing, each estate would produce standard smoked sheet only, which would require

**Getting Uniform Quality** only small power and light machines. All scrap rubber and bark parings would be sent to a central cooperative factory for treatment where they would be made into one standard "compo" crépe grade, and the entire output would be marketed cooperatively by the agency.

The agency or bank could manage 50 corporations as well as ten, located in other islands. It would only mean additional personnel and cash.

The amount of labor required to plant up and bring into bearing 50,000 acres of rubber would, of course, depend on the speed with which it is done, location, class of land, whether cut over timber, scrub or grass. About 10,000 laborers would be required for the work and the whole ten units could be entirely planted up in not

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more than five years from the start.

When in full bearing each unit would require a daily tapping force of 600 tappers with probably 100 other laborers for general upkeep work and the necessary foremen and factory crew.

One American manager and two white assistants would be required on each unit.

Probably it would be necessary to recruit seventy-five percent of labor requirements from the northern islands for any location in which work was started. This would be necessary in order not to disturb local labor conditions.

Filipino labor is entirely different from any other oriental labor. Here we have no coolie class. The desire of most Filipinos is to eventually secure a small piece of land for a home. As Mindanao and the southern islands have great areas of unoccupied land and the northern islands are densely populated with very poor people, there is almost an unlimited number of potential laborers anxious to come south.

### Filipinos Not Coolies

In locating plantations ample land should be left between two or more units and adjoining them for laborers to locate homesteads, and it should be one of the manager's duties to see that each of his Filipino staff has a small homestead adjoining the plantation. In this way each unit would surround itself with a potential labor force, in addition to its own resident labor force, and would have little or no labor troubles.

The Filipino laborer is very easily led and hard to drive. He understands a square deal, and, on the whole, is intensely loyal and partisan to the "amo" (master) whom he calls the "old one." Once settled on or adjoining a plantation, he grows to consider himself a part of it.

It is true that the average of \$0.50 gold per day without food is somewhat higher than other oriental countries, but this is more than offset by the far greater efficiency of the Filipino laborer. One who has watched a gang of Tamil coolies at work on a rubber estate in the Federated Malay States or on the public roads there, can readily understand this.

It is believed that the government would assist a project of this kind in every way possible, as the Filipino would be the gainer in every way. It would open

### Government's Attitude

acres of land for small up many thousands of homeseekers that are now money reserves and breeding ground for locusts. It would relieve congested areas and settle up the new unsettled Moro country, and would eventually settle the Moro problem. Thousands of Christian Filipinos and non Christians would be placed under much better sanitary surroundings, and get to know and respect each other.

On rubber estates on Basilan Moros of half a dozen tribes and Christian Filipinos work side by side, play baseball together, and their children sit side by side in the plantation schools, all without friction or trouble of any sort. So much for plantation influence, and it is very great.

With normal conditions, that is, no wars nor financial panics, and with cooperative planting as outlined, an acre of rubber would be brought to the end of the 4th year:

**Production Costs**  
(from planting) for \$156.09 per acre, counting interest at about six per cent. Beginning the 5th year tapping would start over some one-third of the area with a probable output of 100 pounds per acre for the first year and a probable all in cost of \$0.30 gold per pound. When all of a unit is in full bearing, say at end of 10th year from planting, with \$800 available acres (200 off for roads, building sites, etc.), the output should be at least 350 pounds per acre with an all in cost of not more than \$0.20 gold per pound. It is not believed that rubber will drop to \$0.50 per pound again for a good many years.

The Philippines are in a particularly favorable position. A position that should be grasped at once if we are to do anything toward producing our own rubber. Our position is analogous to a manufacturing industry, producing a world-wide necessity, with costs cut to the lowest point. All plants are using identical machinery and methods, and production costs are pretty much the same all over. There come inventors perfecting machines and methods that will produce three to four times the output at the same cost. This being the case it is evident that new factories starting up with new equipment would be able to produce far more cheaply than the old plants that would have to struggle along with the old equipment, because they could not be scrapped.

In a rubber plantation it is a well known fact that there is no uniformity as to yield.

75% of output is produced by Budded probably 30% of trees planted. Rubber In order to raise the yield per costs, poor

yielders are systematically cut out, but this takes a long time and is expensive. Seed selection has helped in a limited way, but is unsatisfactory as Para rubber flowers are not self-fertilized, and seed from high yielding trees may have been fertilized by a very poor yielder. It is also generally recognized that poor yielders produce far more seed than do good yielders. This being the case it is evident that the problem had to be attacked from a different angle, which our Dutch friends in Java have successfully done, i. e., bud grafting.

The method used is very simple. Buds taken from carefully selected high yielding mother trees are shield grafted onto young nursery plants, from six months to two years old. The bud is inserted as near the ground as possible, and after the shoot has started the stock is cut off, so that the resulting trunk will be a high yielder. By this method the Dutch have succeeded in increasing yields from 350 pounds per acre to as much as 1000 pounds and more per acre, and it don't cost any more to tap a high yielding tree than a poor yielder. Many hundreds of acres of budded rubber have already been planted out in Sumatra and the Federated Malay States, and it is safe to say that little or no rubber will be planted there in the future except high yielding budded trees.

We have an absolutely clean slate here in the Philippines, why not use it? There is ample material at hand, seed for nursery purposes from well grown

**Native Technical Personnel** healthy trees, and many thousands of fine, heavy yielding mother trees from which bud wood can be secured. There are many well trained Filipinos from the College of Agriculture, University of the Philippines, the best tropical agricultural school in the world, who are quite familiar with this sort of work.

Arrangements are now going forward toward cooperative research work along this line by one of the present rubber plantations on Basilan and the Philippine bureau of agriculture, the benefit of which,

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needless to say, would be available to future planters.

In this way the Rubber Commission's estimate of a possible 70,000 tons production in the Philippines (which the writer considers very conservative), could be raised to more than 200,000 tons from the same acreage, and with available labor, with materially increased wages, at a less cost than elsewhere, and at a greater profit to the investor.

This could all be done if we would simply get busy, use our heads for thinking not for talking, especially about Philippine conditions, land laws and labor. The land laws are quite satisfactory and workable, as outlined above. The best legal talent in the islands have assured the writer that the plan is perfectly legal. The labor is available and efficient. I have been using it for more than twenty years, and am not guessing.

The rubber shortage will begin to pinch real hard about the beginning of 1927 and prices will be good for a great many years to come. Why not get in on the ground floor, help America to produce her own rubber, and at the same time have a well paying investment?

**SCIENCE AND THE COMMON FARMER**

We read and we see much, in these times, of the dependence of great industries on science. In fact many great industries have been established on recent scientific discoveries and developments. The relation of the common man to science is not so clearly recognized, and in the less progressive countries no such relation may exist. In the Orient for instance, the common farmer may be still getting along after a fashion with the same methods that he has been using for 4,000 years, and with practically no improvement either in his crops or in his mode of life.

"Science" is merely a seeking of the truth—the complete, unmistakable, indubitable facts—full and clear knowledge of all factors. Through science have come the modern possibilities of better culture, of

plant breeding, of fertilization to suit crops and soils—all meaning larger returns for the unit area; and more generous returns, with far greater possibilities for the unit of human labor. From science has come great possibilities in crop insurance against pests and diseases, which up to a few decades ago did not exist in any country and is now developed in but few.

Uncontrolled Nature demands a fearful toll from the ignorant farmer. Here in the Philippines we lose each year some millions of pesos from pests and diseases, yet adequate support for investigation along these lines is unobtainable. By expenditure through the right hands of a few thousands, Hawaii Territory is constantly averting losses that might easily, if neglected, run into millions. Japan claims over-population and inability to produce at home adequate food supplies, but at the same time she allows too large a percentage to pests and diseases and does not support adequate investigation, her few over-worked specialists being unable to cope with existing problems for the whole country. Though it must be admitted that, under the highly efficient administration of Doctor Kuwana, Japan maintains the best plant quarantine service in the Orient. China has practically nothing along these lines and suffers tremendous losses accordingly, but the fate of the common man means little in China—as yet. Indo-China has but limited service of this sort, and Siam and the British Malayan colonies nothing worthy of the name. In striking contrast, Java maintains a very active Institute for Plant Diseases where the highest class work is constantly in progress. Java also has, besides this, numbers of the highest class specialists obtainable in the various cognate lines.

We talk of the material development of the Philippines as if it was a matter only of business—of attraction of capital. We should not forget what the years have clearly taught in America and Europe, that there can be in the long run no safety whatever in agriculture investment, without the essential technical—scientific—service that may throw new light on every problem, and may furnish the only reasonable insurance and security that agriculture—"the greatest gamble on earth"—may have. After needed and adequate knowledge is secured, it must then be taught to the whole

population through every educational means available from lowest to highest.

This road is the only "royal road to wealth and well-being"—a pathway broad, plain, and clearly sign-posted. In the Orient, to a very large extent, we wander in meandering and tortuous by-paths that lead to no positive results. More needed, than all the political arguing and self-seeking, is constructive action that will result in putting us on the right road—in the way of definite material progress for the common man and of *honor for all!*

Charles Fuller Baker, Dean, College of Agriculture

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