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TUBERCULOSIS ERADICATION

New Vaccine For Cattle Recently Discovered Is Highly Recommended by Agricultural Workers.

A plea for an extensive trial of Dr. Albert Calmette's BCG, a substance used in the vaccination of cattle against tuberculosis, is made by Dr. Allen K. Krause, Editor of the American Review of Tuberculosis, in the October number of that journal. Dr. Krause points out that Dr. Calmette's position as Assistant Director of the Pasteur Institute, Paris, and his extensive studies covering over twenty years gives sufficient warrant of success, so that American investigators are being asked to repeat Calmette's experiments and confirm them by demonstrations on cattle in various parts of this country.

BCG, which is the name that Dr. Calmette gives his vaccine, is a strain of tubercle bacilli which has been grown through 230 different generations on medium of potato cooked in ox bile. The peculiar characteristic of these germs is that while they are like other tuberculosis germs in most particulars, they are unlike them in this respect—that they do not cause the ordinary processes of tuberculosis, the setting up of tubercles, and subsequent destruction of bodily tissue. When these germs are introduced into the system of young animals they protect these animals against attacks of tuberculosis.

Calves inoculated with BCG have resisted efforts to give them tuberculosis with virulent tubercle bacilli for as long as eighteen months. Calmette and his associates have aimed within five years to rid previously of tuberculosis by gradually doing away with the non-vaccinated cattle and keeping only the vaccinated ones, as these through the natural increase by birth replenish the herds. Up to May 1924 they have vaccinated 1278 young calves all of which remained in perfect health.

The conclusion reached by Calmette that "at present vaccination and annual re-vaccination are absolutely harmless." Since forty per cent of mature adult cattle, that is, 5 years of age and over generally throughout the country give evidences of tuberculosis, Doctor Krause points out that any efforts to extend Calmette's experiments and make BCG useful everywhere would mean saving of countless millions of dollars to the cattle industry.

Doctor Krause points out also that Calmette's experiments in vaccinating babies within the first nine days of life are suggestive, but he questions whether the time has arrived to experiment on the active immunization of children in this country. He intimates that before this is attempted the most exhaustive investigation should be made on cattle, for, as he says, "One cannot help feeling certain that what ever will keep cattle from getting tuberculosis will also eventually be found to prevent the disease in man." Calmette's BCG is useful only in animals that have not previously been infected with tuberculosis. For others the BCG is of no value.

Notwithstanding the knowledge and previously scientific work in tuberculosis by Dr. Calmette, and the implicit confidence placed in his ability and integrity, yet it is necessary that his work, as Dr. Krause says, should be checked by many observers in many lands on many animals, and later on many infants that will likely be exposed to infection by their mothers, and that the United States of America, with its favored economic and scientific outlook and its warm appreciation of author's work in the tuberculosis world is to have a large share in proving the value of Calmette's method.

Notwithstanding the fact that the proof of the value of this BCG or vaccine cannot be accepted at this stage of the investigation as typhoid and diphtheria preventive in the fact that it is only effective as an occlusion and notwithstanding the fact that it is only effective as an immunizing agent in those who have had any infection of any kind by the tubercle bacillus, yet in all probability this is the greatest discovery that has ever been made toward immunizing against tuberculosis.

Arrangements have been made by the National Tuberculosis Association whereby investigators properly approved may be able to secure Calmette's BCG for experimental purposes, provided that such investigators meet certain conditions laid down by the Association.

INTERESTED IN WATER POWER

We are firmly convinced that the development of our potential water powers will mean revolution in the financial conditions of the 25 mountain counties. Before 1940 water power development will cause the expenditure of between \$100,000,000 and \$300,000,000 in Western North Carolina. Whether the smaller or the larger figure becomes available depends largely on how we take advantage of this great resource. The turning loose of these hundreds of millions of dollars will directly benefit every person in this section.

According to all the figures available there is 1,000,000 horse power going to waste in our mountain streams. Some of this power will never be developed because many of our beautiful falls will be preserved because of their value as tourist attractions. Other parts will be very slow of development due to distance away from commercial centers. Certainly however, we are safe in assuming that at least 500,000 horse power will be at work within a short period of time.

The cost of developing water power ranges between \$100 and \$200 per horse power, with an average of \$150. The development of 500,000 will then cost around \$75,000,000. Please note that this amount of money will be spent no matter by whom the powers are built. The money is not available in Western North Carolina, so it must come from other sources. Note, too, that this \$75,000,000 will be spent largely in Western North Carolina, no matter what use the power is to be put to. It takes "big money" to spend big money; therefore it is absolutely necessary that big companies or corporations undertake this work. We welcome Big People to Western North Carolina.

According to the North Carolina Geological Survey, the industries in this state now demand 500,000 horse power and for a number of years this demand has increased 10 per cent yearly, on an average. The demand is actually increasing and with the great industrial expansion there is reason to believe that a 10 per cent yearly growing use of power may be expected for many years to come. This normal increase then would create a demand for 800,000 horse power in 1930, 1,300,000 horse power is practically the final limit to the possible power in North Carolina, it is safe to predict that all of Western North Carolina's 500,000 horse power will be developed by 1940. That means that \$75,000,000 will have been turned loose up here within the next fifteen years by development of powers alone. We believe this is a very conservative figure which might well be doubled.

A high official of the Southern Power Company has stated that reliable statistics by his company show that for every dollar spent by them in developing hydro-electric power, the user of the power, the manufacturer, spends \$6 in buying land, erecting factories, installing machinery, building houses, etc. This being true, there would be no exaggeration in predicting that an additional \$450,000,000 will be spent to make use of our 500,000 horse power. However, it is very probable that only a portion of our four hundred and fifty million will be spent in Western North Carolina as there is not enough industry here now to absorb that much. Certainly, though, we could make use of 100,000 horse power, which would call for the expenditure of around \$90,000,000 or \$90 for every horse power we can keep at home.

From the above it may be seen why Western North Carolina, Inc., is endeavoring to build up manufacturing industry in Western North Carolina. Every wheel, calling for use of a horse power, which we can get located here means the expenditure of \$900 by the manufacturer plus \$150 spent by the developer of the hydro-electric power. It is up to the people of Western North Carolina to bring every factory possible to our counties. The entire \$450,000,000 may be ours if enough industry can be induced to come here.

The life of Western North Carolina, Inc., will certainly be more than justifiably if we help bring in over a hundred million dollars to boost prosperity of the Land of the Sky. Water power is "white coal," and factories run by electricity avoid smoke and dirt. We contend, therefore, that the industry which this organization is going after will not hurt the tourist industry.

It is interesting to note that in our files we have a request from parties wanting water power of from 10,000 to 40,000 horse power capacity. One owner has asked for aid in selling a 6,000 horse power site. Several powers ranging from 100 to 1,000 are

FOREST PRODUCT MEETING NOV. 19

The Conference on Forest Products Called by Henry C. Wallace Meets in Washington This Month.

The conference on the utilization of forest products, called by the late Henry C. Wallace as Secretary of Agriculture, will be held in Washington on November 19 and 20 as originally planned, announces Acting Secretary of Agriculture Howard M. Gore.

Chief Forester Greeley in an announcement just issued declares that the late Secretary Wallace regarded the reduction of timber waste as one of the most important phase of forest conservation and felt that much could be accomplished in this direction by calling together the leaders in forest-using industries and in the principal groups of wood consumers for a thorough discussion of the subject.

Officials of the United States Department of Agriculture believe that Secretary Wallace's great service to forest conservation can be commemorated in no better way than by carrying out the conference at the time and in the way he planned," said Mr. Greeley.

"The Government is taking the lead in this movement only so far as its help and cooperation are needed to bring the various interests together. It is in reality a co-operative industrial movement. We hope the conference will end in an organized attack by forest industries and consumers on those points where timber waste bears most heavily on industrial profits and on the public pocket-book. Investigation has already done much to expose these points. Fortunately to cut down these wastes will not only be in the public interest but will in many cases be profitable to industry."

Interest in the forthcoming conference is widespread, according to letters being received by the Forest Service. Many leaders in the forest and wood-cutting industries have already indicated that they will attend the meeting.

Acting Secretary Gore has again announced that the conference is open to every one interested in the manufacture or consumption of forest products and that no special invitation is necessary in order to attend the conference.

"I have noted some confusion in regard to just who may attend the wood utilization conference," said Acting Secretary Gore. "I desire to make it very plain that the Department of Agriculture will welcome any one interested in this important phase of forest conservation. No formal invitation is necessary, but it is desirable that names be sent in as far in advance as possible.

Announcement.

Mr. D. G. Stewart has asked the Press to announce that his only mission in Franklin is to work for the improvement of our telephone system.

He will have no time for anything else. The co-operation of the public is much desired. Mr. Stewart says that he is not a collector but a telephone expert whose entire time will be devoted to installing new equipment and overhauling the present system. He therefore requests that patrons send a check promptly at the end of the month for rental on the telephone for the succeeding month if the old method is followed. Mr. Stewart will have to devote three or four days of his time each month to collections. He states that hereafter he will not make collections. Therefore, if you want your telephone to remain connected send in your check promptly.

being planned. Five plants varying in size from 300 to 20,000 horse power are at present being built. Two plants of 2,000 and 6,000 respectively have been announced for immediate construction. To date water wheels amounting to 180,000 horse power have been installed and are now in operation.

NEW CLIMB PLANNED TO CONQUER EVEREST

Undaunted by the tragedy that claimed the lives of two members of the 1924 Mount Everest expedition, the survivors are already preparing for another assault on the highest peak of the world to be made in 1925. Swiss Alpine climbers also are planning an expedition, but will make the attempt in 1925 in an effort to beat their English rivals.

With both the earth's poles visited, the deserts crossed and lesser mountains scaled, Everest alone continues to defy man's efforts. Rearing its head 29,002 feet above sea level, the great peak was thrown open to mountain climbers after the war, when, in 1920, the Dalai Lama issued permission for an expedition to attempt the ascent. On his warrant the mountain is given its Tibetan name, Cha-ma-lung-mo, meaning "the place where it is so high that even a bird goes blind when he gets there."

Acting on this permission, the first Everest expedition went out in 1921, ascended to a height of 22,000 feet and brought back a valuable map and data—but left one of its members in a grave in a 17,000 foot pass, the first victim to the high altitude. In 1922 the second expedition following the same trail pushed farther ahead and three men including George Leigh Mallory, reached a height of 26,800 feet, while two others, armed with oxygen tanks, climbed to 27,300 feet, less than half a mile beneath the mountain crest. In the thin air at such extreme altitudes the burning sun threatened the climbers with sunstroke while their feet were being frostbitten on the glacial ice and snow. Before the work could be completed the dreaded monsoon season set in and terrible snowstorms swept across the mountain face, followed by warm winds from India which melted the snow and sent avalanches cascading down the slope. One avalanche swept seven Tibetan porters to their death and the expedition was forced to retreat. The third expedition, in 1924, was equipped with better oxygen apparatus and supplies, the backbone of its man power was Mallory and other veterans of the preceding climbs. After heartbreaking efforts, a camp was pitched at a height of 27,000 feet. Several efforts to scale the peak were frustrated by bad weather, and finally Mallory, the veteran, and a young college student named Irvine attempted the dash for the summit. Later the same day when the clouds on the peak lifted their companions at the 27,000 foot camp saw the two toiling up a little ridge at the 28,000 foot level, barely 800 feet below the summit. Then the storm clouds closed in and they were never seen again. Whether they actually reached the summit, and perished there of cold and hunger, succumbed to exhaustion on the ridge, or fell into some glacial crevass, may never be known.

Doctor Somervell, who with Col. Norton, commander of the 1924 expedition reached the 28,000 foot level says the effort required to move at that height is almost beyond comprehension. In order to take a single step forward a man must first take ten deep breaths to get enough oxygen into his lungs. Each step he says is equal to the exertion required to make a 100 yard dash at the sea level.

Despite the difficulties, veteran climbers of the Alpine club are confident that Everest will be conquered. Hundreds of volunteers have offered their services for the next attempt, but only the pick of the world's athletes are eligible. The members of the expedition must practice constantly to keep in trim, and even a brief rest entails months of hard work to get back in condition.

While lecturing in America raising funds for the third expedition the ill-fated Mallory, astonished crowds by climbing up fire escapes, hanging from the lower side by his hands. That was only part of his daily exercise. He suggested at that time that it might be necessary to send an expedition to live on the slopes of Everest above the 20,000-foot level for a year or two to thoroughly acclimate themselves.

But the natives living nearby are sure the spirit of the mountain will never be conquered by man.—Popular Mechanics.

ARBOR DAY WILL BE NOVEMBER 21

Governor Cameron Morrison Sets November 21 as Arbor Day in the State of North Carolina.

Whereas, nearly two-thirds of the total area of North Carolina is now covered by forest growth, the greater part of which has been cut by lumbermen and devastated by fire to such an extent that its annual yield is less than one half what it should be and

Whereas, the soil is the material source of our strength and upon its right use depends the permanent prosperity of our State; and

Whereas, the present generation is coming to realize that the use of the forest and the soil has not been in accordance with proper economy inasmuch as forests have been destroyed by axe and fire, steep lands have been cleared and unwisely used and ruinously cultivated; and

Whereas, the coming generation of forest and soil users is now in our public schools; and upon the school children of the State is to fall the task of repairing the loss caused by our carelessness or indifference;

Whereas, the General Assembly of this State has seen fit to enact an Arbor Day Law;

Now, therefore, I, Cameron Morrison, Governor of the State of North Carolina, realizing the value which the suitable observance of this day will be to the State in interesting the rising generation in a proper appreciation of our forests, our birds, our trees and our shrubs, I do hereby proclaim that Friday, the twenty-first day of November, one thousand nine hundred and twenty-four, shall be appropriately observed as Arbor Day by the teachers and children of all the public schools of the State by recitations, drills, songs and exercises appropriate to the occasion, and by the planting of trees and shrubs on the school grounds.

Let this be done that the purpose of Arbor Day may be impressed upon us and upon the youth of the State and interest be awakened in a subject the consideration of which will add to our general prosperity, the future wealth of North Carolina, and to the happiness of us and our children.

Done at our City of Raleigh, this the 28th day of October, in the year of our Lord one thousand nine hundred and twenty-four, and in the one hundred and forty-ninth year of our American Independence.

(Signed) CAMERON MORRISON,

Governor.

ARBOR DAY MESSAGE.

In accordance with the Proclamation of Governor Morrison Friday, November 21, is to be observed as Arbor Day throughout North Carolina and celebrated in the schools and by civic and other organizations in appropriate ways.

The schools are being asked by the State Superintendent of Public Instruction to conduct exercises in which the children of the various classes may take part. Many schools will wish to plant one or more trees on the school grounds; others will keep the exercises within doors and decorate with the colored fall leaves or the fruits of the native trees.

Women's Clubs can probably help most effectively by advising with and assisting the teachers to carry through a suitable program in the local schools, though the opportunity of having a Forestry or Tree Program in the Club should not be neglected.

Boy Scouts should by all means plant a tree on public ground, naming it after some local or national celebrity. One of the oaks common to the region should be selected for this purpose.

Civic Clubs, instead of planting, might well take some definite and aggressive action looking to the better protection of the shade and roadside trees of their town and from mutilation of those which have been growing many years is much more important. The Women's Clubs can also help most effectively in this work.

The message of Arbor Day to the grown-ups as well as the children of North Carolina is: Know the Trees—learn to appreciate their beauty, their value, and so learn to grow and protect them in forest, park and roadside. North Carolina is third among the States in the number of tree species; let us be first rather than last in the care of this God-given heritage.

J. S. HOLMES,

State Forester.