

## Mechanizing...

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The products of the farm are not yet sufficient to feed the ever-growing inhabitants.

Modern farm motors and power machinery have the definite advantage of giving better quality of work and of doing the job in much less time than by the man and animal labor. By increasing the area under cultivation with the use of mechanized units, it is possible to supply food to our millions of population plus food for additional millions outside of the Philippines.

The use of carabaos and of bullocks as the main source of native power has the disadvantage of being slow, weak, and subject to attack of pests and diseases. With mechanized units unnecessary delays can be minimized or ultimately cut out, and land preparation, planting, cultivating, harvesting, threshing, preparation of finished agricultural products, and delivery to market will all be done on time.

Although estimates made in the College of Agriculture always indicate better economy with the use of modern implements it is difficult to figure comparative costs owing to different rates of local wages and of unfixed prices of motors and machinery. In large sugar centrals and in Koronadal Valley where power-driven machinery have been found to be an absolute necessity and where no other tools are used or called upon to do various heavy farm work for so many days in the year, the utilization of modern farm mechanical equipment proved desirable and profitable.

### MECHANIZATION PROBLEMS

There are thousands and thousands of individual farmers in the Philippines at present who consider the native plow the one and only tool that seems to be able to do good tillage work on their small farms. The College of Agriculture has gathered plenty of local data to prove the suitability of tractors and of some agricultural machinery in raising some crops. Some big sugar centrals, the Government owned Land Settlement Administration at Cotabato few big landed estates, and the Bureau of Plant Industry have demonstrated to some extent the efficient and profitable use of some of some mechanized units in large tracts of land. Where men and women are still to be had for planting and harvesting by hand, where method of

# FOOD FOR THOUGHT

(Reprint)

"The progress of the Western civilization is marked by the improvement of the plough. The pre-historic plough was the crooked stick drawn by man. It was merely a scratching tool. Every man was his own draught animal. Somehow the farmer and his family could manage to eke out their existence with this crude method of tillage. In India too we find reference to this kind of tool in the hands of Balaram, the brother of Sri Krishna who is considered to be the father of Indian agriculture. Balaram used to carry a plough as his emblem and was also called by the name of Haladhra or the carrier of a plough.

"In ancient Egypt a form of hoe made from a crooked stick used to serve the purpose of a plough.

"The Roman plough which Virgil describes used to be made of two pieces of wood meeting at an acute angle and plated with iron.

"In the middle ages no improvement of the plough was noticed. The Dutch were the first people to greatly modify the Roman plough. They first conceived the fundamental ideas of the modern plough. They made their plough with a curved mouldboard, a beam and two handles. In England in the beginning of the eighteenth century the Dutch plough served as a model...

"In America after the Revolution-

farming, specially that for lowland rice, has to be carried on in small plots of well puddled mud or on limited areas, and where farmers are still available to work with the meager returns that they get from their farms either as part owners or as tenants, it will not be an easy matter to generalize the use of mechanization. A very thorough process of proving, approving, disapproving, and improving of various farm power and farm machinery will still have to be carried out extensively. What types of farming can best be mechanized, what size of land and machines must be secured to suit various farm conditions, what engines and devices will give the most efficient and profitable return, and what will be the ultimate effect of mechanization to the mode of living, happiness, and welfare of the Filipino people, are the problems that must be well considered in relation to the mechanization of Philippine agriculture.

ary War the English plough was gradually replaced by ploughs made in the United States. Among those who gave first thought to the improvement of the plough, the names of Thomas Jefferson, Daniel Webster, Charles Newbold and Jethro Wood are prominent...

"The Indian plough is a wedge-shaped toothed implement provided with one handle, a long wooden beam and a long iron pointed share all attached to its wooden body. It stirs the soil all right but inverts it very little. It closely resembles a medieval plough. It takes much time and labour to prepare a seed bed with this plough..."

—The Allahabad Farmer. (India)

## Preparation And...

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or turf as floors of the pit. He believes that these materials are obstacles for the earthworms to get access into the compost materials. Earthworms and microorganisms in the soil aid greatly in the decomposition of the compost materials. Earthworms provide fertilizing substance when they die after performing humus formation activity.

3. The maintenance of the proper amount of moisture is one of the most important requirements of the compost.

4. The fermentation occurring inside of the pile is a life process, hence the pile must be allowed to breathe, and it should be well aerated.

5. A compost pile that is too dry requires watering. Dry compost gets hot very easily and fermentation is destroyed.

6. The guiding principle is the fact that the compost pile itself must be treated as a living organism because of the bacterial content and its internal fermentation.

7. In the case of a big compost heap, turning the pile is necessary. In turning, the outside of the original heap should be made the inner part of the new, and the former inner part now becomes the new outside. It results into a uniform decomposition of the compost materials in the same heap.

8. Weeds should not be allowed to grow on the compost pile. A growth of grass on the pile is harmful because it prevents the air from coming into the pile due to its thick root system, thus precluding fermentation.