

**Column for Manila Bulletin**  
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**Of Trees and Forest**

### **Mechanizing Agriculture For Food Security**

LAST February 27, I urgently called on the government in Senate Resolution No. 731 “to devise strategies that promote modern farming methods and adopt new approaches, including the so-called climate-smart agriculture.”

“Climate-smart agriculture,” according to the United Nations’ Food and Agriculture Organization (FAO), means “intensifying production systems to achieve productivity increases, as well as climate change adaptation and mitigation.”

I made that same call in this column last March 20, and barely three months after it came out, major newspapers carried reports about the need to increase mechanization of Philippine agriculture.

The reports cited the Philippine Center for Postharvest Development and Mechanization (PhilMech) as saying the country has one of the lowest rates of mechanization in Southeast Asia at half a horsepower per hectare (0.5 hp/ha).

Vietnam and Thailand, which are both rice exporters and are the major sources of Philippine rice imports, both have a higher mechanization rate at 0.7 hp/ha. South Korea has an even higher farm mechanization rate of 4 hp/ha, while highly industrialized Japan remains a major rice producer with a mechanization rate of 7 hp/ha.

Filipino farmers, according to PhilMech Executive Director Rex Bingabing, rely heavily on manual labor in land preparation, planting, and harvesting. He estimated production losses at 16 percent of total rice production because of inefficient farming methods.

Less than a week after the report on the state of farm mechanization in the Philippines came out, the Department of Agriculture (DA) announced in the Philippine Gazette the allocation of an initial P6 billion to increase the country’s farm mechanization rate. It quoted Agriculture Secretary Proceso J. Alcala as saying, “our target in the medium-term is to increase the current farm mechanization level at 0.57 horsepower per hectare to 0.8 hp/ha.”

For the national rice program alone, Secretary Alcala said the DA had already allotted P3.6 billion (P1 billion in 2011, for the purchase of 2,300 units of postharvest machinery and other equipment; and P2.6 billion for this year, for the purchase of 7,000 agricultural machines that would be distributed to farmers’ groups and local government units.). And the department is proposing another P2.4 billion for more purchases of farm machinery under the proposed national budget for 2013.

The government expects to reduce rice importation to 500,000 metric tons this year, compared with 850,000 metric tons last year and 2.47 metric tons in 2010. The agriculture department said the country is on track to achieving rice self-sufficiency by 2013, with production in 2012 on track to reaching 18.46 million metric tons, due to the continuing mechanization and good weather.

The mechanization of agriculture program, however, has raised another issue that must be addressed. PhilMech’s Bingabin observed that some farmers are reluctant to mechanize because they fear losing work. He also observed that many farmers allowed

much produce to be wasted or to rot because of excess production or because traders were not willing to pay better prices.

In my view, mechanizing our agricultural sector poses a kind of cultural shock among farmers who have long relied on manual farming. The program should not be limited to giving farmers access to modern equipment. It should also include a program to educate them on the benefits of using efficient technology and machinery. In short, an attitude change.

In addition, the government must adopt programs and strategies to establish a ready market for the farmers' produce, whether local or international. I believe that the success of farm production in Thailand, Vietnam, and other agricultural countries is largely due to the fact that their farmers are assured of domestic and overseas markets for their harvests.

Let us remember the global food crisis that erupted in 2007 and 2008 remains a constant threat because of the growing world population, climate change and even volatile energy supplies and prices.

For the Philippines, food security is a permanent issue of national interest which can be addressed through high and efficient agricultural production.

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