## Highlights of Agro-Industrial Cluster Analyses

## STRENGTHENING GENETIC RESOURCES AND ENTREPRENEURSHIP

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I wish to congratulate NAST for coming out with PA 2020. It is a landmark output for Philippine Agriculture. One of the innovations noted was that rice and white corn were clustered as one. Rice and corn were always treated as separate commodities. This is logical because white corn is a staple in Mindanao and the Visayas and their increased production could somehow relieve the pressure for the production of rice.

Another innovation is the clustering of yellow corn with poultry and swine, again very logical because yellow corn goes more to hog and poultry feeds making up more than 50% of feed constituent. So these are two new groupings involving corn. As usual, vegetables as a group is very complex because they range from leafy vegetables to root crops. Sugar cane, of course, stands by itself and so does coconut, abaca and coffee.

The PA 2020 reports follow a pattern starting with the vision for the cluster, goal, objectives and then industry analysis - present state of the industry, costs and returns, and whether the crop is competitive as an export crop or as an import substitution crop. SWOT analysis was also done for each cluster noting strengths and weaknesses. In some clusters, there are proposed activities and/or actions to address some of the weaknesses.

What are my overall comments? First, I agree in general with the analysis for each cluster of crops or group of crops. I will leave to the commodity experts what interventions are needed to address problems in these commodities.

In relation to the goals of PA 2020 namely: decreased poverty, enhanced food, fiber and bio-energy security, improved agro-industrial competitiveness, and improved sustainability of the ecosystem, these goals have two things

in common - increased productivity and production efficiency - regardless of the crop or group of crops. Thus, productivity and efficiency are fundamental goals for development of agriculture in the Philippines.

For productivity to be sustainable in the long term, biodiversity underpins productivity. The 2020 report affirms how rich the Philippines is in biodiversity. In plants, the country has an estimated 15,000 species and that 50% of these are endemic. Somehow I did not read in the documents that this is a very important component of our sustainability for the next 15 years. Thus, my first suggestion is that the 2020 documents must emphasize that conservation of genetic resources is fundamental to our current and future improvements in agriculture. This should be made part of the PA 2020 development strategy through the reinvigoration of the National Plant Genetic Resources System with its nucleus at the National Plant Genetic Resources Laboratory, Institute of Plant Breeding, College of Agriculture, U.P. Los Banos. This point should be explicitly stated in the documents considering that present conditions of the Philippine environment are putting pressures on the country's agricultural productivity, efficiency and sustainability due to losses in soil fertility, erosion and loss in biodiversity, among other losses.

The document states further that "technology development within the next 15 years or even beyond should anticipate the technology needs of different agro-industrial clusters to make Philippine agriculture more efficient, more competitive and more profitable to the producers while assuring sustainability of resources for future generations." With genetic resources conservation explicitly stated as a development strategy, the government must devote sufficient resources to maintain and to conserve our plant, animal and other biotic resources.

Another point I wish to bring out is that science-based technology can transform traditional farmers to entrepreneurs. One of the premises in this document is that agriculture must be organized and managed as a business. From the viewpoint of poverty alleviation among traditional farmers, I contend that this could be the case. I would like to cite an experience under the current hybrid rice program in the country.

During one harvest festival of hybrid rice in Laguna, comments of a farmer were very revealing in relation to this point. It took him a long time to try to grow F1 hybrid rice because he was always thinking of the higher cost of the seed. When finally persuaded by the LGU technician, he succeeded with a really good harvest compared to his previous crops. The

farmer said he began to think not only of the cost to grow rice but was now looking more at how much he could potentially get from his crop! A big step in the transformation towards entrepreneurship.

Hybrid seed as an example of science-based technology has been established and has boosted the local corn industry as well as the vegetable industry. In rice, the technology is spawning a local hybrid rice seed industry. And this development is pushing modernization of rice production in the country as well. Hybrid seed companies are expanding their markets and have gone global in the region. Indeed, science-based technology could be a key to organizing and managing agriculture as a business.