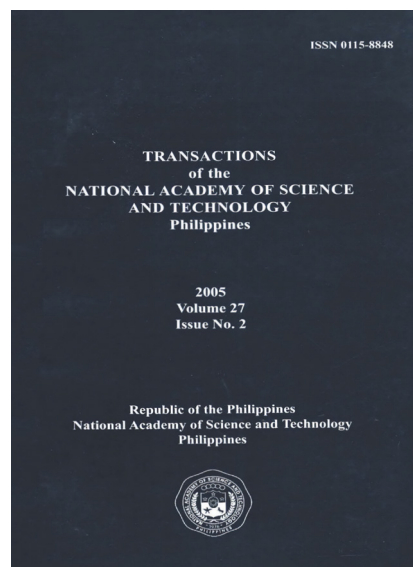


Transactions NAST PHL, is the official journal of the National Academy of Science and Technology Philippines. It has traditionally published papers presented during the Academy's Annual Scientific Meeting since 1979 to promote science-based policy discussions of and recommendations on timely and relevant national issues as part of its functions as a national science academy. Starting in 2021, this journal has been open to contributions from the global scientific community in all fields of science and technology.

---



## Infrastructure and Support Services for Philippine Agriculture 2020

---

### Citation

27th ASM-NAST PHL. 2005. Open Forum: Infrastructure and support services for Philippine Agriculture 2020. Transactions NAST PHL 27(2): 279-282. doi. [org/10.57043/transnastphl.2005.4652](https://doi.org/10.57043/transnastphl.2005.4652)

### Copyright

© 2005

## **Infrastructure and Support Services for Philippine Agriculture 2020**

### **OPEN FORUM**

**Dr. R. Gloria**, former Secretary, DOST: Firstly, how would you address the cost of fuel and energy in PA 2020, this was mentioned already? Secondly, we would like to suggest that the writing group and NAST look into the privatization of agricultural extension of the country. Thirdly, we request and suggest that NAST and its scientists volunteer as experts for the Department of Agriculture, DOST, CHED, and DTI at one peso per year. We would like to suggest in the writeup that they should include the role of state universities and colleges in this PA 2020. What is the role of UP Los Baños which is supposed to be the national conscience of Philippine Agriculture? I think the battleground in the next years to come is not the land; the battleground is knowledge. How are we going to harness knowledge, science and technology to achieve poverty alleviation, food security, etc. Finally, I recommend a chapter on the level of investment and strategy on human resource development to achieve our target of Philippine Agriculture 2020. Thank you Sir.

**Academician CL Follosco**: I will try to answer first, and then, my colleagues here can handle the other questions. It's not an easy thing. First, regarding energy and fuel, we expect fuel to become a major problem. Since we are talking of agriculture, we have not tapped our bio-resources and bio-wastes. Rice hull is not being used for fuel; bagasse is now being partially utilized. The use of bio-wastes including agricultural wastes are the concern of all the countries in the world especially United States. In the latest meeting I attended on energy sponsored by the Association of Academies of Sciences in Asia (AASA) in Dalian City, China a year ago, the recommendation was to go into alternative fuel on a hi-breed system. Second, privatization of agricultural extension can be done except for few technologies that are pioneering. The private sector should take over. I learned this when I visited Academicians Emil Javier and Ruben Villareal in Taiwan at the Asian Vegetable Research and Development Center. They said that in Taiwan, even if the research is not yet complete but the product is promising, the farmers and businessmen already take it and complete it

for commercialization. In the Philippines, 20 years after the research, nobody takes it. Either the research is not market-oriented or the businessman is not technology or knowledge-oriented. Third, regarding NAST as volunteers to the Department of Agriculture and other agencies, I think that is now being done by many of the NAST Academicians and National Scientists. I for one spend 60% of my time for free just to help other government agencies and the private sector. However there are only 51 members of the Academy and we cannot be all over for that. Regarding the role of SCUs, with their reduced budget, then they have to be more or less sustainable. Unfortunately, the SCUs are not market-oriented and their products are not attractive to investors, as we have observed in their presentations to the Management Association of the Philippines. Regarding knowledge, the primary concern of the country is on knowledge management, in which we are still very weak. Our engineers are having a hard time getting APEC accreditation. There were only six accepted as the first batch of engineers who were registered in APEC. I hope steps can be taken to further improve knowledge management. If the company is not going to put attention to knowledge and all other industries will not do it, then we will not prosper. We'll just be assemblers of electronics or exporters of overseas workers. Next, the level of investment for HRD is low which should be increased. In my case, even for small firms that I manage myself, I have to create an HRD department because that is the key to our success.

**Unidentified:** In the PA 2020, there is very little or no presentation and analysis on the production of crop, livestock, fisheries, and wood and on postharvest. All of these entail the use of a lot of energy. I suggest a section on productivity and a whole section on energy. How can we be self-sufficient and be globally competitive when we have no control in the external factors at the cost of our production and processing? Thank you.

**Academician CL Follosco:** I think you're right. Energy is our major concern and therefore we'll have to take a look at certain regions of the country where energy can be generated by windmills, steam power, hydroelectric power, etc. We can use manure from the livestock industry for methane gas. You can use hybrid systems that are suitable for a locality. We have biodiesel but it is very expensive compared to fossil fuel. We have tried it and could not justify its use but I heard the one in Romblon is doing alright so I still have to see the economics of that on methyl ester. In addition, I am personally involved in a new technology for the use of crude oil for processing called ozonation. This is in addition to the methyl ester and this will be slightly much cheaper as a fuel additive from coconut.

**Sec. Manuel Lim:** I have good news for you about energy. There are two firms that are now supplying gasifiers for use in dryers and they use their waste from the wastes such as rice hull and corn cob. The other is the Romblon plant which is planning to sell its bio-diesel at P39 per liter.

**Unidentified:** It is known that corn cob is in fact of higher energy value compared with rice hull, although there is more rice hull available than corn cob. But there are other more valuable applications for these commodities than just for biomass applications. A couple of government agencies and also private sector are looking at composites. But we need to go beyond the use of biomass technology to address our energy problems. I think we should advance further to use passive devices, absorb more efficiently solar energy, reduce that five dollar per watt energy conversion to electricity to a more economical scale. Thank you Sir.

**Academician CL Follosco:** Maybe I can add to that. We need to include in our concern that the energy utilized should not contribute to the ozone layer. Regarding gasifiers, we have the technologies in the Philippines. At ITDI, DOST, there are gasifiers which have been installed in many brick plans already in many parts of the country. But maybe, we need to consider other sources of energy. It is interesting to note that there are some companies in Europe that like to put up malunggay farms for the production of diesel fuel and I said how can you justify the economics of it? They said yes, we have done it in Africa and we are going to ask the Philippines to see where we can get credits under the Kyoto protocol. Some Japanese have already come here to improve the systems of the sugar mills utilizing the Kyoto concept/credits. The developed countries are willing to donate the credits to the developing countries as long as we can reduce global warming.

**Ms. Aurora Peralta:** I'm Aurora Peralta from the Fiber Industry Development Authority. I'm one of the writers for the Abaca 2020. We are last in agricultural development among the ASEAN countries, inspite of the brilliance of the minds of the Filipinos. I think George has stated in different words that it is because of our weak political governance. How will you factor politics in achieving the objectives of agricultural 2020. It is not part of the outline that was presented by Dr. Javier, and I think everybody will agree that our plan will result in nothing, without factoring in the influence of weak political governance. Thank you.

**Academician CL Follosco:** The recommendations that I have proposed now consider the social factors which include the political factor. That is

why it is strong for private sector involvement. I mention the fact that the more a commodity is managed by a government agency, the more it becomes uncompetitive. Banana, pineapple, mango and other seaweeds are not managed by any agency. They are very competitive. The point is, what we need are government support in terms of infrastructures and incentives as was done in the case of clustering approach which is in the investment priorities plan under IPP.

**Ms. Aurora Peralta:** If I understand you right, you may have to define the limits to government participation in developing agriculture. How shall we do it?

**Academician CL Follosco:** We should refrain from giving dole outs. The dole out mentality has destroyed the farmers' culture. When you give free fertilizer they just wait, when you just give loans coming from government agencies, they will not pay because they will just say *gobyerno naman yan*. Many of these we have to factor in. That's why it should be private sector oriented like Thailand and Taiwan.

Just earlier, I was talking with several of our panelists that when a new secretary comes into the department, he brings in new consultants who will say that what they are doing is wrong. And so their department plans are changed. In contrast, Japan has ten-year plans which do not change just because the leadership changes.

We have tried clustering with some successes in different parts of the Philippines that is why by next year, we shall be able to come out with a convention on success stories on clustering. The many discussions we had are those that have come to my attention because I go over the Philippines. On the national cluster approach, we have now a memorandum agreement between and among DA, DTI, DOST, and private sector all working together including the academic sectors in all the regions and provinces of the country and the various sectors including the knowledge sectors. We are pushing this year the tourism cluster including eco-tourism, health sector, engineering, etc. All these should be done and we hope that you do also some clustering by yourselves. But when you cluster, remember the four Es that I like to impart as a final message. First: after clustering, we must reEngineer the whole system and it can take many steps. Second: we need to Educate our people. Third: we must study Entrepreneurship. Fourth and the final one, let's try for Excellence because if we are content to be number 57 for jewelry and in the furniture business, if we do not work for excellence, then we will always be way behind. So with this, I would like to thank you for the interest in this subject. We hope that we have challenged you all.