

## **SESSION 3**

**Organization of the Club  
and proposals for future activity**

## G. Pellizzi

This third work session will be dedicated to the discussion and definition of the organization of the Club and its meetings, together with a consideration of the activities to be developed in the near future.

In this regard, I would first like to give you some details on the proposal discussed yesterday morning by the Management Committee.

First of all, there is foreseen an enlargement and modification of the Management Committee. This proposal, accepted also by UNACOMA, suggests including in the Management Committee a representative for African countries in the person of Mr. Ela Evina of Cameroon, President of ACEMA, the Euro-African Association of Centres for Agricultural Mechanization, with headquarters in Yaoundè, Cameroon.

Secondly, we propose to substitute on the Management Committee, Dr. L. Leviticus, who, on his own request, has informed us by letter that he can no longer follow through, on a regular basis, his work for the Club due to other professional commitments. Accepting his request with much regret and thanking Dr. Leviticus for his past collaboration, the M.C. proposes the nomination as member of the M.C., representing the USA, Prof. R. Hegg of Clemson University, North Carolina.

I thank you for your approval and consent.

Thirdly, we believe it in our interests to try to enlarge the number of full members with particular reference to countries, particularly developing countries, which were not taken into consideration previously. We are thinking in terms of Zimbabwe, Nigeria and Morocco, and we are awaiting news from them concerning eventual proposals of names and also, in any case, proposals of organizations of other countries and international organizations.

The fourth point concerns the need and

usefulness, confirmed also by UNACOMA, as the host organization, to organize meetings of the Club on an annual basis here in Bologna during EIMA. The purpose being to attempt to develop re-search and analysis activities for future worldwide requirements for agricultural mechanization. This, in our opinion, should have as its basis, a knowledge of the actual situations in a number of countries in order to then move forward and make analyses of alternative scenarios for future development of mechanization which also would take into account highly innovative technologies which were mentioned yesterday by Prof. Matthews and Mr. Lucas.

In this framework, it should be kept in mind that the work to be done is essentially aimed at furnishing, most importantly, to the operational sector (industrial and agricultural) and the political sector, a series of evaluations which can be applied in reaching more appropriate decisions relating to the worldwide evolution of agriculture and the inter-relationships with economics and markets.

Thus, it seems logical to divide our related activities into two parts: a first part should be condensed — and we will later request this officially by letter to Club members — in a report which relates to each country and in which each full member develops an analysis of the existing situation — something along the lines of the analyses presented by Prof. Kitani, Prof. Matthews, Mr. Lucas and myself and also by Marcenko for Russia and Ka Hua for China. The final objective is to formulate a "reference bank" which can then be used in an eventual comparative analysis.

I am well aware that this constitutes a substantial effort which is in part statistical; nonetheless, I believe it is most important that we work towards developing something of this nature. Consequently, we will send to the members a very simplified analysis scheme, asking them to follow it in preparing a 6-8 page report so

that we will be able to publish the complete body of reports.

This will help us in permitting the technical secretariat of the Club to formulate initial comparative evaluations prior to the meeting next year in Bologna.

The second area of activity which we would like to propose to you is that of attempting to develop methodology and conceptual types of analyses on innovations or on specific themes, making available keynote papers of high quality which can be distributed beforehand so that they can be discussed at our next meeting.

During the meeting of the M.C. we drew up a presentation of several of these themes which we would like to request that each of you take into consideration, so that we can discuss them all and choose, for example, two of them to be examined in 1990. Two other themes could then be developed in 1991 and so on.

The first theme concerns the *mechanization of small farms*, both in developing and industrialized countries. The problems in the two cases are, in fact, extremely different, even if in both, the topic should be considered in terms of the need to define "appropriate technologies".

In Developing Countries it will be a case of essentially defining technologies which are "labour intensive" even if the intensity levels are disparate, for use at different levels of economic development. In the industrialized Countries, instead, there is probably the need for the availability of highly automatized machinery which can provide low cost service in small farms, taking into account the part-time factor as well as the need to protect the environment.

In several European countries, in fact, there is already discussion in favour of limitations on the areas of farms, principally for reasons of environmental protection.

A second proposal concerns the implications of *agricultural mechanization in countries in a transitional phase*.

This theme, which has not often been

studied, seems to me to be particularly important in order to define the steps which should be followed. There exist enormous needs to be covered: one particularly relates to the fact that evolution of mechanization cannot be considered in a developing country if, at the same time, a development of the general economy, of the manufacturing industry of agricultural machinery and allied facilities are not also taken account of.

In order to produce machinery it is also necessary to verify if such production is worthwhile in terms of technical and economic factors and on this basis define the minimum quantity which is reasonable. This creates problems of: joint ventures among industrialized countries and developing countries; definition of the added value in the manufacturing sector of developing countries; analyses of progressive evolution. This is a multifaced theme which deserves careful consideration and thought.

A third proposal concerns the analysis of the needs of *computerized management* in commercial farming.

What can be done, what must be done in this case? What is today and what will be the role of data processing mentioned by Lucas yesterday? As Matthews mentioned last night, what will be the role of high-tech engineering and physics on the development of agriculture and how can it be most efficiently and rationally managed? How, in other words, can high-tech engineering and physics help to preserve the environment, aid development in agriculture, protect mankind and improve the quality of products? All these points reflect back to what Matthews mentioned yesterday: from the application of sensor to visual systems, from robotics to artificial intelligence and model systems and so on.

Lastly, there is a final proposal — my own — which for me is extremely important, even if, just yesterday, it was briefly discussed by some members of the M.C. This proposal derives from the consi-

deration that, especially in industrialized countries, agriculture must respond more and more rapidly to changes in market needs and requirements, whose needs, in themselves, are changing with ever increasing speed.

If this is true, it means that agriculture must be ever more elastic and must be able to change its own productive targets just as quickly.

Given this situation, it goes without saying that present day mechanization, based on the construction of machinery which has an exceptionally long lifespan, constitutes a significant economic barrier for the evolution of agriculture and technological updating, as this same mechanization represents a non-flexible element for agriculture itself.

Please allow me to make an example; a construction firm producing tractors or agricultural machinery is, based in part, today, on providing a service for spare parts which foresees the possibility of furnishing these parts to customers for at least 15 years from the moment the machinery leaves the production line.

This reality is a factor which goes against technological innovation, which supports the secondhand market, which prevents innovation in agriculture and which certainly leads to added costs because, in order to maintain a warehouse stock of such entity for so many machines, for so many machines for so many years, increases marketing costs as well as those of the commercial farm.

So, my question is, can we not study some solutions which have a shorter lifespan and are more compatible (probably from 30-35% inferior to the present number) and of lower cost so that: a fleet of machinery will be easier and cheaper to re-new; farmers will be able to keep up with technological advances; the individual fleet of machinery can be reduced as well as stocks of spare parts and post-sales servicing.

This is an idea which deserves research and study and which could be, perhaps,

a study topic for a work team in our Club.

It is on the basis of these very general proposals that we want your opinion, in particular, to be able to organize and define our future programme for work and study.

#### **Dr. Yoav Sarig - Israel**

I think that before we get started one should review the purpose of establishing the Club of Bologna and, thinking of my-self as one of the initiators of this idea, which arises from the idea of the Club of Rome, I was surprised to find out that many of the participants do not even know what the Club of Rome is or was. I think, before we get started with the Club of Bologna one should get back to the sources. And, I think the idea of the Club of Bologna, which, in my opinion is a sound idea, a good one, provided we pursue it correctly, is that somehow with the group of, those considered senior scientists from all over the world, we should be able to make some planning for accomplishments in the future. I do not think we need another form of conference, there are enough opportunities for professional meetings and we do not want to have papers presented. I do not think that this is the purpose of our gathering together as a distinguished group. The idea is to benefit from the intelligence and experience of the people who are here or of those who are absent and full members of the Club and to be able to come up eventually with a series of guidelines for the future, with predictions; such as, where are we aiming in terms of tractors and harvesting machinery? And, hopefully, the policy makers worldwide, in a broad sense, would recognize the importance of these findings of this group. We are not talking right now about the mechanisms of how to do that and Professor Pellizzi has outlined some proposals on how to approach them, but, before we get started, we should be able, at least, to identify exactly what is the pur-

pose of this Club. I understood, for instance, from Professor Matthews, that there is already a group within the EEC that is doing work on high tech as related to agriculture. We do not want to have a duplicate of the work that has already been done there, we do not want to copy and I think we should focus on or find our own needs. Nobody is doing any work. That is basically at least, how I perceive UNACOMA, was motivated and I think we should all be grateful for this support of the idea, because they realized what we all lack, at the present time; something that the Club of Rome tried to deliver and was good at in its time and the work that has been done was very important at that time, and, in fact, was used by policy makers to make some global predictions.

That is the premise and I propose to you that maybe we should get started with a discussion on the purpose of the Club; what are we aiming at? What do we actually want to see in this Club? And then we could discuss some of the proposals that have been made by the management committee and maybe some other proposals that can be made by full members. And what I would like to see personally, before we depart all to his own country, is to see some specific goal set up and some targets for next year.

### **G. Pellizzi**

Thank you Dr. Sarig. I would briefly like to answer you on two points.

First of all, the possible duplication with the European Committee Club of Advanced Engineering for Agriculture. In this case, I do not believe that the subject themes are the same. In the case of Europe, in fact, that is a union of research institutes which operates independently in their search to develop research themes for proposal, essentially to the directional bodies of the Community. Our purpose, instead, is that of being an observational entity or a think tank which attempts to understand

the present overall situation in order to make predictions for the future.

Secondly, your mention of the Club of Rome is most opportune because the Club of Rome, when that famous book was published which then resulted not entirely coherent with the reality of development, but which, just the same stimulated great interest, worked for several years in an attempt to develop analyses about the knowledge of the present situation in order to define predictions based on alternative solutions. Something along the same lines, if you remember, was carried out by FAO several years ago when it published a report "Agriculture in View of 2000", which proposed several alternative solutions for development of the various types of agriculture in diverse countries, with specific reference, of course, to developing countries.

So, I believe that our goal is similar and that we should be involved in discussions on future aims and accomplishments. But before we begin, we need to have a deep and complete overall knowledge of the existing situations in different countries.

We all, to a certain degree, are familiar with the realities in many countries, but we do not know the entire picture, and what we need is a series of basic facts and figures in order to proceed. This is essentially the intention of the proposal to divide the targets of the Club of Bologna in two areas: one concerning the knowledge of the present situation and the other concerning the study of several innovative proposals based on a thorough analysis for development.

### **Dr. Ing. Arno Gego - FRG.**

I have a few comments and answers to your questions.

I was here this morning and last night thinking a little bit on the activities of the Club of Rome. First of all I think your activity is very good, should be supported and we should find a way to focus it.

I think the strategies for the development of agricultural mechanization is a good title; we should try to follow it. My proposition is not entirely clear at this moment and the question is how can we, with all these famous people from all over the world, move on to immediate results and publish it, not with many papers but by press conferences, by messages. The question is: could we find a system to get a message out next year, for instance, to have one focus message which is giving direction to one future question. You have mentioned a few questions and I think my proposition would be to concentrate each year on one point, to look for one global, very important message.

I would propose concentrating on regional more than country questions. I think, one can divide Europe into a few regions but not into so many countries. You see, maybe the message should concern the long term development of regions. The question could be: what is a region? But we can discuss it. Concerning the general programme of the meeting I would propose to look more for having round-table discussions and not formal things. Rather for round-tables to have a very open, relaxed discussion, not a lot of detailed re-ports but to think about how to arrive at useful solutions. I think for the next time we should organize a press-conference, maybe in connection with UNACOMA because UNACOMA should have the credit is due.

We should have a press conference immediately or after the meeting, working out the message in a small team and have the press conference at a later date because the timing is very important to have people. It could be an exhibition or I do not know what but you should have people together and a good representation of this group. You have been mentioning some items and I would perhaps give a few more ideas. For instance, questions like regional things, agriculture, environment in a special area case, the growth of robotics etc.

### **Prof. G.T. Ward - New Zealand**

I have appreciated very much Doctor Sarig's remarks now and I just want to put forward the point that we should have some moral appreciation of the situation that I have come from the other part of the world which looks at Europe. You cut through everything, you know everything, you have done all the research, the fact that so many scientists have been made redundant in different countries in the last few years is a measure of the response of the population to the fact we already know so much but we have not applied it nearly enough. Now, we live in one world, what is the use of Europe having a very high standard of living when other people are so discontented, so dissatisfied, because they are under-privileged and they resort to violence and other things. We have to live together, all the populations of the world. The only way to survive is to cooperate with each other and so I think I would like to see more of the membership based on a population basis than on a rich men's club, if you like. I would like to see a strong representation of the undeveloped countries. Their best future is to form a brotherhood, as we have just been hearing, with the countries that need development, that need industrialization.

Then we should apply ourselves. We have already solved most of our problems really, the extra gains will be marginal ones. Now, our technology is so enormous that it is starting to destroy our own bed. Our own environment in the last few years has deteriorated so much! If we could focus more on a global view and on cooperating with areas that need industrialization we would profit or you would profit, in the developed countries, through more opportunities of applying all the knowledge that you have to these new problems. I mean, as far as I can see, in the last couple of decades there has just been a gesture towards the design of equipment, especially for different types of societies.