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E DITORIAL

Agricultural statistics are the most advanced in the Community, and provide a solid foundation for the major political decisions which are shaping the recently-reformed common agricultural policy (CAP).

These statistics are used directly in launching administrative measures or calculating aid to producers; and always aim to achieve greater efficiency by asking all concerned to concentrate their efforts on those areas where they can produce the greatest amount of information of use to both themselves and the whole of the European Statistical System (ESS).

The ESS can amend its enacting terms to allow this flexibility.

Faced with new demands, the specific aims of these statistics should include the more accurate measurement of the ecological impact of agricultural activity, and spotlighting production as well as internal and external marketing and real consumption. The focus will also be on incomes rather than products.

Over 30 years of close cooperation between Eurostat and those responsible for the common agricultural policy have shown that most problems can be solved if both partners are determined to achieve the aim of working for the good of all.

This is the spirit which should always guide our efforts to ensure that correct and well-disseminated statistical information helps both political decision-makers and the operators directly involved to assume particularly onerous public responsibilities.

David W. Heath

Director of Agricultural, fisheries and environmental statistics

E XTENSIVE STATISTICS FOR FAR-REACHING POLICIES

Interview with Mr Yves Franchet

No field of statistics within the European statistical system has benefited from as much development activity as agricultural statistics. A key component in guiding and managing what has hitherto been Europe's most important policy, these statistics are adapting to the needs of the new CAP, which will continue to make substantial use of the figures provided.

PREPARING AND MONITORING GATT

Throughout the whole of the Uruguay Round process, the Commission has sought to uphold Community interests.

Do the agricultural statistics produced by Eurostat provide sufficient data (in both quantitative and qualitative terms) to carry out or assist the GATT negotiations?

Trade and markets

'Within the context of GATT, there are two types of information of particular strategic importance:

- volume of trade: these data are provided on a very regular basis by external trade statistics, which have remained unaffected by the abolition of internal frontiers. They are satisfactory in terms of both quantity and quality, and are produced within the desired time limits;
- in addition to purely statistical information, market data supplied on a day-to-day basis should be used by the agricultural policy steering committees.

The figures provided constitute a mountain of information on operators, markets and products, observed at a very detailed level. Though all these figures can be used to carry out or assist the negotiations and exceed the normal expectations of statistics, they are generally available in good condition.

Subsidies

On the other hand, one of the points of contention at the GATT talks concerns the systems and level of subsidies (more specifically export subsidies) applied by each member of GATT.

Statistics are certainly able to provide a good estimate of the direct subsidies paid to Community producers, but indirect subsidies (par-

ticularly those made through price support mechanisms) are not measured statistically.

The Europeans and Americans, for example, interpret the very idea of subsidies and their associated concepts in different ways. The various systems of subsidies used by each side require the use of hypotheses which go way beyond the domain of statistics and which, by their very nature, are not necessarily neutral...'

THE CHALLENGE OF ASSESSING IMPACT

Can the European statistical system be used to make a valid assessment of the impact of agreements in the short, medium and long term?

'The ESS does indeed provide an essential stock of information which is indispensable for measuring impact. On the basis of these reliable statistics, the different countries or organizations concerned can form certain hypotheses and try to picture trends in prices, the reactions of the different operators, the international markets, exchange rates, etc. The Member States of the Community do not always choose the same basic hypotheses, and sometimes assess the impact of the new CAP on the GATT negotiations in different ways.

Each party is obviously free to carry out this sort of modelling work in the manner they see fit and make their own projections of the future. It is, therefore, hardly surprising that completely different scenarios evolve from the same basic statistics in countries which have chosen economic, social and financial hypotheses that are sometimes far removed from each other.'

Hypotheses and divergences

The 'impact studies' can therefore lead to diverging conclusions. Starting from a 'zero point' which

can be measured fairly accurately (the agreements signed or the definition of the 'new CAP'), the scenario may be pessimistic or optimistic. Obviously, it accompanies the political negotiations and exercises a strong influence on them in one direction or the other.

Statistics here are only a working basis, and it is not their role to develop any particular vision of the world on the basis of the figures supplied.

EUROPEAN STATISTICS

Is it more difficult for Eurostat to centralize all the work involved in European agricultural statistics than in other statistical fields. Why?

'In our system, no field has been developed as intensively as agriculture and none have been subject to the same amount of harmonization and detailed discussions with a view to measuring the prevailing conditions in each Member State. Nor is there probably any other part of the world where the same volume of statistics is available on such a varied group of countries and with the same level of comparability.

How have such developments been possible, when agriculture accounts for less than 10% of value-added in GDP while services make up over 60%? Quite simply because, from the very outset, agricultural policy has been the largest of the Community's policies, and even today it devours two-thirds of the Community's budget!

Development work has presented no real difficulties and, in fact, the pilot role it has played is now serving as an inspiration for much statistical work in other fields.

Nor have there been any particular problems with centralizing these statistics, and this has allowed us to find out what results can be achieved by the detailed harmonization of the different Member States' statistical systems. Nowadays, they are helping other fields of statistics and they remain, by a long shot, the largest body of Community statistics.'

Suitable instruments?

Does Eurostat have suitable measuring instruments for com-

piling the vast collection of statistical data required by the CAP?

'When one looks at the way our work has advanced over the last 35 years, the answer has to be yes. We have perfected a whole, harmonized system of intra-EC surveys, backed up by modelling work which combines micro- and macroeconomic data. This allows us to monitor the CAP constantly and even to estimate price levels very early on in the year from data which may be rather fragmented.

The statistics have, therefore, accomplished their objective and more, since they make it possible to make short-term forecasts on a scientific basis.

Two types of problems

Despite these significant achievements, however, there are now certain developments which demand attention:

- there is a certain tension emerging in the Member States, which is linked to the need to develop the statistical apparatus in other important fields (services, enterprises, SMEs, environment, etc.). With budgetary constraints weighing heavily on the whole of the public sector, the clear imbalance between a highly developed system of agricultural statistics and other fields with far-reaching economic, social and financial implications, but which lack sufficient support from their statistical systems, raises questions about the resources committed to agricultural statistics as a whole.
- the new CAP, and the new objectives accepted and adopted by vote, will probably entail fresh statistical work.

Thorough screening

To meet these concerns, we have undertaken a huge screening operation covering all agricultural statistics. We have examined them one by one from the point of view of their usefulness, their necessity and their effectiveness in relation to the new thinking behind the CAP.

This very important work has taken two years and is nearing completion. It will result in a substantial relaxation and simplification of part of the system of agricultural statistics.

Agriflex

For example, the introduction of the Agriflex system will provide greater flexibility in the demand for statistical information from countries and producers, depending on how important this information itself is at national or Community level. No specific product or sector has the same "weight" throughout the Community and statistics should take this into account, by adapting readily to individual circumstances, reducing the frequency of certain surveys and targeting others more accurately, etc.

Considerable progress has been made with this approach, which is being conducted jointly with DG VI and the Member States.'

Developing new concepts

Do we currently measure what should be measured? What could be improved/changed?

'At the same time as simplifying the procedure, we should also develop new instruments. With the new CAP being more interested in the total income of farmers than price support, the statistics are going to have to measure different factors.

Should we not introduce new concepts into the models, and move away from gross value at market prices by including subsidies to express the factor cost? Perhaps review the concept of branches measuring income accounts to move to a more institutional concept? A number of technical elements should be reconsidered to make the statistics we produce more in tune with the new requirements.

In general, we can say that nowadays we do measure what needs to be measured, even if in certain instances we could do this even more effectively. We are working on improvements. In short, the improvements and changes will aim to place strict limits on the old concepts which can be simplified and to develop new statistical instruments which will make it easier to identify the new objectives of the CAP.'

What concrete changes will there be?

'It must be stressed that the new CAP has not yet been defined in sufficient detail for us to be able to start work now on developing the appropriate statistical tools.

The old policy, which followed the very simple economic logic of supporting prices, was quite straightforward for statisticians to monitor. The new policy, however, requires them to try and comprehend a much more complex situation, as subsidizing incomes is much more difficult than subsidizing prices. What should we measure? How will statistics be able to show that income support is not the same as a bonus for inefficiency?

For so long as no clear vision has been set out of the way in which politicians will actually apply the measures decided as alternatives to price support, statisticians can only edge very cautiously towards the design of new instruments of statistical observation.'

Different use

In a reform where support is given to the means of production rather than to products, the variety of European agriculture will be preserved and even encouraged, and intensive production will alternate with more extensive and diversified forms. Is there not the risk that the statistical observation of the agricultural scene will become even more complex in a field where it was already very difficult at times to obtain EUR 12 figures?

'It is true that what we have been observing for 35 years was already complex enough. We have, however, succeeded in finding ways of measuring not only production and prices but also income, which we assess on the basis of branch accounts, sectoral accounts, etc.

For some years now, we have been testing the concept of the total income of agricultural households, which very often includes receipts from tourism, craft trades and distributive trades. We are also trying to take account of agricultural activity carried out by non-agricultural households.

The work carried out over these 35 years has brought us a wealth of experience and, through simplifying one dimension or probing deeper into another, has enabled us to make the best possible use of the whole range of statistical tools developed.

All in all, the new agricultural statistics will be no more complex than the old, and should even re-

sult in a certain degree of rationalization, perhaps through using the data collected in different ways.'

STATISTICS AND PUBLIC ADMINISTRATION

Agricultural statistics seem to be rather loosely structured, particularly in certain Member States which make greater use of the CAP than others. What problems does this pose for Eurostat?

Restructuring plans

'The quality of statistics very often reflects the quality of a country's public administration, which varies from one country to the next.

EC-financed plans for restructuring agricultural statistics have been developed in countries where structures are clearly lacking, particularly Ireland, Italy, Greece and Portugal.

These plans, which have been completed in Ireland and Italy and are still under way in Portugal and Greece, have made it possible to consolidate and modernize the measurement apparatus. The weaker parts of the agricultural ESS have thus been strengthened, enabling us now to obtain good EUR 12 figures. The importance of the CAP has obviously meant that the resources devoted to this have been considerably greater than those raised in other fields.

The independence of statistics

Are there clear imbalances between the information provided via the Member States' statistical information systems and the actual situation 'out in the field'? To what are these due?

'The problem is not so much the distance between the statistical information and the actual situation out in the field as the level of independence of these statistics compared with the use of administrative information.

From the moment statistics are used as a key for distributing financial resources, premiums, subsidies, etc., there is a tendency to "expand" certain data. Whether this is desirable or not, it is a natural human tendency, both in the north and in the south.

The best way to counter this tendency is to use statistics which stick to the facts.

It has sometimes been seen at Council level that a country's official statistics do not tally with other "expanded" administrative information for that same country. In such circumstances, statistics should play the role of systematically correcting the differences. The instruments used are neutral and objective, and the development of new techniques such as spaceborne remote sensing will further increase this objectivity and make it possible to eliminate the "clear imbalances" which may have existed between the statistics and other sources of administrative information.'

A FAILURE TO READ THE SIGNS

The agricultural sector in Europe may have the impression that, consciously or unconsciously, it has been living through a long period of false security. Have European statistics broadcast enough signals for this sector to anticipate the current reforms?

Early warning

'The difficulties in reforming the CAP are certainly not due to a lack of statistics! Since the beginning of the 1950s, our statisticians have identified instances of over-production in a number of sectors. A specific study carried out by the Statistical Office in 1954 already recommended switching to other products, particularly in the cereals sector, and stressed the dangers behind systematic over-production.

The problem is not therefore due to any lack of warning signals, but to the difficulty of translating statistics into political decisions. Over the last 20 years, the Commission has submitted proposals to amend the agricultural policy to the Council on a number of occasions, but the Council has failed to act on them.

The signals broadcast by statistics have been very clear and very strong and, though they were issued at a very early stage, they have not been taken into account for political reasons. The CAP is certainly not an easy policy to handle.'

Conflicts of interest

Which signals have been misread or misinterpreted? By whom? What other signals should perhaps have been broadcast?

'All the signals were broadcast, but not enough of them filtered through to the grass roots. Why? Probably because a large number of parties had no interest in seeing such information circulated.

The "small" countries, such as Denmark, the Netherlands and Belgium, set an example in terms of the widespread dissemination and excellent use of statistical information, particularly by trade associations which worked hard to guide their members.

Elsewhere, particular local circumstances or the divergent professional interests of certain categories of producers proved much stronger than the desire and duty to provide information.

Is it not significant to note that there seems to be no serious crisis in these "small" countries where, moreover, production seems to be organized fairly much in line with market trends?'

Courageous ministers ...

The success of the 'reformed CAP' will depend to a great extent on the quality of the (statistical) training and information given to 'new farmers' (particularly young farmers currently learning the skills of the trade). What should be done to make sure they get this information and use it properly?

'It is not the Commission's job to get in touch with them, as the message should be passed on at the various national levels. It is up to the Ministers of Agriculture to be courageous and lucid enough to explain what is happening and how those involved might best profit from the means that Europe is attempting to place at their disposal to cope with the situation.

This requires an enormous amount of understanding and communication, as even though the new CAP will certainly benefit over 80% of the farmers who have most need of it, i.e. small farmers, it is this very group which at present tends to see it as some sort of monstrosity ... It is they too who need to be made aware of the fact that the high stakes in the economies of Europe are played for nowadays not so much in agriculture as in services, industry and the communications sector, etc.'¹

'An uninformed man is a subject; an informed man is a citizen'.² For a long time now, the farmer has ceased to be the 'subject' of the mediaeval age. We hope that correct and well-disseminated information will therefore help him assume the onerous responsibilities of the citizen!

¹ Interview with Mr Yves Franchet, 16 April 1993.

² A. Sauvy.

THE WILL TO SUCCEED

Interview with Mr D. Ahner, Mr S. Torcasio and Mr J. Pacheco

As a result of over 30 years of close cooperation between those responsible for European agricultural policy and Eurostat, the European statistical system can nowadays be used as a solid foundation for all major decisions and administrative procedures, and systematic use can be made of statistics in helping to launch certain political measures.

Dirk Ahner

An economics graduate in political economy and business management from the University of Bochum, he then obtained a post-graduate qualification at Aix-en-Provence where he specialized in the labour market. He worked first of all for an economic research institute in Germany before joining the Commission in 1978. His career at the Commission included a spell from 1982 onwards at the Forward Studies Unit, before he returned to Agriculture in 1987. At DG VI, he is currently in charge of work on economic analyses and general approaches to prepare for the implementation of the CAP.

Saverio Torcasio

A qualified statistician, he spent eight years at the National Institute of Agricultural Economics in Rome carrying out research work into agricultural economics. He arrived at the Commission in 1975, working initially at the DG for Regional Policy before being attached to the cabinet of Vice-President Natali, where he was put in charge of files relating to sectoral policies. He joined DG VI in 1980, and since October 1992 has been the head of the unit which develops quantitative analyses and short- or medium-term forecasts. This unit is also responsible for coordinating relations between DG VI and Eurostat.

João Pacheco

An agronomist, he carried out specialist studies in agricultural economy, mainly at the University of Lisbon. He has been at the Commission since 1986, where he was in charge of forecasts and quantitative analyses until last year, when he joined Mr Ahner's section which is attached directly to the Director-General of DG VI.

A LONG HISTORY OF COOPERATION

Generally positive

Agricultural statistics are by far the most highly developed area of Community statistics, as a result of the demands made by DG VI. How would you sum up the 30-plus years of cooperation with Eurostat?

'Very positive. Not just as regards the figures, which have always helped us carry out our work, but also in terms of the very close cooperation in the form of help and advice. The services provided by Eurostat have always been of excellent quality.

With the CAP now at a turning point, we are grasping this opportunity to try and improve what can be improved together.¹

'Statistics are no longer a simple accessory to managing the CAP, but are increasingly assuming a key role in the guidance and management of this policy. DG VI's requirements for agricultural statistics are therefore still essential for the smooth operation of the reformed CAP, particularly given the difficult economic situation we are currently experiencing.'²

Reliable

Reliable data are needed as a basis for managing the CAP, and this reliability should be provided by the quality and precision of European agricultural statistics. Has this always been recognized? What, if any, have been their shortcomings? How do things stand at present?

'When one considers the volume of harmonization work carried out and all the obstacles that have had to be overcome regarding the number of farms involved, their size, the number of farmers, etc., European agricultural statistics have probably become some of the best in the world.

Their quality and precision are due to the authority and independence of Eurostat and the na-

tional statistical services. Questions have only very rarely been asked about their reliability. It is, however, true that over the last few years there has been a certain risk that they might deteriorate, particularly as statistics are used directly to launch administrative measures or calculate aid to producers.²

Some weak points

'Not shortcomings as such, therefore, but rather weaknesses and certain gaps.

For example:

- in the field of animal feed-stuffs, which plays a vital role in the management of a number of markets, certain information requirements still need to be covered;
- other fields where coverage could be improved: production stocks and consumption of certain products, agricultural processing. All these require further efforts to collect the appropriate data;
- in general, if there is a weakness, it is the length of time it takes for data to reach the Community. Flexible formulae need to be found whereby it is not absolutely necessary to wait for the last figures for the twelfth Member State before certain types of work can be completed.²

MOST IMPORTANT USES

What, in your opinion, are the three most important uses to which DG VI puts the data produced by Eurostat? Are these data sufficient in the three cases mentioned?

'DG VI does of course use all the agricultural statistics produced by Eurostat, particularly those of a horizontal nature: economic accounts and sectoral income indices. Apart from these, the three areas most frequently consulted are:

(i) The structural survey

Forming the basis of a deeper vision of agriculture in the Community, it also allows DG VI to set up and run the socio-structural and rural development policy, which has become a priority issue.

In the new reform, it helps to fine-tune some of the measures taken as part of the "markets" policy. Its results also serve the needs of the

farm accountancy data network for financial estimates carried out under the EAGGF, etc.

(ii) Statistics on production

Statistics on production, and more specifically those used to manage agricultural markets, provide us with information on production volumes, consumption, surface area, number of animals, slaughterings, stocks, etc. They also, however, provide us with statistics on value: producer prices, market prices, the cost of certain production factors, etc.

This is in fact the area in which agricultural statistics are most directly applied to the administration of the CAP. Often, the statistics are not only used to guide what decisions we take, but also enable us to closely monitor the actual application of these decisions.

(iii) Trade statistics

External trade statistics showing trade in agricultural products are heavily used in a number of fields, not just at the level of market divisions but also with regard to external policy (imports and exports), particularly for trade with non-EC countries.¹

'These statistics are some of the most complete as they follow a well-established classification. Sometimes, however, the time lag before the data are available is too great.²

THE WAY AHEAD

Geographical breakdown

'Apart from certain delays — for instance, some of the results from the 1989-90 structural survey are still missing — we are satisfied with the statistics made available to us. However, for the structural survey in particular, we feel it would be desirable to have a more detailed geographical breakdown of the results. This need has been felt especially within the context of the introduction of the policy on rural development.

Launching Eurofarm

We are eagerly awaiting the introduction of the Eurofarm project, which should allow us to make better use of the results of the structural surveys, by using those characteristics of most direct interest to us. This database should contain individual data on each farm

surveyed, thus enabling us to make all the cross-references we desire between the different characteristics recorded.²

Managing the markets

The definition of DG VI's new requirements has been subject to a screening procedure developed for other purposes.

'In order to manage the markets, our analyses and preparatory work on new policies make daily use of agricultural statistics. As we also, however, use these to monitor and manage our policies, the handicap from which we occasionally suffer is once again that of deadlines. If we really want to include statistics in the virtually day-to-day management of the market and trade, we would need to obtain certain statistics on a more or less daily basis.¹

'Previously, the agricultural markets were very much "managed". In the new system, the focus shifts much more to signals coming from the market, and in order to follow trends in these and intervene when necessary, we need rapid information on elements not previously covered, in a manner which corresponds to our new constraints, such as land use, stocks and consumption. The Member States are aware of the efforts which will have to be made and we are sure that we will be able to count on their support in continuing to improve the statistical information.³

A catalyst for political measures?

'Since the introduction of the systems of stabilizers, we have gone so far as to base certain political measures on statistical indicators. Is this not asking too much of statistics? Is there not a risk that their quality will drop under the weight of this burden, which is virtually turning them into a catalyst for certain political measures, price increases or reductions, or other phenomena? We have probably reached a limit which should not be crossed.¹

Providing even better information

The annual report

The annual report on *The situation of agriculture in the Community* contains a large statistical annex. Are there plans to

make any changes to the way in which this work is compiled or to encourage even wider utilization of its results? How?

'This work is valuable not only for keeping a watch on the development of the CAP, but also for tracking the progress of Community agriculture as a whole. It is recognized as being useful as a basic work which seeks to cover as widely as possible those areas which might be of interest to both specialists and users outside the field of agriculture.

The product of close cooperation between DG VI and Eurostat, it also offers a useful summary of data from international sources.

We are keen to shorten the length of time it takes to compile and publish this work, by making greater use of information technology which should allow us to eliminate some of the hold-ups.

With regard to its dissemination, we will attempt not only to extend this outside the Commission but also to make it more immediate internally, even if this entails circulating segments of it at different times so that those who have to take decisions in certain fields can have the information they need when they need it.²

Early signals

It has been said in print that 'the old CAP mainly served to bolster the imbalances which are killing off farmers'⁴. Without necessarily commenting on this statement, can it be said that statistics have fully assumed their role in highlighting these imbalances? How in particular? If not, why?

'Statistics have played a full role in identifying the imbalances.

The basic imbalances were revealed by applying statistics to the basic analyses. They were used at the time of the major work on the first Green Paper during the mid-1980s, their presence was again felt when we were dealing with the question of stabilizers, and they were used throughout our work on the current reform of the CAP. The excellent cooperation and possibilities they offered of carrying out simulations and forecasts were all very useful, and I personally value them very highly.

With regard to economic imbalances, the problem takes on a dif-

ferent hue. These imbalances develop from one day to the next and here too, in order to measure them properly, the results need to be available even more quickly. But are we not approaching the very limits of statistical possibilities in seeking this? We know, at any rate, that Eurostat is currently doing all it can to try and improve what can be improved in this field.¹

NEW DIRECTIONS

What are the most important changes which the Commission should be able to measure between the 'old CAP' and the 'new CAP'? Can statistics measure these properly? If not, why not? What else could be done?

'By and large, the system already contains most of what we will need, and we should concentrate on the following issues:

Income

As direct aid is going to play a more important role in the assistance given, we will need more figures on farm incomes, which are to be considered as total income.

Environmental issues

The new CAP also puts a strong emphasis on environmental issues, and the links between agriculture and the environment will increasingly come under discussion. We will have to think about how to improve the statistical indicators we have in order to shed sufficient light on these links.

Rural development

Agricultural statistics and regional statistics are moving closer together and this will present a growing challenge over the years to come. The origins of this trend go back to the reform of the structural funds at the end of the 1980s, and it is bound to play a key role in the next few years. The regional overlap of agricultural statistics should be fully exploited in the future.

And agro-industry?

This is also currently facing a process of adjustment, both upstream and downstream. It is very much in our interest to keep an eye on what is happening here, not just in order to assess the adjustment process and attempt to anticipate its progress, but also because there is a very strong link between

agro-industry and rural development. Within a rural economy, agriculture, which provides the raw materials, is very often closely connected with the sectors which process these downstream and which should generate value-added at regional level.¹

Pruning and trimming

Have you any other suggestions on specific points?

'We are thinking about lightweight, rapid surveys, or even panels. The main thing for us is not perhaps to carry out large-scale statistical operations requiring considerable resources, but rather to go for more lightweight and carefully-targeted actions which produce faster results.³

Some statistics are probably no longer relevant as a result of the reforms carried out or planned. What are the main 'dead branches' which need to be pruned?

'In view of our limited resources, most of the dead branches were amputated a long while ago. The screening exercise which we have just completed identified those fields where savings could be made, particularly by reducing the frequency of certain surveys or by seeking greater integration of different types of surveys in order to achieve an optimum degree of synergy.²

AT WORLD LEVEL

Does Eurostat cover the 'agricultural dialogue' between Europe and the rest of the world in sufficient depth? What could be improved?

Consultations and forecasts

'Eurostat is in regular contact with a large number of international organizations, such as the United Nations, the Economic Commission for Europe, the FAO, etc. As a result, relations with the rest of the world are well covered and produce good exchanges of information.

Moreover, cooperation between Eurostat and the countries of central and eastern Europe should provide us with a wealth of data for our immediate and medium-term activities.

As for DG VI, it is attempting to maximize the development of sta-

tistical applications in the field of forecasts, through regular contact with the OECD, partners in the US and Canadian Departments of Agriculture and the Australian Institute of Economic Research, amongst others.

Together with Eurostat, we probably obtain all the information it is possible to exploit in this network, putting us in the position of being able to monitor agriculture worldwide.³

IN CONCLUSION

'Eurostat and DG VI have set off together on the right track, and co-operation should continue.

There are a certain number of points which could be improved, and we are working hand in hand to do so. We are continuing to rationalize the system and intend to retain the systematic procedures installed during the "screening" exercise, i.e. pruning where necessary, but also grafting on new

shoots when required, such as rural development, environmental issues, etc. All these shoots should start to flourish as of now, so that they are well-established by the time that full use is made of this instrument of analysis.

The flexibility which is to be provided by Agriflex was essential. We hope that it will contribute towards speeding up the availability of agricultural statistics.

For over 30 years we have seen that whenever there is a solution to the problems facing us, it is to be found through good cooperation between individual parties. There are few difficulties which cannot be overcome by a common desire to attain an objective, when this objective is for the good of all. This is the goal we will continue to pursue!¹

¹ Interview with Mr Dirk Ahner, 5 May 1993.

² Interview with Mr Saverio Torcasio, 5 May 1993.

³ Interview with Mr João Pacheco, 5 May 1993.

⁴ J. Le Cacheux and H. Mendras: *Éléments pour une nouvelle politique agricole commune, Observations et diagnostics économiques*, revue de l'Observatoire Français des Conjonctures Économiques, n° 42, October 1992, p. 95.

FLEXIBILITY AND PRECISION

Interview with Mr David Heath

For some time now, agricultural statistics have been used for all sorts of purposes. Following a long period of self-examination, they are aiming to show their versatility and adaptability to achieve a greater degree of efficiency with the maximum amount of flexibility. The theoretical principles established will be put into practice quickly.

After studying philosophy, politics and economics at Oxford, David Heath qualified as a statistician and began his professional life in the UK Department of Health. He worked on the statistical and economic aspects of the agricultural sector first of all in private industry and then in a semi-governmental body.

He arrived at the Commission when the United Kingdom joined the Community, and held various posts in Eurostat before becoming Head of the agricultural, fisheries and environmental statistics directorate.

THE STATISTICIAN AS A PROPHET!

Has our statistical information system made it possible to correctly assess the evolution of the common agricultural policy? Did it make it possible to anticipate the problems which confronted the 'old CAP'?

'Quite clearly! On the basis of the statistics available at the time and certain trends which were already visible, one of our heads of division very clearly foresaw in 1975 the impending reforms and described the dangers associated with the over-production of certain products, etc.'

On short-term policy

His conclusions have turned out to be right, although at the time he came in for strong criticism, as he was the only one to have the courage to write what others were already thinking. The difficulty with European agricultural policy is not that there is any lack of data, it is much more a question of length of vision. National Agriculture Ministers have too often defended the short-term interests of their "national farms", without considering the more long-term interests of the "Community farm"...

The past and the future

How was the ESS involved in drawing up the 'new CAP'? How will it be amended to adapt to the reform and, especially, to monitor it and measure its effects?

'Our information system has been able to provide elements which let the Commission's administrators, economists and agronomists examine the consequences of alternatives which might be proposed. Our modelling systems made it possible to envisage the consequences of all the scenarios which those in charge of the CAP felt it useful to contemplate. Statistics played an extensive part in the drafting of the new CAP and are ready to measure the effects of its application.'

The need to reform agricultural statistics, which were built on very firm foundations with the founding members of the Community but were tailored to suit these countries, has become clearer as the Community has expanded.'

A strong element of self-criticism

'A large-scale "screening" exercise was launched two years ago with the aim of providing a suitable response to the pressures bearing down upon the Commission and the statistical services in certain Member States.'

It was felt that both the Community and national systems were too complex and costly, and the need to adapt to the new requirements of the new CAP gave the operation considerable drive.'

The overall assessment of the existing system highlighted the merits of taking action, particularly on the following four issues:

Legal bases

The legal coverage for the different applications has turned out to be far from perfect, with insufficient legal bases for certain topics and too many for others. It would appear desirable to simplify the legislation and extend the coverage.

Modularity

Even though each application may fulfil its objectives in generally satisfactory terms, when it comes to national systems it is nevertheless often difficult to combine two or more applications flexibly, so as to produce reliable information in the most economical way possible. The overall architecture of the system should be redesigned with a view to highlighting the modular aspect of each application.

Speed

Over-attention to accuracy and excessive detail adversely affects the speed of the response, thus raising doubts about the usefulness of certain statistics. Each

specific case should be re-examined so as to establish a reasonable balance between the demands for speed and exhaustiveness.

Reliability and comparability

Measures for managing certain agricultural markets, for example, could make a contribution to the statistical system, but at the cost of threatening its reliability and comparability. In order to avoid any deterioration of these criteria, more intensive use should be made of totally objective survey methods such as remote sensing in the field of land use, which is increasing substantially in importance as a result of the new reform.

AIMING FOR ONGOING ADAPTATION

Increased efficiency

This will initially involve making the existing structure more efficient wherever possible, and this increased efficiency will help free resources.

'There does not appear to be any merit in seeking to have each country's statistics conform with one single model, as each country has its own traditions and culture. At the end of the day, a single mechanism which sought to handle everything in the same way would be very inefficient.

That is the reason why, in order to optimize resources, the idea is to allow each country more flexibility, letting them concentrate their efforts on those aspects which are politically important and statistically interesting in their individual contexts. The aim is also to achieve savings by pruning any dead wood.'

More in line with Member States' requirements

'The correspondence between our demands and the information requirements of the Member States should be investigated in greater detail and exploited wherever possible. This should mean that each of the national ministers will in future have access to appropriate information allowing him to defend his interests well at Council level, while doing so within a transparent Community framework.

We should avoid discussions based on virtually obsolete situ-

ations and respond to the growing pile of new information requirements, all the while ensuring that the whole thing does not run out of control. If the aim is indeed to try and make life easier for everyone, we need to make sure that we offer a "concerted" response to the new needs corresponding to the demands of the next decade. It is the interests of agriculture itself which are at stake, over and above those of agricultural statistics.

This topic has constantly been at the forefront of our work with the Commission's DG VI, during the meetings with the Member States when we presented our original ideas and throughout the bilateral meetings we held with them to explain the outlines of the solutions we were advocating. Discussions will now be held with all the Member States and we will have to convince the heads of the various statistical offices that what we are proposing is probably the best way of resolving the current, very complex problem.

Proposals for legislation setting all this down in terms of annual procedures and work programmes are being drawn up at this very moment.'

AGRIFLEX

Trend towards flexibility

Different weights

In the six original Member States of the Community, the difference between the weight of agriculture in their respective economies was nowhere near as great as it has become since enlargement. The successive enlargements have had an even stronger influence on the relative importance of the main agricultural products in final production.

It was only after the successive enlargements gave greater importance to crop production and in connection with the reorientation of agricultural policy at that time that the matter of statistical legislation in this field became an issue. The Regulation on cereals surveys adopted in 1990 is a milestone in this respect.

However, some of the criteria regarding precision, uniform procedures and threshold values, which had previously been established jointly, were already called into

question with the Community's first intake of new members, and the following enlargements have only served to aggravate the situation.

The Community surveys on the structure of agricultural holdings have always given scope for a certain degree of flexibility in the requests addressed to the Member States. The 1990 Regulation on cereals surveys, and even more so the 1992 Regulation on other crops, were characterized by a greater degree of flexibility regarding the threshold values set. This trend is continuing, leading to different priorities and bearing in mind each country's limited resources.

There has been a reduction in the number of statistics hitherto supplied to Eurostat on the basis of tacit agreements, in view of the lack of legal regulations, and in some cases these have been partly dropped. There has been an emerging desire for greater flexibility, provided of course that the quality of the statistics is not impaired.

Objectively recognized criteria

Although a legal regulation may no longer stipulate a single detailed methodology in the different Member States, greater flexibility does require objectively recognized criteria which will make it possible to satisfy the requirements of Community statistics.

Setting these objective criteria and determining the influence which greater flexibility might have on the current reliability of the forecasts has required and will continue to require further studies and calculations, in close cooperation with the Member States.

They will make it possible to lay the foundations of a truly flexible statistical system: the Agriflex system.²

'Agriflex will allow us to modulate our approach depending on the situation in each country. The key concepts are: the most effective methodology for the circumstances in the country concerned, whilst asking all parties involved to concentrate their efforts on areas where they can produce the most information of use to both themselves and us. We are hoping to be able to adapt our legal mecha-

nisms in order to extend this flexibility throughout the field of agricultural statistics.'

THE PRINCIPLES OF AN INTEGRATED COMMUNITY SYSTEM OF AGRICULTURAL STATISTICS

The theory ...

Concentrating on the basics

The volume of information requested from each Member State will vary depending on the importance of the situation covered at regional, national and Community level.

A more effective national approach

The Member States will be able to collect the basic data using the most effective method, provided that they respect the parameters of definition, deadlines and accuracy. The use of administrative data as a statistical source will not necessarily be discouraged.

Proven comparability

In its structure and activities, the system will incorporate ongoing comparability tests, so as to check that the quality of the data satisfies the needs expressed to a sufficient extent.

Modularity

The system will be made up of a series of modules defined at Community level. Each country will be responsible for making optimum use of the system, depending on its respective individual circumstances.

The basic modules are still:

- the structural survey;
- the current statistics on live-stock and crops;
- agri-monetary statistics: prices and incomes.

The specialized modules will cover forestry statistics, the environment, agro-industry, regional and sub-regional data, central facilities and restructuring operations.

... and the practice

Which element not produced by the European statistical system

would you now regard as indispensable (or extremely useful) for agricultural policy?

'By extending our "screening" operation, we have now identified eight sectors³ where there is a need to develop new statistics or strengthen those already there.

These statistics should aim for speed rather than precision, so that they can be used for management purposes and to provide information for markets. The increased use of lightweight surveys, panels and remote sensing should help attain this objective.

On the other hand, together with DG VI we have identified about a dozen sectors where we feel that fairly substantial savings can be made.

We are lucky enough to have at our disposal a vast *acquis communautaire*, which is powerful, productive and highly-advanced and has not only satisfied our past requirements for certain types of information, but continues to do so. Our situation is different from that faced by most other sectors of European statistics, which currently have to undertake major developments, sometimes from virtually non-existent bases. We should, however, guard against squandering our assets, by adapting them as well as we can and rationalizing them so as to derive optimum efficiency and savings from these resources. In doing so, we should attempt to fill a number of gaps which are more obvious now than they previously were, such as:

- the future of the rural environment;
- the ecological impact of agriculture;
- the measurement of real consumption, and
- internal and external marketing.'

Keeping an eye on outlets?

The solvency of demand very much determines whether supply is geared to the internal market or to exports. How do statistics monitor trends in solvency? What can they tell market operators, particularly as regards external markets

which are the real measure of the competitiveness of European agriculture?

Agro-industry

'This falls within the scope of our "agro-industry" project, which we are developing by making the best possible use of data from other Eurostat sectors. It is in fact very important to measure what outlets there are for European agriculture, as the purpose of production is to sell the products and it is fairly useful to know where these can be sold.

We are currently attempting to reap the benefits of the improvements being made, particularly in the field of business statistics, and we are developing the agro-industry project together with the appropriate Eurostat Directorate.'

And exports?

'These are much too dependent on refunds and the "unforeseeable moods" of a market which we cannot regulate and organize in the same way as the internal market. Up to now, we have had to call on international organizations for statistics.'

Producers in the internal market sometimes prefer to sell products outside the Community and claim the refunds, as they find it easier to rely on the mechanisms for financing and guaranteeing exports than to sell their products on the internal market, where the initial problem seems to be finding a buyer who is solvent into the bargain. Would it not be useful for agriculture in general and the measurement of its competitiveness in particular to develop figures allowing one to determine the origin and destination of specific products, as well as the volume of subsidies in each direction?

THE FUTURE NOW

The next 10 years will be crucial for European agriculture, particularly because the major ecological battles which will shape the future will probably be won or lost during the current decade.

Agriculture and the environment

In the field of agriculture and the environment, are statistics

really capable of providing relevant figures to those who need them?

'The information at our disposal can already be processed in many different ways, but this primarily provides the background to environmental problems and not enough work has as yet been carried out on it.

In future, the figures used should be as regionalized as possible, so that environmental problems are brought closer to the areas concerned.

Scientists are currently developing a number of coefficients which will make it possible to highlight background information by making full use of statistics already at our disposal.

We are, however, sadly lacking in the resources to develop statistics on the use of fertilizers and biocides in particular, as well as statistics on many other fields where we will be faced with new information requirements in the future.'

Fishing and statistics

How do you see the role of fisheries statistics in measuring the improvement or destruction of the environment?

'We are ill-equipped to undertake much in this field, and instead we cooperate with all the international bodies concerned with their daily monitoring of stocks, catches, etc. We would, however, like to stress that it does not appear to us that the environmental aspect receives enough attention.

The same is true for forestry statistics, another important example worth mentioning, despite the fact that the role they play in environmental affairs is universally

acknowledged. Forests are nowadays also seen as an interesting complement to agriculture: wooded areas are an alternative to crops and the economic aspect of forestry is far from negligible. As the Community extends towards the Scandinavian countries, we have every reason to believe that this field absolutely has to be developed.'

Remote sensing

Is there not a risk that, as a result of the intensive use of spaceborne remote sensing as a survey method, agricultural statistics will end up being no more than a method of retrospective checking?

'One of its great advantages is its capacity for systematic updates, which will greatly reduce delays. We see it as an addition to the range of statistical tools already at our disposal and as an instrument which, far from completely replacing certain others, will make them even more effective.

One interesting aspect to note, among many others, is the possibility it offers of calibrating a whole set of information as, within a group of data which are difficult to harmonize, it will add one or more elements of identification covering the whole of the territory observed.'⁴

Agricultural statistics are clearly moving towards greater interaction with the rest of the statistical system. They will provide other sectors with more information and receive more from them in return, because agricultural policy is becoming less and less isolated from other Community policies. There are obvious symbioses with the policies on rural development or the environment. Statistics should not fail to make full use of these!

¹ The green future of Europe.

² 27th meeting of the Standing Committee on Agricultural Statistics, Luxembourg, 6-7 June 1991.

³ To perfect the system of agricultural statistics and in accordance with the new needs created by the reform of the CAP, the following statistics are necessary or should be developed:

1. Rapid estimates of sowings and planting intentions at the beginning of winter for the main crops.
2. Estimates of the volume of stocks for the main products (such as cereals, oil-seeds and meat).
3. Statistically reliable data on the production of poultry and eggs.
4. Statistically reliable data on the production of fruit and vegetables.
5. Estimates of consumption of the main products, including the consumption by animals of cereals and oil cakes, and wine consumption.
6. Inclusion in the structural survey of questions on other gainful activities, and a breakdown by target regions.
7. Publication of harmonized Community forestry statistics.
8. Improvement of statistics on agricultural prices.

⁴ Interview with Mr David Heath, 16 April 1993.

P RODUCTION AND ANALYSIS

Interview with Mr Giuseppe Calò

Statisticians would like to be able to analyse and comment on the data they produce in greater detail, explaining the reasons for certain grey areas, seemingly anomalous developments and any 'tricks of the light'. They would like to emphasize new interactions between the phenomena they are able to bring to light, attract the attention of trade organizations, etc. Common to all these wishes is one pressing imperative — to finally open the doors of the agro-industry to statistics.

A graduate in general statistics from the University of Rome, Giuseppe Calò began his career as a statistician with the FAO at its headquarters in that city. He came to the Commission in 1971, and has been with the Statistical Office for 22 years. Apart from a four-year period as assistant to the Director-General, he has devoted his entire professional career to agricultural statistics and is currently Head of the agricultural accounts and structures unit.

SOME BACKGROUND

Don't go thinking that agricultural statistics have become what they are today simply as a result of the development of the CAP and its attendant information requirements: agricultural statistics have been the basis of a whole range of activities since the birth of statistics in each Member State. The CAP merely gave a European dimension to statistics that had long since existed at national level.

What aspects of your work do you consider most useful to the CAP?

'Of the information sources I am responsible for managing, the most useful in CAP terms are probably the structural survey, data on income trends and agricultural price statistics.

Income and physical factors

The new CAP will definitely concentrate more on income than products. Even so, income will not be examined independently of physical factors, but will be calculated in terms of each holding's production potential. Income will be guaranteed depending on the size and physical characteristics of individual holdings. So there's no question of dropping one source of information for another.'

DESCRIBING ... AND ANALYSING?

How do you see the role of Eurostat in the actual organization of the agricultural market? Should it concentrate more on analysing such things as the agricultural market, sectors, or agriculture in general, or should it limit itself to describing such things as agricultural production?

Pie in the sky?

'Our aim as statisticians is both to produce and analyse data. But we have so few resources that we

usually have to limit ourselves to production, so there is little or no room for analysis.

It would, however, be a good thing if the people that produced statistical data were able to comment on their work in greater detail, as only they have an in-depth knowledge of what is behind certain data.

We have at various times considered commenting on our work more systematically. But I personally would admit that I have not been able to give the analytical side the importance it deserves. Is this an ideal to be aimed for, or just pie in the sky?'

Grey areas

Are there areas of agriculture that are not covered (or incompletely covered) by statistics? If so, why?

'Modern agriculture, which is intensive, has been accused of being highly damaging from an ecological point of view. The intense development of mechanization in agriculture has led to the mass use of fertilizers and biocides. This is one grey area on which unfortunately we have very little data.

Another little-documented aspect of agriculture is data on consumption. We work out theoretical consumption, but actual — i.e. physical — consumption escapes us. There's much work to be done here.

Things are even worse when it comes to marketing. All we really know about in the production/consumption chain is the production side. Everything downstream of that is rather vague.

When identifying income, we should thus gradually move away from our current approach, which is too macroeconomic, and move down to a more detailed level — there are a large number of non-physical factors of the monetary and financial variety to be recorded.'

Forestry, the great unknown

One thing that is notable for its absence in agricultural statistics is forestry. Is this set to become the 'future of agriculture'?

'Forestry has suffered from not being the subject of a specific Community policy. It was only very recently, when people became aware of its ecological role, that it shifted to the forefront of attention. Forestry is seen as both a solution to the problem of overproduction and an answer to a number of environmental questions.

Paradoxically, this is an area in which resources have been made available but not used. In 1989 the Council approved the EFIX project (European forest information and communication system), for which substantial resources were set aside. It has not yet been possible to use these, as the unit responsible for developing this project has had other priorities. These resources could have been used elsewhere.'

Is forestry an economically viable option at European level? What do you base your opinion on?

'We must first understand that if national demand is high, this is because Member States are anxious to see their data rapidly harmonized. Let us not forget that Europe's major discovery has not been agricultural statistics as such, but the harmonization of these statistics. Now, this simply hasn't happened in the field of European forestry, as it has in the United Nations, where the FAO maintained an emphasis on this sector which we at the time thought misplaced, much to the detriment of agricultural statistics.

However, a word of caution in respect of economic viability: forestry is not a viable option for the individual farmer. This cannot be stressed too much. Forestry calls for 10-year programming at the very least for the fastest-growing varieties of tree, whereas the individual farmer works with a timescale of three years (one year's output in the bank, one in the barn and one in the fields, as the saying goes).

Furthermore, if forestry is practised intensively, ecological problems appear here too: eucalyptus, which is farmed intensively in Portugal, is depleting the soil ... and in Germany, where poplar trees

are growing rapidly, particle production tests have conclusively shown that these trees quickly exhaust the soil if they are cut back every three years.

It should thus be stressed that forestry can only be the future of agriculture at collective level, not at the level of the individual farmer.'

Duplication of work?

Eurostat measures the income of agriculture in Europe. The FADN system, which is used by other Commission departments, measures the income of farmers. Is this twin approach really suited to what is in effect very similar work? Does it not result in a duplication of work or resources?

'The FADN (Farm Accountancy Data Network) is a system that allows the accounting inputs and outputs generated by farmers during the day-to-day management of their affairs to be monitored, independently of other factors. Furthermore, it is aimed at a population that cannot be treated as a statistical sample, so its results cannot be extrapolated, as it is not known to what extent a given reaction is statistically representative. The FADN provides accountancy data for the different types of production — data on holdings specializing in milk production, horticulture, etc. In effect, it is a micro-economic accounting system. It provides excellent data, but not statistics!

At Eurostat, our work is of the macroeconomic type: we determine income, as the difference between "outputs" (production) and "inputs" (fixed capital formation, investment, etc., plus income), and our approach is similar to that used in national accounts. We work on the basis of representative samples, and we include weightings to allow us to extrapolate certain results.

So there is no duplication, even though the fields of application may sometimes appear to overlap.'

Linking major surveys?

'The current system of "major surveys" in Member States includes those conducted at Community level — the structural survey, the wine survey, the surveys of fruit trees, cereals, livestock, etc. The

drawback of these is that they mobilize large-scale resources in a disorganized fashion.

Disorganized development

These surveys were developed independently over the years, without any unifying vision. They also dealt with phenomena that varied in importance from one Member State to the next.

It has become clear to us that the legislation that requires Member States to carry out these major surveys puts a great burden on the national statistical services.

In the beginning, these surveys were broadly similar to the work already being carried out, and so did not put undue strain on the Member States, particularly as the surveys which we requested (and which immediately became compulsory) received considerable Community funding. Today, however, the funding has dried up but the legal obligation remains.

Emphasis on interaction

We don't want to give the Member States the impression that we have taken advantage of their good will, which is one of the reasons why we have started to rationalize the current system. We will henceforth endeavour to make better use of interaction as part of an ongoing process to bring the system into line with demand.

Interaction will also be one of the main features of a new analytical tool that will allow users to combine a vast range of observations recorded during the surveys on the structure of agricultural holdings conducted between 1966 and 1999: this tool is known as the Eurofarm database.'

EUROFARM

Up until 1987, Member States were required to forward most results of Community structure surveys in the form of standard tables. This all changed with Regulation (EEC) No 571/88, which required Member States to send Eurostat data on individual holdings as from 1988.

These data are stored at Eurostat in a special database, Eurofarm, where they are processed and checked.

As individual data are subject to statistical confidentiality, Eurostat has had to develop procedures

and programs to guarantee their physical security and to ensure that certain holdings and data relating thereto cannot be identified in the tables of results published.

Main components

- individual database (BDI): individual survey data by agricultural holding;
- tabular database (BDT): standard and ad hoc tables taken from the BDI and accessible on-line to preferential users only.

Advantages of Eurofarm

- data processing method common to all Member States;
- rapid production of standard tables;
- centralization of data and their standard format also allows the rapid production of ad hoc tables in response to individual requests;
- flexibility;
- tables available on various carriers (magnetic tape, diskette, CD-ROM, paper, on line);
- all functions computerized, so human intervention reduced to a minimum.

Main functions

- physical protection of individual data (BDI);
- exhaustive validation of, and plausibility checks on, individual data;
- guaranteed statistical confidentiality of individual data, which cannot be identified in the standard and ad hoc tables (BDT);
- consistency checks on tabular results;
- assessment of the reliability of each cell of the BDT in the event of sampling;
- identification of dominance situations and automatic deletion of problem cells;
- identification of cells in which deleted contents can be reconstituted by calculation;
- extraction of a sampling plan using a full survey.

Eurofarm contains 150 characteristics on each of the nine million holdings surveyed! The number of possible correlations is almost endless.

THE SPEL SYSTEM

What is the link between SPEL¹ and the CAP? What is the purpose of SPEL?

A good example of modelling...

This econometric model consists of a long-term historic database (around 20 years, depending on the country). Many of the data can also be found in the Cronos database, the difference being that the basic data here are annual.

Developed in the early '80s by Professor Henrichsmeyer's Institute (University of Bonn), SPEL is used for short-term sectoral forecasting and medium-term simulation as well as for estimating trends in agricultural income in the Community.

'The main strength of SPEL is its database (SPEL/EC Data) and the quality and reliability of its data series.

...that is very popular with Member States

SPEL has proved very popular with the Member States, as it has helped highlight inconsistencies which they were unable to identify themselves. It has also allowed series that did not exist to be created. Several of the participating countries had no historic series in certain domains before they joined. SPEL has helped verify the consistency of ex-post reconstitution work for all historic series.

In the field of income, SPEL is able to provide interesting answers and short-term forecasts up to October of the current year. It will thus also be very useful for meeting the new CAP requirements by simulating the impact of new measures on both production and income.'

RELATIONSHIPS TO BE DEVELOPED

Eurostat is a major contributor to the annual agricultural report produced by DG VI. What other important contributions are worth mentioning?

'Although 95% of the main results of our work are contained in this report, we obviously also publish a

large number of detailed monographs for many of the domains covered.

In addition to the contribution we make to this important work, we provide continuous assistance to the national Ministries of Agriculture on an almost daily basis.

Interaction is a phenomenon that is becoming increasingly evident in European agriculture. Each Member State is responsible for managing its national programme but, to a much greater extent than in the past, it must do so with an eye to trends in the same phenomenon in its partner countries. We are the ones that provide them with the comparative data.'

Keeping the economic operator better informed

So Eurostat's services are likely to be used more and more in the field of agricultural statistics?

'Yes, which is why we would like to develop links with the trade associations concerned. These have hitherto concentrated primarily on the guarantee section of the EAGGF. However, our statistics are also (or should I say primarily) designed to shape medium- and long-term policy by anticipating structural trends and finding ways of influencing these, etc.

All too often, the information we held was not passed on properly to economic operators, who thus went into types of production for which there was no market. The result was over-production, problems with the sale and processing of products, etc., all because trade associations were probably not supplying operators with the programming data which we held and which might have persuaded producers to change direction.

What was really called for, given the developments in, and investment requirements of, modern agriculture, was an adjustment of medium- and long-term agricultural structures. However, the shortsightedness of the partners involved, who seemed interested only in the annual agricultural marathon of price fixing, meant that long-term restructuring measures went by the board for a considerable time.

Agriculture and agro-industry

Is it easy for statisticians to draw a line between agriculture and (agro) industry? What are the difficulties?

'Agricultural statistics have gone through major phases. In the first of these (1950s to the 1980s), the emphasis was on the origin rather than the use of products. Products that are now classified under the agro-industry were traditionally kept under agriculture over the years.

Nowadays, there is a definite tendency to bring more under the agro-industry and less under agriculture. The agri-foodstuffs phenomenon is of major economic importance: it is expanding rapidly, and was the first sector to "go European". Multinationals in this sector have literally exploded. In agriculture, it is the sectors that have assumed an industrial dimension that have probably benefited most from the CAP.

There are two main reasons why agro-industry statistics have not developed along the same lines as agricultural statistics in general:

- industrial statistics, and agro-industrial statistics in particular, have not carried the same weight at Community level as agricultural statistics or the CAP — there has never been a common industrial policy in the true sense of the term;
- statistical systems, whether national or Community, are "institutions" made up of "departments", whereas the agro-industry, like it or not, is situated somewhere between agriculture and industry. Disagreements over internal competence have meant that the paternity of this industry has always been unclear at both national and Community level.

Add to this the fact that there is a clear trend to avoid giving the Community too much power in this field, where multinationals take a dim view of parameters being set for them, and is it surprising that statistics have not developed here?

But things will change in the future. In a single market, there will be a growing need for agro-industrial production statistics, at both regional and national level, as these are indispensable for locating flows and determining major movements of goods and capital.

We ought to have started developing these statistics four or five years ago. Lack of resources means that they are still the exclusive reserve of multinationals, which are the only bodies capable of programming in an area which the political authorities do not understand. Where are the statistics on chocolate, or biscuits, to name but a few?

The most dynamic developments?

Where do you see the most dynamic developments in agricultural statistics in the immediate future?

'I would put my money on forestry and the agro-industry. Forestry is ultimately the only solution to the "set aside" imperative we have been landed with for better or worse. And the agro-industry because this is probably the least democratic area in both agricultural statistics and European agriculture in the broader sense.'²

¹ SPEL: Sektorales Produktions- und Einkommensmodell der Landwirtschaft (Sectoral production and income model for agriculture).

² Interview with Mr Giuseppe Calò, 16 April 1993.

T RADITION AND MODERN TECHNIQUES

Interview with Mr Hans Georg Baggendorff

Do agricultural statistics actually benefit the people they should, i.e. the farmers? How can we be sure of this? How can we improve the circulation of agricultural statistics between Member States and the ESS, for the benefit of all? How can agricultural statistics stimulate agriculture/development in countries in which Europe has a role to play? And where do fisheries statistics fit in?

It is the combination of traditional methods and necessarily modern techniques that will ensure that agricultural statistics best meet the new needs of their users.

A graduate from the University of Copenhagen with an MSc in economics and political science, Hans Georg Baggendorff began his career in a Danish ministry before joining Danmarks Statistik.

He was involved mainly with transport and tourism statistics, worked as a consultant for various international and governmental organizations, and was Chairman of the OECD Committee on Tourism.

He was part of the Danish team that negotiated accession to the EC, and took over as head of the transport and tourism division in the Statistical Office. In 1978 he joined agricultural statistics, and is currently head of the division Agricultural Products and Fisheries.

KNOW-HOW AND COMMUNICATION

Agricultural statistics are an extraordinarily rich source of information. No other sector of economic activity in Europe has been the subject of such extensive statistical work, even though the relative importance of this sector has continued to decline.

Which aspects of your work as a whole are (or will be) of particular use to farmers (especially young people coming into the profession)? What plans are there for telling them about this work?

No direct contact

'Our role is not to check whether the work we do is getting through to the people you mentioned. Although trade associations regularly use our figures, it is not our job to provide them with systematic commentaries on the information we supply. However, we do endeavour in our *Rapid reports* publications to highlight salient trends or the cyclical aspect of certain phenomena.

It is up to the national, institutional or trade organizations to scan our work for material that might be of interest to their members. What we produce should serve as background to the work of these bodies and institutions: these have experts, agronomists and teachers who are better able to use their knowledge of these detailed areas to draw attention to phenomena that are of importance to farmers in their countries.

There is a clear need for a relay system to ensure that the farmers of the future are better informed, particularly in the educational and academic spheres. Eurostat is open to suggestions that might help it improve anything that can be improved in this field.'

Quality in spite of differences

'The successive enlargements of the Community have forced agricultural statisticians to take ac-

count of the differences between the constituent countries. The accession of Spain and Portugal in 1986 once again increased the importance of Mediterranean countries, and we have been forced to take account of these differences in the legislation drawn up over the past few years. We have called this approach "Agriflex", and it involves reducing our demands wherever possible, but without making the results any less reliable. For example, we calculated that the reliability of pig population statistics would not really be affected by reducing the number of surveys (one instead of three per year) in four of the twelve Member States.

As statisticians from the various Member States, we thus search for weak points that can be improved without increasing the response burden, so as to derive "cross benefits" for everyone concerned.'

FIGURES AND WORDS

Definitions and conflicts

Agricultural statistics obviously work with very precise definitions. Crops, for example, are defined in terms of moisture content, which in turn is dependent on the means of transport used. The ESS uses fixed standards, definitions that are accepted by all statisticians, who ensure that concepts are actually applicable rather than just theoretical ideas.

Given that official statistics are used as a basis for calculating all sorts of subsidies, do ambiguities arise out of differences between statistical and political definitions (particularly as regards the allocation of guidance, regional or other funds)?

'Our figures obviously carry a lot of weight when it comes to political decisions, which must be made jointly. It seems to us that the Member States do their best to ensure that this is the case, but

conflicts between statisticians and politicians cannot always be avoided.

The former are careful to maintain a policy of independence at all costs, whereas the latter, for obvious reasons, are sometimes tempted to question the reliability of statistics when national interests are at stake.'

A general picture

It is easy to image how difficult it is to weigh and measure everything everywhere in exactly the same way. The introduction or modification of milk quotas, for example, is very rapidly reflected in statistics.

In animal production statistics, would it be possible to identify the same unit differently (e.g. dairy cow or bovine animal) depending on where it comes from in the internal market? Has the problem of estimating the cattle population been resolved?

'Statistics generally give a very accurate picture of a situation, although there are exceptions: in animal production, for example, there are generally very few horse censuses. Why is this?

All in all, there is no real conflict: our figures provide a general picture that can be used as a basis for political initiatives or decisions. But it is inevitable that, given the sheer scale of the sums involved and the unpopularity of over-strict checks, certain countries have been tempted to be less than diligent in curbing fraud. But statistics often enable sectors to be detected in which checks are necessary.

However, statistics can never be used as a way of carrying out direct checks. If they were, they would cease to exist. Respondents must be assured that the information they provide will never be used against them.

Also, it must be said that statistics can never be 100% accurate: they show trends, orders of magnitude and volumes that can be used by the parties concerned as basic figures, as a backcloth.'

What of actual consumption?

Does the inclusion of imports/exports in product balance sheets not distort the re-

ording of certain imbalances which it would be interesting to observe?

'Imports and exports have always been part of our balance sheets. In actual fact, the problem with drawing up product balance sheets is in distinguishing between purely statistical work and analytical work.

Consumption is calculated on a basis agreed on by the 12 Member States. But we should bear in mind that per capita consumption is not actual consumption — what we are in fact recording is available quantities. These figures should thus be regarded as orders of magnitude.

Owing to the recent introduction of the Intrastat system, we are not yet able to say how the quality of these figures might be affected. The external trade data supplied by Member States were generally very accurate, very detailed. Given total production, we can now work out the quantities available at EUR 12 level, but it will probably be more difficult to calculate them on a country-by-country basis.

How can we get a better idea of actual consumption? Household surveys, which ask about nutrition patterns in order to produce social statistics, can provide valuable information, but they are very expensive to conduct. However, might this not be a good way of proceeding in a bid to improve our knowledge of the actual consumption of agricultural products?

AGRICULTURE AND DEVELOPMENT

How can statistics help monitor the role of agriculture in aid to developing countries?

'Agricultural statistics have not, unfortunately, contributed a great deal in the field of aid. However, a spirited initiative — aimed initially at the countries of central and eastern Europe — has just been started.

The Warsaw shock

At the end of March, we convened a meeting in Warsaw of representatives from all these countries. Each country, from Estonia to Armenia, sent two or three delegates. In conjunction with the FAO and the OECD, we invited speakers from Sweden, Denmark, the

Netherlands, Italy and Germany to explain to these countries the basic structure of our production statistics. We thought it necessary to provide them with this basic information before moving on to price statistics at a subsequent stage. This proved a real information shock.

A first

This was the first time we had organized an operation on this scale. It told us a great deal about our participants and the difficulties they had hitherto experienced in critically evaluating the situations in which they found themselves. Their whole manner of expressing themselves was affected by this. We are currently doing our best to help them describe their operational environment and specify their needs.

Statistics and democracy ... quickly!

We have thus developed basic statistics, and we are going to have to follow these up with price statistics. But conditions vary greatly from one country to the next. Some countries will virtually have to start (or start again) from scratch. We are endeavouring to help them think about all the possible options open to them.

However, they don't have much time: their systems will have to be in place within five to ten years at most, whereas in our countries, agricultural statistics are based on traditions stretching back more than a hundred years in some cases, and have seen many changes throughout the course of their history.

Very diplomatic

Africa and the developing countries in general have much in common with the situation we have just described. We must provide assistance at grass-roots level and be very diplomatic. The main thing is to find ways of setting up a modern statistical system in the field of agriculture, particularly for the collection of information.'

FISHERIES STATISTICS

What role do statistics play in determining fishing zones?

Determining these zones

'The role of statistics is to provide information for policy manage-

ment purposes. We should also remember that fishing zones were not created by the Community — they go back much further than that.

In the past, a large number of international organizations used biological and scientific criteria to estimate available resources (stocks), effectively creating the zones we see today. It was only fairly recently that the Commission began to work on this question.

In 1991, regulations were drawn up in agreement with the Member States that allowed information on landings and total catches to be collected. This information is expressed both quantitatively and in monetary terms and includes catches that are processed on board, even though it is none too easy to identify these at this stage.

There are now plans to extend this information, which hitherto covered the fishing vessels of the Twelve only, to the EFTA fleet (and possibly to those of other countries such as Russia, Poland, etc.). All being well, we should be able to record landings by boats from all these countries by 1994, and these figures will give us a much better idea of the situation. The Member States have confirmed that they wish to proceed in this way.

There are also plans to further improve the information by incorporating more subdivisions, thus enabling the activity of fishing fleets in the various zones to be better evaluated — i.e. who's fishing where and for what.

Then there will be the figures that allow work done and means deployed to be better evaluated — operating tonnage, number of hours worked, etc.

The Commission is presenting these measures to the Member States and international organizations. Those that are not obligatory will become so soon. They are of paramount importance for both the biological evaluation of stocks and for negotiations with countries such as Canada, the United States, Iceland, Norway, etc.

Measuring the impact

How can statistics measure the impact of overfishing on certain species?

'Statistics cannot provide this information directly: results must be incorporated into the figures held by political organizations and the Member States themselves. This is obviously a very sensitive area for Member States who have highly efficient fishing fleets, or for whom fishing is of particular importance given the size of their country.

In certain regions, whole zones depend on fishing, and changes in this sector will have a profound impact on employment. Many industries are affected, and are struggling to survive. As things stand, we can only give basic information on the phenomena observed.'

WHAT CHANGES ARE IN THE OFFING?

What will be the main impact of the reform of the CAP on your work?

Change is nothing new

'Whilst it is certainly true that this reform entails a number of major changes, this in itself is nothing new.

When the Community was set up, the Six concentrated on animal production statistics. Crop production was not really given any thought until after the Community was enlarged. Then came stabilizer systems, particularly for cereals. Other crops have only just been taken into account.

Judicious legislation has allowed us to restore the statistical balance between animal and crop production. The ESS will now be able to monitor phenomena in a wider area comprising the Scandinavian countries, the countries of central and eastern Europe, etc.

We will, for example, be able to assess the importance of forests in Scandinavian areas such as Finland, Norway and Sweden. It will also be possible to take account of the special features of animal production in these countries. The rearing of reindeer, for example, is a significant activity in these countries, and we will be able to follow their migration patterns and capture.

From an organizational point of view, we have split the work so that the crop and animal sectors can be managed separately. This will allow us to continue our observational work as efficiently as possible.

Smooth controls

But there is also new information to be collected. Most importantly, we must improve our knowledge of stocks, particularly by type of product, place of production, processing, marketing, etc. We have not yet worked out all the details of how we will go about this.

Should we make greater use of our simulation models?

This is a matter that calls for original statistical applications, ones that are in many cases different from traditional methods. Should we make more use of panels? What type of panel? We have a full set of controls at our disposal, and we must operate the levers as smoothly as possible.

Knowledge of farmers' plans

These techniques will also allow us to gather valuable information on a matter that has hitherto been little explored, namely what farmers' plans are.

Finding out well in advance what farmers are planning for the coming season will effectively enable us to start certain procedures in good time. Under the current setup, procedures are often initiated too late and so do not have the intended effect.

Just as, in industry, we obtain information from order books that allows us to anticipate production and its attendant features well in advance, so we should introduce the same concept into agriculture.¹

The field of agricultural statistics, which is much more market-oriented than before, will in all probability have to review a number of its traditional and sophisticated (over-sophisticated?) methods, abandoning these in favour of methods that are more flexible, less costly, more efficient and capable of producing concise, adequate and accurate data in good time. A sort of marriage of tradition and modernity.

¹ Interview with Mr Hans Georg Baggen-dorff, 16 April 1993.

M ISSIONS, VISITS AND MEETINGS

■ STATISTICAL PROGRAMME COMMITTEE (SPC)

The SPC met in Brussels on 25 March 1993.

The meeting concentrated on the following topics:

- legislation on business statistics: the majority of countries were in favour of an integrated approach, with a framework regulation as the legal basis. A management committee would decide on a number of technical points and analyse the cost of work to be done.
- principles and procedures for programming missions: general agreement was reached on this point at the meeting. However, participants wanted to see programming missions limited to cases where there were genuine problems.
- approval of two proposals for Council Regulations on fisheries.
- revision of the European system of accounts (ESA): the SPC welcomed the Eurostat initiative for obtaining a common position from European countries. Several countries proposed taking a closer look at the idea of creating a legal basis that would require Member States to draw up accounts using the new ESA.

■ EUROPEAN ADVISORY COMMITTEE ON STATISTICAL INFORMATION IN THE ECONOMIC AND SOCIAL SPHERES (CEIES)

The CEIES met in Brussels on 26 March 1993 to deal with the following topics:

- dissemination of statistical information: the Danish, Irish and Italian members of the Committee presented their contributions on dissemination policy for official statistics;
- harmonization of consumer price indices: interesting contribution from the German member;
- development of the Community statistical system: activities of the SPC, the Committee on Monetary, Financial

and Balance of Payments Statistics (CMBF) and the Steering Committee for Statistical Information (CDIS), together with the draft Community statistical law.

- running of the CEIES: organization of the Committee's work.
- cost/efficiency aspects of the Community statistical programme: presentation of examples based on the cost/efficiency approach.
- evaluation of the 1989-92 Community statistical programme: in April and May three members of the CEIES would draft an opinion on the final report on the implementation of this programme. This would subsequently be forwarded to the Council.

T HE COMMUNITY ON CD

An example of innovation
Interview with Mr Michel Brogard and Mr Jacques Frankin

For the first time ever, key Community statistics have been brought together on a CD-ROM. The socioeconomic indicators selected cover all statistical fields, providing information on all 12 Member States (EUR 12) and, wherever possible, the United States and Japan. This was an ambitious project, and is providing useful information for the future.

Michel Brogard

After graduating in commerce and finance from the ICAD (Paris), Michel Brogard trained in statistics before entering the Commission in 1975. After three years in budgetary management with DG XIX, he joined Eurostat in 1978, where he was involved with industrial statistics until 1985 and national accounts until 1989. After the Euro-cron database was set up, he was put in charge of the Eurostat-CD project.

Jacques Frankin

After studying for four years at the Ecole royale militaire in Brussels (social and military science), Jacques Frankin was assigned to a number of commands in Belgium and Germany until 1987 before joining the security services of the Ministry of Justice. He came to Eurostat in 1989 to take over management of the Cados documentary database, and was subsequently involved in developing the EC electronic statistical directory.

IN THE BEGINNING

In the early 1990s a preliminary study showed there to be two interesting sources of potential for developing CD-ROM applications in Eurostat — one was agricultural statistics and associated legislation, and the other was data on all the sectors covered by the Statistical Office, in the form of an advanced electronic directory.

Gestation

At the end of 1990, a feasibility study concluded that the time was ripe to give priority to developing the statistical directory, and the initial budgets were drawn up at this time. A number of unforeseen administrative problems had first to be resolved, and by late 1991 the ad hoc legal framework was in place. Preparation of an in-depth systems analysis could now begin.

Birth

The final version of this analysis was available by April 1992. Various types of data preparation work were also carried out simultaneously, meaning that by April 1993 — barely a year after completion of the systems analysis — version 1/93 of the disk was brought out.

How it was done

Development of the software alone cost some ECU 200 000 (excluding production costs). Once it had got off the ground, a team of just six people was responsible for running it. In addition to the project leader and assistant, there were two to three documentalists and at least two people working on encoding and classification plans. Additional work by other individuals was also required to produce minor software programs for preparing data and for checking/revising them prior to extraction from the various bases.

AN INTEGRATED APPROACH

'We initially aimed to design a product that would provide separate access to the data contained in each of these bases using a single software program. However, we soon had to change our ideas. We realized that it would be better to create a fully integrated product bringing together all Eurostat data under a single "umbrella", so that the same software could be used to extract regional, national or Community data by product, domain, etc.

These data are very heterogeneous, not only because they are stored in separate databases, but also because they cover a wide range of dimensions and types, or because they are based on very different concepts or collection methods or use very different classifications.

We were thus faced with a major problem, particularly since there was no equivalent product on the market that we could have used as a reference for defining our approach. We thus had to innovate and make choices, and were led to devise a rather unorthodox "classification plan".

Russian dolls

The system is reminiscent of a set of Russian dolls that fit inside each other. It uses a decimal index which is not a descriptor, but which allows the user to move from the general to the particular, the last level always being a detailed level of data. The "umbrella" under which the data are grouped has been broadened wherever possible so that it can be shifted between the chapter headings of very different statistical sectors. A single "umbrella" thus covers regional, national and Community data, meaning that the user can choose the appropriate statistical system during consultation.¹

An integrated approach

'The need for an integrated approach led us to "mix in" additional elements which may have appeared out of place at the outset — classifications (either associated with data or used as a reference), methodological notes, explanations of concepts — elements which, in the various bases currently in operation, are notable more for their absence.

In general, the methodological notes were unsatisfactory, so we had to put the emphasis on documentation. The integration exercise was thus only applied to the actual databases. It also meant incorporating the various classifications, setting them out side by side, proving that they were mutually complementary, that there were in fact well matched. Then we had to explain the concepts to which the data refer, so that this was clear to the user.²

Difficulties

The cartographic dimension

'Nor did we expect to have problems with the geographical location of data. However, we had to recognize that we lacked the necessary skills in this field. Fortunately, at about this time, another Eurostat team was starting on a major project in the field of georeferenced data (the GISCO³ system). Their advice, and the work they had already done, enabled us to obtain very satisfactory results.¹

Translations

'One difficulty that had not really been reckoned with at the outset was that of translating not just the classification plan but also the corollaries, and the fact that the method of data indexing varies according to the source language. Changes must constantly be made depending on the specific vocabulary used in a given language.

Because the translations were done as the prototype was being developed (French being the original for both the classification plan and the methodological notes), delays were compounded, meaning that the English and German versions could only be incorporated into the final prototypes. Full credit to the Translation Service, which

did everything it possibly could in spite of the pressure we had to apply.²

LESSONS

The main lessons can be drawn from the way in which we were able to 'disconnect' the system from the bases that originally provided the data.

'As soon as we dissociated the bases and methodological notes from their main carrier, from their environment, we very often needed to create new titles for each of the tables throughout the hierarchical structure (i.e. for all the "umbrellas"). Fortunately, we were able to take full advantage of the considerable wealth of translations that already existed in the Cados system and its three-language thesauri.²

'We were able to use Eurostat's various dissemination bases — some of which are available in traditional (i.e. paper) form only — to "salvage" an electronic form, although very often this contained the "data" section but not all the "metadata". This is what caused us most work in terms of reconstitution.

The most important lesson in my opinion is that it proved possible to create an integrated product using the very diverse statistical data held by Eurostat. The price we have paid is far from small, and the first version will definitely not be perfect. An important corrective phase will follow.

Another major lesson we learned is that creating a product of this type is a very useful way of highlighting the imperfections, faults, inconsistencies, errors of unit/scale, etc. that any database may contain. All the domains covered called for considerable corrective work, especially the social domain.¹

'We discovered a lot of dead data that many people thought were still live. In reality, our bases are often virtual-data constructions: you expect these to be produced by certain combinations of codes, sub-codes or dimensions. But when you take these and put them into a melting pot such as this CD, you get a much clearer picture: dimensions are no longer codes, but have names — a country, a specific unit, a clearly determined variable. Because there is

clearer access to a dimension, errors that had hitherto been invisible are suddenly apparent ... figures that are missing because certain countries have not respected the reporting periodicity, extreme values that stand out, figures that are available for a few countries only but which the system says can be selected for the Twelve, etc.

Lack of homogeneity

In the various databases of the European statistical system (ESS), not all the dimensions have the same names. The twelve reporting countries have as many codings as there are bases. It is thus impossible at this stage to use a single extraction tool — a specific extractor has had to be created for each base. In almost all domains, we have come up against this problem of a lack of homogeneity, e.g. of dimensions. It is not so much a case of data being unavailable in the ESS as there being a lack of homogeneity. The experiment we have conducted should go a long way to rectifying this.

Lack of a reference base

At the level of metadata, which have been my principal concern on the documentation side, the lack of a reference base, of a reservoir of multilingual documentation, is all too clear.

This is ample justification for the work that has now started in this field, which should allow this type of product to be created much more easily and quickly in future. We have felt a strong need for a reference base into which we can plug any type of medium in the future for all our publications.²

OUTLOOK

This CD-ROM, which effectively contains all key statistical data at regional, national and Community level, together with external trade data by product (according to both the CN and SITC), is aimed at a very broad public. It is designed for people or institutions looking for harmonized statistical information on the Community — universities and university-level colleges, libraries and documentation centres, national authorities, NSIs, ministries, representations of

Member States and of non-member countries, consultants and design offices, etc.

Furthermore, given the growing importance of the regions within the Community, the CD-ROM, which supplies data in the form of maps and regional profiles and allows basic economic analyses to be rapidly produced for any NUTS⁴ region, will prove to be a politics management tool of unsuspected potential, as the strengths and weaknesses of each region can be seen at a glance.

Multinationals will find that this new statistical instrument provides them with all the essential information they need for sectoral, branch and market analyses.

Internally, all of the Commission's DGs will use it to supplement current on-line access facilities and traditional publications. The CD-ROM⁵ will also be greatly appreciated in the Commission's Delegations and press offices abroad, where communication problems currently make on-line access highly inconvenient.

The outlook for both the future development of the product and its marketing is very encouraging indeed.

¹ Interview with Mr Michel Brogard, 17 May 1993.

² Interview with Mr Jacques Frankin, 17 May 1993.

³ GISCO: Geographic Information System for the Commission of the European Communities.

⁴ NUTS: Nomenclature of Territorial Units for Statistics.

⁵ The Eurostat-CD, Catalogue No CA-CM-93-000-3A-C, is sold by the Office for Official Publications of the European Communities in Luxembourg, price ECU 1 500 (see inside back cover for address).

The price includes the first edition and an autumn update. New subscribers will also be given a reduction of 40%.

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