*Rational agriculture*

In his report, Guy Paillotin proposes a definition of rational agriculture: 'Rational agricultural is aimed at controlling in the best way possible, at the level of the farm as a whole, the positive and negative effects of farming on the environment, while ensuring the quality of food products and maintaining or improving the economic profitability of holdings'. He considers that the environment is a right for society and that agriculture must care for it and protect it and finally should not cause pollution. Society does not necessarily have to support this approach by farmers, except in specific cases (*Contrat Territorial d'Exploitation*). Rational agriculture is the way of linking the market mechanisms that govern production and non-market ambitions.

## The awareness and observation of consumers with regard to fruit and vegetables

*The problem of quality*

According to analysis made by Anne-Marie Moreau-Rio of the CTIFL (*Centre technique interprofessionnel des fruits et légumes*), quality is a real problem in fruit and vegetables and the agri-environment is a major preoccupation for the French. The surveys and studies on this theme performed last year by the CREDOC and more recently by the CTIFL are clear on this point.

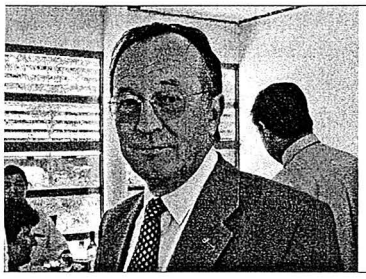
Thus, the French are spontaneously preoccupied by the environmental consequences of animal farming and cereal crops, which have been criticised somewhat in recent years. In contrast, the natural aspect of fruit and vegetables is sought. This is a formidable advantage in comparison with industrially produced agrifood products. Curiously, this advantage is not sufficiently used in the generic promotion of fruit and vegetables, whereas it is used by the agrifood industry (for dairy products for example). Thus, the consumer considers that fruit and vegetable a priori form a preserved universe—whose image is intact—even if 11% of people are worried and sure that they are being poisoned.

Nevertheless, consumers consider that the intrinsic quality of these foodstuffs has fallen in the past ten years, while they think that the quality of agrifood products has increased during the same period. They attribute this decrease to intensification, reckless emphasis on yields and the use of inputs in general. Quality is therefore the real problem of fruit and vegetables.

They obviously recommend a return to wisdom. 'Vegetables should be respected in the same way as people' explained one of the persons questioned, clearly expressing an extremely strong link with a vegetable or a fruit—plants from which humans draw substance. For effectively, can one imagine a more intimate link with a product that we purchase, that we eat, from which we draw energy and vital force?

I have described some of the important challenges that are issues for our society. Other speakers will describe other issues—obviously related to hygiene, the environment, economic problems and segmentation and marketing in fruit and vegetable channels and especially tropical produce.

CIRAD-FLHOR researchers will then address solutions and discussion—lines that should form approaches to solving the problems and issues in the banana and pineapple subsectors ■



# Banana and pineapple imports in the European Union: a synthesis of community law and French acts

**Gilbert Theissen**, Head of the Mission de Coopération Phytosanitaire de la sous direction de la Qualité et de la Protection des Végétaux, DGAL du ministère français de l'Agriculture et de la Pêche, gilbert.theissen@wanadoo.fr

The various criteria are mentioned: phytosanitary aspects, food hygiene and quality factors. The latter are not within our scope and are simply mentioned in passing. Our aim is that of informing technicians and operators in order to demystify the subject.

## Phytosanitary criteria

Phytosanitary certification by the authorities in the exporting country (drawing up a phytosanitary certificate) is not necessary for these tropical fruits. Indeed, none of the pests listed in Directive 2000/29/EC of 8 May 2000 concerning measures to prevent the introduction of pests in the community are in principle likely to be present in shipments. I refer in particular to the fruit flies that cause worry to exporters of mangoes and other susceptible fruits and vegetables.

The only problem that may arise is that of so-called 'quality' pests such as mealybug on pineapple. These may reduce product value and are solely a commercial problem to be settled between the purchaser and the seller without any intervention by the authorities handling control operations.

Packing is not a problem either. This is performed with boxes that are glued and no longer stapled (for handlers' safety). However, bananas and pineapples must not be packed in conifer bark, for example, since the importing of certain types of wood and wood products is forbidden. The shipment would simply be destroyed—not because of the contents but because of the packing.

## Food hygiene criteria

It is essential here to take into account the possible presence of residues:

- pesticides resulting from field treatment of pests,
- additives such as coatings or preservatives used in packing stations for the post-harvest conservation of fruits,
- other possible contaminants such as microorganisms and toxins that they secrete, chemical contaminants (heavy metals, nitrates, etc.) and radioactivity. These contaminants are not known in banana and pineapple.

In fact, only the first two may cause difficulties for the person putting on the European market fruits that are not in conformity with regulations transcribed into the national law of member states. This transcription is performed using the guidelines on pesticide residues (directives 76/895/EEC and 90/642/EEC amended respectively by directives 2000/24/EC and 2000/48/EC) and by that concerning food additives (including preservatives) other than colorants and sweeteners (directive 95/2/EC amended by directive 98/72/EC). The only substances concerned here are preservatives like thiabendazole permitted for surface treatment of bananas with a maximum residue level of 3 mg/kg.

It is useful to remember that discussions at European Union level concern:

- pesticide residues for the 'phytopharmaceuticals' applied to field crops,
- 'additive residues' for preservatives or coating substances used in post-harvest operations.

Pesticide residues—as used here and in community law—means the remains of pesticides and the products of their metabolisation, degradation or reaction of the active substances. Solvents and adjuvants, forming a propellant for the pesticide, are not yet covered by law. The European Commission in Brussels (SANCO) is beginning to address the subject. Indeed, among solvents, xylene may finally be extremely toxic for consumers if it is present on fruits and vegetables.

Community sample taking methods for the official control of pesticide residues on and in fruit and vegetables are set by directive 79/700/EEC. For bananas and pineapples, the whole banana fruit without the peduncle is used and the entire pineapple fruit without the crown. The residue level set by the regulations is applied to fresh and refrigerated fruits and also to the resulting processed products (juice, jam, etc.). The method used for setting maximum residue levels (MRLs) was mentioned during the talk.

The major priority in the European Union is safety for the consumer, that is to say control of MRLs. The new control policy is specified in a report dated 1 March 2000 by the Commission to the Council. Control will be performed by member-states over five-year periods. A synthesis of the results at the end of each period will make it possible to define consumers' effective dietary exposure in the light of the presence of residues in the products monitored. Co-ordinated community control programmes can then be better drawn up.

Bananas and pineapples are not a major preoccupation for the DGCCRF (*Direction générale de la consommation, de la concurrence et de la répression des fraudes*). The controls performed have resulted in only a very small number of interceptions. The rare problems known are for bananas and consist of levels of post-harvest treatment products greater than the thresholds.

*A few examples*

**bitertanol**

A vessel from Cameroon was intercepted by an inspector in Marseilles. We were consulted and re-examined the case of bitertanol and its residues. In France, Baycor, based on bitertanol, has not been registered for banana. This means that its residue threshold according to the principle of the law must be at the minimum limit of detection, that is to say 0.05 mg/kg. However, the Codex alimentarius, the world reference on questions of residues, is applied in Germany and the United Kingdom. Here the MRL for bitertanol is 0.5 mg/kg, that is to say ten times as high as in France. The results of the analysis performed gave a satisfactory figure (0.1 mg/kg) for Germany and the United Kingdom.

The vessel could be re-routed to London or Hamburg where the bananas could have been cleared through customs. Having become community goods, all hopes were allowed for the

cargo in the respect of the principle of free movement of goods.

It was necessary to know that Baycor benefited from a derogation for use in Guadeloupe and Martinique but without a residue level set, which is a loophole. This gave the inspector an interpretation problem and raised the question of the coherence and harmonisation of MRLs. Seizure of the goods was not pronounced and they were cleared through customs.

**tebuconazole**

No MRL has been set and so the minimum detection limit is used insofar as use is in conformity with good practice or its registration. This substance is permitted for use in banana plantations in which the bunches have been bagged. No MRL is therefore necessary.

**thiabendazole** (E 233 - preservative)

There have been a few rare interceptions for exceeding the MRL that is currently set at 3 mg/kg. Packing stations are relieved because the MRL is to be raised from 3 to 5 mg/kg on bananas in July 2001. Thiabendazole is the only preservative authorised on the surface of bananas by community law.

**aldicarb and chlorpyriphos-ethyl**

In July 2001, the MRL of aldicarb on bananas will be lowered from 0.2 to 0.1 mg/kg while that of chlorpyriphos-ethyl is to be raised from 0.05 to 3 mg/kg.

Phytosanitary advisers to banana and pineapple growers must therefore keep up with changes in the legislation of residues in and on fruits so that the best choices can be made in time with regard to the selection of treatment products and the setting of pre-harvest treatment dates. Crops with undetectable residue levels should be favoured. In the absence of specific limits in sections on banana or pineapple, it must be checked while examining the regulations whether mention is made in a more general customs category covering 'other fruits' and under the heading 'other plants'.

## Quality criteria

Exporting to the European Union requires respect of the standards laid down for fruit and vegetables. Banana has its own quality standards (Regulation 2257/94 of 16 September 1994). Those for pineapple are still at the draft stage and being examined by the Codex Committee on Fresh Fruits and Vegetables. For information, I should like to mention the excellent work carried out by COLEACP and CIRAD-FLHOR in the booklet entitled *Ananas - Critères de qualité*.

**In conclusion**, the keys to successfully exporting bananas and pineapple to the European Union countries lie in good field and packing station practices. For this, you can place your confidence in CIRAD-FLHOR experts who are scientists and specialists in these crops. In addition, we remain at your disposal for any information concerning the regulation aspects ■

*Note: the legislation mentioned here is available as a regularly updated compilation in the volume 'Additives and contaminants in foodstuffs of plant origin' (600 pages) of the set of compendia of international provisions and European legislation compiled by the Mission de Coopération Phytosanitaire. Information from gilbert.theissen@wanadoo.fr*

## Questions / Answers

**Luc de Lapeyre, CIRAD-FLHOR**
Has a standard been drawn up concerning bitertanol on banana?

**Gilbert Theissen**
No standard has yet been set for bitertanol in community law or in French regulations. In Germany and in the United Kingdom, and in the Codex, the standard on bananas is 0.5 mg/kg. The absence of French standard is without consequence because the manufacturer recommends the use of bitertanol for the treatment of banana plantations in which the bunches have been bagged. There cannot be any residues. Used in post-harvest treatment of bunches, there is a risk in exporting to France because the residue level must be lower than the detection threshold set at 0.05 mg/kg.

No substances are permitted for the post-harvest treatment of pineapple—not even the famous soaking in fungicide solutions that is sometimes performed in packing stations. There is no question of forbidding these practices in the countries of origin as that would be interference, but remember that the threshold level on arrival must be that of the importing country's standards.

**François Dalle, POMONA**
Three substances are authorised in the 1991 regulation on post-harvest treatment of banana: thiabendazole, imazalil and benomyl. These are used by producers. A registration application for bitertanol was made in October by the Bayer company, which requested a MRL of 3. We still do not have the results.

**Gilbert Theissen**
The active substance authorised for post-harvest treatment effectively appear in both the community measure that you mention and in the transcription into French law (order of 14 October 1991). This regulation

was modified by directives of December 1996 and then of 15 October 1998. The 1996 changes were made to the French order of 1991 by that of 2 October 1997 (*Journal Officiel* of 8 November 1997). The wording of the amendment is not very clear with regard to the substances mentioned on banana. We propose to review post-harvest treatments shortly.

**Laurent de Meillac, banana grower in Martinique, chairman of SICABAM-Martinique**

Outside the European Union, any product can be used on fruits before and after the harvest on condition that there are no residues. The fruits treated in this way cannot be barred for import. However, the use of these products is forbidden in the European Union. Does not this imply an enormous distorsion of competition between European Union producers and the others?

**Gilbert Theissen**

This is a problem of national sovereignty and not of unfair competition. Every third country has its own registration system (or is trying to set one up according to its resources). Countries make a political choice with regard to authorised pesticides. This choice will be more or less in line with sustainable agriculture that respects consumers and the environment.

The European Union and France have taken this line. Following the last agricultural framework law in 1999, our farmers will be taken to court if they use (or even just possess) treatment products that are not registered for the crops that they grow. This is a penal offence and is punished by up to six months of imprisonment and a fine of up to FrF200 000. Controls of residues form part of this political approach.

**Ellen Hanak Freud, CIRAD-CA**

Are we moving towards the harmonisation of standards among European Union member-countries?

**Gilbert Theissen**

Yes, this is the objective of Directive 90/642, amended, of 1990. Thus, the MRL for fenamiphos (the active substance in Nemacur) is 0.1 mg/kg in Germany and 0,02 in the United Kingdom on banana and France and the Codex have not set an MRL. The minimum detection threshold is therefore applied in France. Hence, if you have applied Nemacur in your plantation it is better to send your bananas to Germany where they have more chance of getting through. The aberration is that these bananas can subsequently enter France with, perhaps, less risk of being stopped. This is a harmonisation problem that exporters are currently profiting from. I have already replied to Mr de Lapeyre on the subject of bitertanol. The level of thiabendazole on banana is to rise from 3 to 5 mg/kg whereas ethephon on pineapple is to be lowered from 2 to 0.5 mg/kg. That is harmonisation.

**A product whose MRL is in conformity with European standards may move freely in the community even if the active substance is not present in a product registered for crop treatment in a member-country. In fact, registration and MRL are totally unrelated. The MRL of unregistered substances is also set at the detection threshold ■**

# The impact of pesticide regulations on ACP fruit and vegetable trade channels

**Catherine Guichard**, Delegate-General of COLEACP

Few companies concern themselves with the regulations on pesticide residues as long as they are not hit by sanctions. Consumer concern generated by successive foodstuff problems at the end of the 1990s led to reaction by the sanitary authorities. This awareness was particularly marked in Great Britain; there was no longer any question of the government being an accessory in sanitary problems, after failing to condemn those whose errors were detected during controls.

The first list of offenders was made public in 1999 and contained the names of the supermarkets where tests had revealed residue levels higher than the limits set. The names of the importers supplying the supermarkets were also mentioned. As there is strong competition between British retail distributors, the latter reacted to prevent these 'naming and shaming' campaigns from results in severe losses of market shares.

This led to extremely strict conditions applied by distributors to their suppliers, who must provide guarantees concerning operational sequences, the full traceability of goods and the assurance that the pesticide residue limits laid down by the regulations are respected after the application of good farming practice. The problem of pesticide regulations appeared to be very serious in 1999, because it seemed that 'open positions' would be reduced to analytical 'zero' on 1 July 2000, and some people went as far as thinking that the maximum residue limit (MRL) of all pesticides used on horticultural crops and for which an MRL had not been harmonised at a European scale would have an MRL of zero.

With the strengthening of controls and European concertation since 1995, each member-state must report the results of its residue tests to the European