



Contrats Territoriaux d'Exploitation (CTE) for banana plantations in Guadeloupe: proposal for a 'Perennial highland banana plantation' measure

Marc Dorel, CIRAD-FLHOR, marc.dorel@cirad.fr

The 'CTE' is a contract between a farmer and the French government within the framework of the new Agricultural Orientation Law. Its aim is the multifunctionality of agriculture: balanced development, job creation, maintenance and improvement of landscapes, respect of the environment, quality and safety of foodstuffs. This is no longer just a question of production targets. Other functions are assigned to agriculture and they cannot be remunerated solely via the market. Society must participate in this effort and the CTEs form the instrument that can accompany farmers in this new approach.

The proposals for CTEs made to the departmental agriculture commission in Guadeloupe were drawn up by CIRAD in collaboration with GIE Agro Service, the Karubana and Banagua producers' groups, the *Direction de l'Agriculture et de la Forêt* (DAF), the *Direction Régionale de l'Environnement* (DIREN) and the Chamber of Agriculture.

Strategic framework

The context of CTEs for banana plantations is that of a fragile island environment requiring the taking into account of the environmental impact of crops. In addition, West Indian production is subjected to strong competition on the European market, with flow difficulties resulting from the over-supplying of this market. In order to survive, West Indian banana production requires the competitive advantages that it can obtain by being different to standard products, by laying stress on different origin, cropping systems, cultural practices and cultivars.

The CTE is a way of attaining these new objectives and producing produce of better quality with improved value-added while respecting the environment. The highland banana plantations in Guadeloupe match the priorities defined for the launching of CTEs fairly well, i.e. land where the environmental issue is strong, a sector in difficulty and small and medium-sized family farms.

Territorial assessment

The CTE must be based on a territorial assessment, a review of the environment and the farming

systems currently used. In the zone in question, the environment consists of andic soils with good fertility on steep, stony slopes and with moderate soil parasitism (nematodes and banana borers). The climate is marked by strong rainfall of between 3 000 and 6 000 mm per year and stronger winds than in the plain. The fruits produced under these conditions have interesting characteristics. They have high mechanical strength and are less susceptible to diseases and to canker in particular. Their organoleptic qualities are also reputed to be excellent. All this forms a set of potentially profitable factors in this production zone.

The farming systems found in this highland zone in Guadeloupe consist of small farms (more than two-thirds have an area of less than 5 hectares) mainly operated in the traditional way, that is to say perennial banana plantations. There is neither mechanisation nor replanting and the level of intensification is low, with little application of fertiliser and pesticides. Intercropping is also observed, consisting of banana and coffee and banana and *Anthurium*. Finally, one of the features of the farming system is the high cost of cultural operations because of the heterogeneity of the fields and the topography. Manual operations are expensive on slopes with much stone.

This traditional system has a number of advantages with regard to sustainability, respect of the environment and the maintaining of fertility:

- no replanting means that constant soil cover protects the soil from erosion;
- no mechanisation is a factor in the conservation of soil porosity that enhances internal drainage and root exploration and hence good plant rooting;
- it is a potentially less pollutant form of farming because few inputs—pesticides and fertiliser—are used in these traditional systems.

In contrast, improvements are needed with regard to:

- pollution by polyethylene bagging;
- roads and service networks: these have not always been planned very judiciously to the extent that they are the points of departure of erosion phenomena during hurricane periods;

- bunch care: the potentially high fruit quality is poorly exploited for lack of adequate bunch care.

Specification

The aim of this specification is to maintain the traditional non-mechanised perennial banana cultivation system by introducing a new rational cultivation concept. This improves the system through the limiting and rational application of inputs and the promotion of the intrinsic quality of the fruits by means of a quality label.

The main features of the specification are as follows:

- involvement of planters in a training and monitoring procedure to be handled to a considerable extent by GIE Agro Service;
- following a farm development plan forming part of an overall drainage basin and production area development plan. This consists of a system of wind breaks, roads and tracks and canals and the identification of sensitive zones to be reforested. It should be planned in concertation with support structures;
- non-mechanised perennial cropping system with, in the case of a new banana plantation, zero tillage to conserve the physical properties of the soil;
- rational fertilisation in the light of soil/plant analyses, with a ceiling set for nitrogen fertilisation and the splitting of fertilisation;
- rational control of nematodes and banana borers by means of the regular monitoring of parasite and pest populations;

- no chemical control of thrips: control by bagging alone;
- systematic collection of wastes: bagging, string and packing material;
- filtration of packing station waste water;
- weekly bunch care, marking at flowering and management of the optimum harvesting time (harvesting of bunches of the same age for a period of a maximum of three weeks);
- planters' involvement in a collective quality approach in the area.

This specification can of course be changed in the light of fresh knowledge or new techniques. These changes will be validated within the framework of research contracts between planters and the technical support structure. In Guadeloupe, these support structures are GIE Agro Service, Serviproban, grower group technical units, CIRAD and the Chamber of Agriculture.

The specification has been approved by the *Commission départementale d'orientation agricole* (CDOA) and is being examined in Brussels. The funding awarded would be approximately FRF5 800 per ha per year (€884).

In conclusion, the respect of this specification will encourage the establishment of farming systems that respect the environment and allow better expression of the quality potential of highland banana. However, funding is limited and unless promotion is assured in the downstream part of the chain the effects will not be very great ■

Questions / Answers

Jean Harzig, L'Echo

You suggest a type of quality label to be defined. Have you an idea of the way in which a highland banana can be differentiated objectively from a standard banana, it being understood that, as in the Paillotin report, respect of the environment is considered as something normal and that can be the subject of compensation within the framework of the CTE but no more. So, objectively, is there really a difference in the organoleptic characteristics of the product?

the more when the specification is applied. However, this will be less marked unless care is taken with regard to the stage at which the fruits are harvested. In any case, work on organoleptic differentiation remains to be done. I do not fully share the idea on the subject expressed in the Paillotin report. I consider that the notion of terroir, origin and production method can have commercial value and bear a certain image of the West Indies—of traditional cultivation. This is my opinion and it remains to be validated at the commercial level.

François Dalle or other trade operators in contact with the distribution sector and who may have an idea about the subject.

François Dalle, Pomona

There are marked examples in France, for apple, for example, with mountain or Limousin apples. The difference in value potential is substantial because there is a considerable, measured advantage in taste. The specification for these apples includes a minimum sugar content and a degree of crispness and it can thus be fully justified both in the chain and for the consumer. It should be measured in this case. We have tried a little and did not find

Marc Dorel

There is a small organoleptic difference that will be stressed all

Jean Harzig

I would like to submit the question to

a great difference. But several distributors were approached and they stated that they were not ready to pay for the respect of the environment unless there was a real difference in visual appearance and taste.

Jacky Ganry, CIRAD-FLHOR

It is stated in the Paillot report with regard to the CTE that 'It is legitimate to encourage the viability of experiments aimed at rendering profitable in a way an approach to the protection of nature', and also 'The aid provided by CTEs must enhance market access for new products'. This means that the undertaking of an agri-environmental approach or a CTE already makes it possible to approach higher product quality. Production will take place under the best possible conditions. It is then necessary to add criteria to which insufficient value has hitherto been attached. We know that highland bananas have certain features, and especially firmness, that it should be possible to use commercially. Let us say that it is not a direct relation between the environmental approach and the market. However, the environmental approach makes it possible to become involved in a logic of rational agriculture that can be used as the basis for a number of practices that can be used commercially.

Jean Harzig

As stated by the CNLC and whenever we discuss certification, this can only provide approval for procedures that certify a difference for the consumer. Differentiating a

production procedure is a good thing but cannot be the subject of certification, except for organic produce. Something must be differentiated in the end. So can we differentiate highland bananas in the same way that we objectively differentiate highland apples?

Marc Dorel

I think that we can make a distinction. Quite a lot of survey work has been carried out on mechanical qualities and diseases. The organoleptic aspect has not been covered. It can be considered that beyond the subjective impression there are objective differentiation criteria that can be identified.

Laurent de Meillac, Sicabam Martinique

Your approach is a good one from the philosophical and environmental points of view. Nevertheless, you have forgotten that there are growers behind this. What income are they going to draw from their work? You haven't mentioned the yields that can be achieved. In addition, you talk about plantations with an area of 2.5 hectares or less than 5 hectares. Although one hectare of bananas can be profitable with a certain value drawn from production, one hectare cannot feed a family and neither can two hectares. You need a minimum of 5 or 6 and even 7 depending on the region.

Eric Bargy, Germicopa

Isn't it interesting in a case like this to apply for an *appellation contrôlée* or something like that, with strong product differentiation?

Marc Dorel

Yes, that is the idea in a way. When I mentioned a quality approach, this meant a PGI. But there are two possible pathways: either we go for a commercial brand or growers work to gain an official label. We would tend to favour an official quality label.

Olivier Masbou, FLD

I would like to know how many growers are potentially concerned by the project, because it seems to be a fairly determined highland zone. In addition, what is the average area farmed and what income can they draw from this? If I may mention a point concerning rational agriculture, it would seem to me that all the work in progress addresses the certification of the farm and not of production. Therefore, the entire farm, whatever it produces, should operate using rational agriculture.

Marc Dorel

On the subject of farm structure, it is true that there are about 40 farmers in the production area concerned. Some (less than 5) farm more than 20 hectares but most are small farmers. With regard to the CTE notion at farm scale, they are banana plantations with a majority of banana on the farm area and the CTE therefore applies at farm level. In addition, this is a CTE backed by a notion of sustainable agriculture and not a quality label or the certification of rational cultivation ■



Certification policy: the example of Compagnie Fruitière in Côte d'Ivoire

Alain Normand, Compagnie Fruitière, scb@africaonline.co.ci

Some observations concerning the ISO 14000 standards

I am responsible for pineapple operations in Côte d'Ivoire and also handle agricultural management, in which we have worked on ISO 14000 standards this year.

These are international standards with stress laid on environmental management and that take into account the aspects air, water and soil pollution, human danger/safety, food risk, hygiene, health, potable water, the infirmary, workers' health, wastes (fruits, plastic, empty packaging, etc.) and so on.