Technological Replacement for Better Competitiveness of Kon Tum Coffee

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With favorable climate and soil, coffee in Kon Tum gains an average yield of 1.5- 2.0 tonnes per hectare. According to the Ministry of Agriculture and Rural Development, the coffee area in Kon Tum is not as large as in other provinces in Western Highlands. Coffee prices here experience fluctuations over years because of unfavorable weather (drought, hoar frost, etc.). The coffee area in this province tends to increase. It is planted even in arid areas and the crop has to depend on well water with the result that the source of underground water is reduced remarkably. According to the CafeControl under the MARD, the coffee bean from Western Highlands is of high quality with the following indicators:

- Size: from 45% to 60% of the output reaches standard of the grade 1 (bigger than 6.3 cm in length).
- Taste: 35% is excellent; 50% good; 10% medium and 5% mediocre.

Because of imperfect processing technology and obsolete machinery, the product quality is not stable over crops, and Kon Tum coffee contains too many faults. A study carried out by the WB Advisory group reports that Vietnamese coffee contains 210- 300 faults per 300 grams of bean, compared with 120-140 ones found in Indonesian coffee; 60-80 ones in Ugandan coffee and 40-55 one in Indian coffee. High degree of faults makes the export price fall:

- The selling price of robusta coffee of R1 grade from Vietnam is US$200 per tonne lower than the one paid for the Ugandan coffee of smaller size.
- Vietnamese coffee of the grade R2-5% is US$90 per tonne lower than the one of same grade from Indonesia.

1. Coffee processing in Kon Tum

In Kon Tum today, the following methods are common:

- Traditional drying method: Drying green coffee fruit until both bean and flesh get dry.
- Improved drying method: Rubbing the flesh before drying: This method reduces the drying time by 30-35% but the product is of poor quality and vulnerable to fungi and other poisonous substances.
- Traditional wet processing: This method comprises rubbing the flesh, causing it to ferment, washing and drying. Its product is dried coffee bean. This method requires a lot of water and effluent treatment, but it is useful when harvest takes place in the rainy season.
- Semi-wet processing: Ripe coffee is washed and classified according to its ripeness and weight; flesh is removed; the bean is then washed, dried and polished as in the traditional drying method. The finished product is clean coffee bean that can be sold at a higher price (from US$40 to 100 per tonne) as compared with bean processed by the traditional drying method.

To make the coffee dry faster, planters usually rub its flesh before drying, and thereby reducing the drying time by four or five days. This method, however, increase faults in the bean: it may be discolored, broken, fermented or contain strange tastes. Some 30% of the volume of coffee for export is returned because of fermentation.

As for equipment, planters use various machines to rub the coffee fruit in order to remove the flesh and the skin of the bean. Quality of the products depends on skill of machine operators. Besides some processing concerns equipped with modern machines of high productivity, most planters use simple and cheap machines that fail to produce bean of quality. And their coffee should be processed again in modern concerns to reach standards for export.

To rub dry coffee, processing concerns employ cool rubbing machines (with small knives or hammers) or hot rubbing ones (with rubbing axes). The latter is considered as more appropriate to local conditions. Some planters use simple rubbing machines with poor degree of precision with the result that the amount of broken bean is high.

To classifying beans according to their size and color, processing concerns employ a wide range of machines. Imported ones are expensive but they ensure better quality for the product.

After producing clean coffee bean, it could be roasted and ground to make coffee powder, but this business is not well developed in Kon Tum. Local coffee companies usually export coffee bean instead of turning it into finished products for end users. In addition, this business requires a lot of know-how and techniques needed for creating unique flavor and ensuring hygienic standards.

Workers in coffee plantations pick coffee fruit two or three times in October – December period every year. They tend to pick all fruits without discrimination with the result that green fruits account for some 15% to 20%; dried or rotten fruits 2%- 3%, leaves and other substances 1% - 2%; and ripe fruits represent 75% - 80% of the output. Drying the coffee fruit in the sun takes from seven to 10 days (and even 15 days in the rainy season) because of the shortage of drying yards, which make the coffee fruits vulnerable to fungi.

2. Suggestions on technological replacement in Kon Tum coffee business up to 2010

- Storage: Both state-owned and private coffee processing companies have to build standardized warehouses.

- Bank credit: In the coming years, commercial banks and credit funds had better refuse to supply loans to projects to build new coffee plantations. The following projects are more desirable: intensive coffee farming to improve the average yield; coffee drying concerns; transport and distribution; etc. In short, bank loans had better encourage the formation of small or medium processing concerns with modern technologies.

Commercial banks could also supply loans to planters to help them keep their produce in store instead of selling it right after harvest time in order to prevent sudden falls in the selling price; or provide processing concerns with loans to purchase coffee after harvests. These programs must be linked with social policies on remote districts and ethnic groups.

In the long run, full attention must be paid to the following problems:

+ picking coffee fruit more carefully in order to make ripe fruit account for at least 90% of the output;

+ offering reasonable purchasing prices in order to encourage planters to sell fresh coffee fruit to modern processing concerns instead of processing it themselves with obsolete machines;

+ encouraging planters in districts with unfavorable climatic condition to use the wet processing method and some drying system using local sources of fuel.

In short, products made by planters are only dried coffee fruit or bean and they output will be sold to modern processing concerns that have ability to preserve high quality for the finished products.

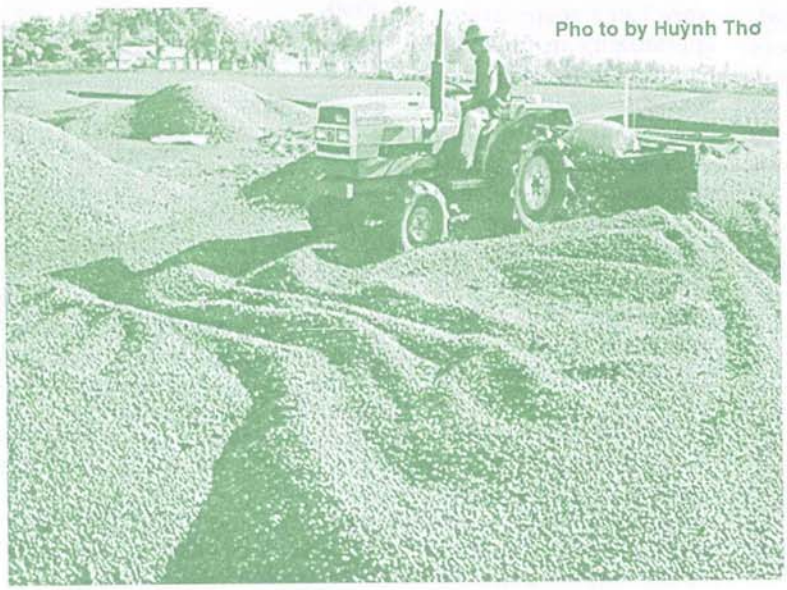
In my opinion, the following targets for the coffee processing business in Kon Tum are achievable by 2010:

- Some 50% of the coffee output in the province will be processed with the wet processing method. Various measures could be taken to encourage processing concerns to get technology transfer and related authorities could help them with estimate of transfer projects.

- Coffee products must be diversified and differentiated. More attention must be paid to production of coffee powder, instant coffee, roasted coffee, and the likes. Proportion of finished coffee products could be increased to some 15% of the output by 2010.

- As for under-50 ha coffee plantations, planters should build drying yard (100 square meters for a hectare) to produce dried coffee fruit if the number of sunny days per year are high enough. In areas with lower number of sunny days, planters can employ rubbing machines with capacity of one tonne per hour and simple drying system to produce dried coffee bean.

- Planters should be trained in harvesting coffee fruit with a view to reducing the proportion of green (unripe) fruit, thereby enhancing the product quality and competitiveness.



Pho to by Huỳnh Thơ

After 2010, the provincial authority may carry out programs to build wet processing factories with capacity of 10 to 30 tonnes of fresh fruit per hour in order to ensure the processing for the whole output after harvests; and modern factories to make finished coffee products, such as instant coffee, coffee powder, and roasted coffee, etc.■