

“Fine” or “flavour” cocoas are the oldest and largest category of speciality cocoa. There are various estimates for the export volume of fine cocoas (263 000t, ca. 9% of the world crop – see Table 2.5). There is no agreed definition of “fine” or “flavour” cocoas except they are purchased at a premium price for their flavour or colour (e.g. light-breaking). Also, according to the ICCO (2010), the difference between fine and bulk cocoa is in the flavour rather than other quality aspects. Fine or flavour cocoas have some ancillary flavours that are described variously as fruity, raisin, brown fruit, floral, spicy, aromatic, nutty, molasses and caramel (Fowler, 1994). They are mainly used to make dark chocolate in which their special flavours or colour can be appreciated. These cocoas generally come from Criollo, Trinitario or Nacional type trees. However, not all cocoas of these varieties are classified as “fine” or “flavour”. If they do not have the desirable flavour characteristics or if the fermentation and drying is poor, they are traded as bulk cocoas and may even sell at a discount to the main bulk origins. Prices depend on supply and demand for each type. Typical premiums start from about 20%, rising to double or even treble the bulk cocoa bean prices.

The above definition of “fine” or “flavour” cocoa can be seen as subjective, and people have attempted to find definitions based on scientific evidence. For example Amores *et al.* (2007) found that the theobromine/cafeine ratio can “clearly differentiate fine from bulk cocoa”.

The Arriba cocoa (see Section 2.7.8) from Ecuador represents ca. 50% of the worldwide volume of fine cocoa. Amongst other “fine” or “flavour” cocoas, the majority is from varieties of Trinitario trees, but some from Madagascar and Venezuela is from much sought after light-breaking Criollo varieties, although not all their production is of this type. A unique cocoa to be mentioned is the light-breaking cocoa from Java, Indonesia (see Section 2.7.4).

Conclusions

It is impossible to make chocolate without cocoa, and its quality and availability is of paramount importance to the confectionery industry. Therefore, no chocolate manufacturer can afford to neglect this vital ingredient and remain divorced from the issues surrounding cocoa production.

Cocoa makes a substantial economic contribution to many rural economies. There is great potential to improve both yields of cocoa plantings and farmer incomes. These are two challenges that need to be addressed by coordinated actions from the industries, the governments and some NGOs. Also, with the cocoa production concentrated in a few countries in West Africa, future supplies are by no means assured.

Quality, including food safety, traceability, origins, sustainability, living conditions of cocoa farmers and environmental impact are very important and will continue to provide challenging issues to the complex supply chain that exists with cocoa.

Demand for cocoa products is expected to continue to increase, mainly due to the universal appeal of the unique cocoa flavour and the history and myths related to it. The ultimate objective is to ensure that cocoa, and thus chocolate, can be enjoyed by as many consumers as possible. This requires the transformation of the cocoa supply chain into an efficient, profitable and sustainable one. This is in the interest of consumers, the cocoa and chocolate industry and the producing countries.

References

- Amores, F., Butler, D., Ramos, G., Sukha, D., Espin, S., Gomez, A., Zambrano, A., Hollywood, N., Van Loo, R., Seguíne E. (2007) *Project to determine the physical, chemical and organoleptic parameters to differentiate between fine and bulk cocoa*. CFC/ICCO/INIAP Project. International Cocoa Organization, London. Available at: <http://www.icco.org> (accessed 2 January 2016).
- Dand, R. (1999) *The International Cocoa Trade*, 2nd edn. Woodhead Publishing, Cambridge.
- Fair Labour Association (2012) *Independent External Monitoring of Nestlé's Cocoa Supply Chain in the Ivory Coast*. Fair Labour Association, London.
- Fountain, A.C., Hütz-Adams, F. (2015) *Cocoa Barometer 2015*. International Cocoa Organization, London.
- Fowler, M.S. (1994) Fine or flavour cocoas: current position and prospects. *Cocoa Growers' Bulletin*, **48**, 17–23.
- Gockowski, J. (2006) *Child Labour investigations and interventions in the cocoa sector*. Sustainable Tree Crops Program, Impact Brief Issue No. 6 March 2006. International Institute of Tropical Agriculture. Available at: <http://www.trecrops.org> (accessed 2 January 2016).
- Heise, J. (2010) *Comparison of private sector standards applicable to cocoa production*. Study commissioned by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and Programme Office on Social and Ecological Standards (4504), Catherine Vogel and Carsten Schmitz-Hoffmann, Bonn.
- ICCO (2010) *Report by the Chairman of the ICCO ad hoc panel on fine or flavour cocoa*. International Cocoa Organization, London. Available at: <http://www.icco.org> (accessed 2 January 2016).
- ICCO (2015) *Quarterly Bulletin of Cocoa Statistics*. Vol. **XLI** No. 1 Cocoa year 2014/2015 ISSN 0308-4469; and *Review of Cocoa Market Situation* EX/133/1, 7 November 2006. International Cocoa Organization, London. Available at: <http://www.icco.org> (accessed 2 January 2016).
- ITC (2001) *Cocoa: A guide to trade practices*. International Trade Centre UNCTAD/WTO, Geneva.
- Kirk, R.S., and Sawyer, R. (1991) *Pearson's Composition and Analysis of Foods*. 9th edn. Longman, London.
- Lopez, A.S. (1986) *Proceedings of the Cacao Biotechnology Symposium*, (ed. P.S. Dimick), Pennsylvania State University, Philadelphia, pp. 19–53.
- Minifie, B.W. (1989) *Chocolate, Cocoa and Confectionery: Science and Technology*, 3rd edn. AVI Van Nostrand Reinhold, New York.
- Mossu, G. (1992) *Cocoa*. Macmillan, London.
- Motamayor, J.C., Lachenaud, P., da Silva e Mota, J.W., Loo, R., Kuhn, D.N. *et al.* (2008) Geographic and genetic population differentiation of the amazonian chocolate tree (*Theobroma cacao* L.). *PLoS ONE* **3**(10): e3311. doi:10.1371/journal.pone.0003311
- Oyeniran, J.O. (1979) *The Influence of Moisture Absorption on Internal Mouldiness of Cocoa Beans During Storage in Controlled Atmospheres*. Technical Report No.1, 1976/7, Nigerian Stored Products Research Institute, Lagos, pp. 31–37.