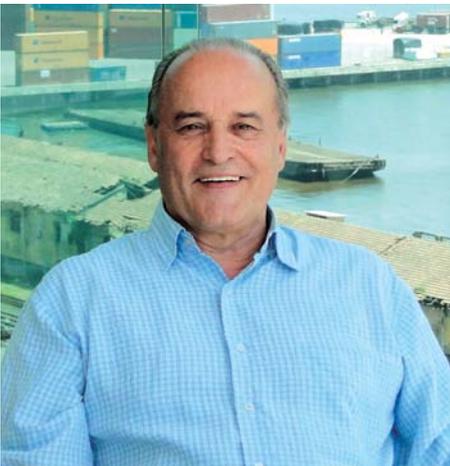




May 2013

INSIGHT SPECIAL: BRAZIL ON/OFF-CYCLE

CBS&A Coffee Business Services & Academy, a Volcafe Initiative



Brazilian arabica coffee production has had a pronounced on/off-cycle for more than a decade. It has been such a long-standing feature of the global coffee market, that the whys, wherefores, and what-nexts can sometimes be overlooked. Here we set out why coffee trees do this, why it is particularly strong in Brazil, and what's next for the biggest coffee producer in the world – on, off, or smoothly does it.

**Urs Wegmann,
General Manager,
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WHYS AND WHEREFORES

Coffee trees, if they have high productivity in one season, will use most of their energy to develop that crop, and will put less energy into new productive tissue for the following crop. The natural pattern of coffee trees, unchecked by systematic branch pruning, and in regions where high productivity is possible, is to settle into an on/off-cycle of production.

In Brazil, two years of low productivity in 2000 and 2001 (the latter caused by a widespread frost event in June 2000) meant that trees had an enormous amount of productive tissue on which to produce for the 2002 harvest. There were also new coffee trees coming into their first high production, and weather was ideal. Very high yields were achieved for a large portion of the arabica coffee area in 2002, which meant that trees had little energy to grow productive tissue for the 2003 harvest, leading to very low productivity on those trees that year. This kick-started a very pronounced on/off-cycle in Brazilian arabica production, due to a large percentage of trees remaining on this cycle.

This could only really happen for one main reason: tissue management was not a widespread, systematic practice in the Brazilian arabica areas. Brazil used to prune its arabica trees after diseases, frost, and when they became very old, but it tended to be “recepta” pruning, i.e. right to the ground. Strong branch pruning, or “esquelatamento” was less common, but has much increased in incidence in recent years. This practice of pruning has evolved mainly to avoid the high costs of harvesting a low crop. A farmer would rather have zero production in the year of pruning, followed by much better production the following year, as overall costs are reduced, and production over the



two years amounts to the same volume. More and more farmers are carrying this out in portions of their farms year after year, leading to a smoothing of the on/off-cycle, as trees are not on the same rhythm. Other arabica origins which had a higher incidence of systematic and targeted branch pruning, have had successive crops which followed a much smaller on/off cycle, or even saw their successive crops being a very similar size. On the other hand, origins like Peru, where the majority of farms do not implement pruning, had and continues to have a strong on/off-cycle of the magnitude of Brazil's.

As a side-note, conillon trees are not immune to on/off cycles, but the different regional climate of conillon areas, and the different management of conillon farms, has meant that successive annual production of conillon has a steadier trend (although from 2006-2011, conillon production had settled into a small on-off cycle that followed the opposite rhythm to arabica production).

WHAT NEXT

Will Brazilian arabica continue in this strong on/off-cycle for the foreseeable future?

Well, coffee production does not just count on productive tissue, it also relies on weather, agricultural inputs, changes in coffee area, and, as we've seen, the pruning program. Brazil has seen a change in pruning practices, but weather, inputs and area changes are also having a big effect on the 2012/13 crop, and hence the 2013/14 crop.

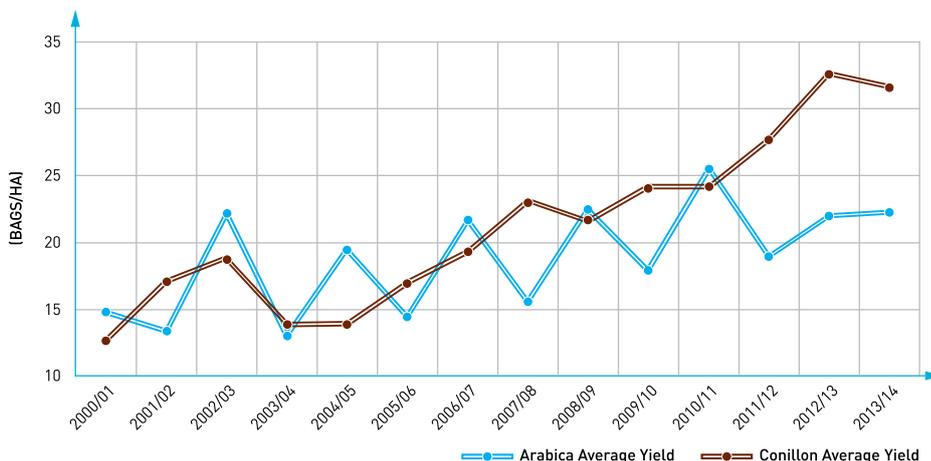
The flowering in Sep/Oct 2011 for the 2012/13 arabica crop was frustrated by a lack of rainfall, and many flowers were aborted by the trees. Full production potential of 60+ mio bags was not reached in this on-cycle, thus trees were able to grow more productive tissue than is usual for the next "off-cycle" crop in 2013/14. In other words, productive stress was minimal after the 2012 harvest, and coffee trees had gas in the tank for 2013.

Due to good prices, new area is coming into production this year, and in the last three years, arabica farms have seen very high fertilizer use and disease control.

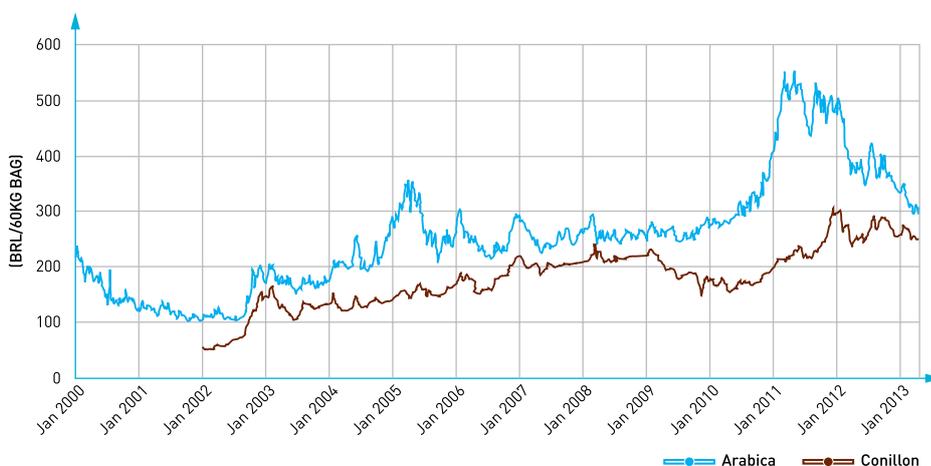
This all adds up to one thing: the 2013/14 off-cycle crop will not, in fact, be lower than the previous year's on-cycle, it will be higher. Both productivity and area are higher in 2013 than in 2012 for Brazilian arabica.

It's time to bid farewell to the Brazilian on/off-cycle... at least for a time. ☺

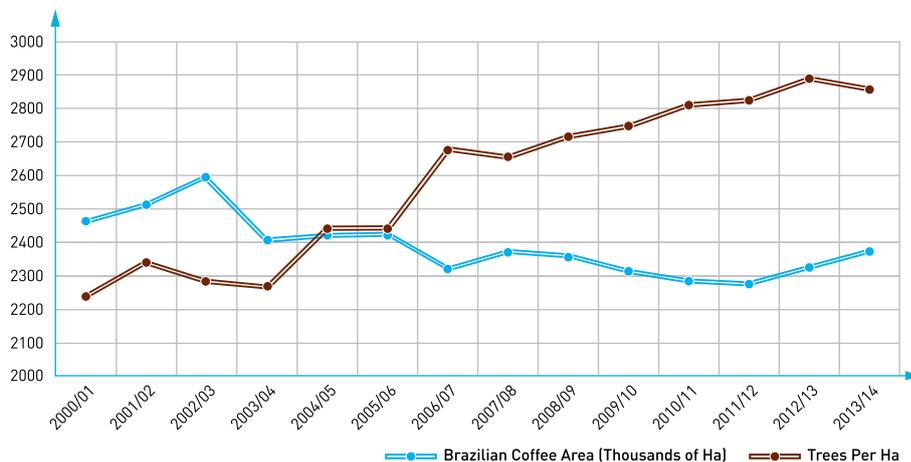
AVERAGE YIELD OF ARABICA AND CONILLON



BRAZILIAN INTERNAL PRICE



TOTAL BRAZILIAN COFFEE AREA AND AVERAGE TREE DENSITY



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