



COPAL COCOA *Info*

A Weekly Newsletter of Cocoa Producers' Alliance

Issue No. 190

31st July – 4th August 2006

ICCO Daily Cocoa Prices

	ICCO daily price (SDRs/tonne)	ICCO daily price (US\$/tonne)	London futures (£/tonne)	New York futures (US\$/tonne)
31 st July	1061.58	1575.23	866.67	1525.33
1 st August	1061.32	1575.40	865.33	1526.00
2 nd August	1060.74	1576.92	863.33	1526.67
3 rd August	1082.96	1607.22	873.33	1563.67
4 th August	1077.41	1601.39	863.67	1549.33
Average	1,068.80	1,587.23	866.47	1,538.20

Up-coming Events

- 69th General Assembly and Council of Ministers meeting, 28th August – 2nd September 2006, Abidjan, Cote d'Ivoire.
- 15th International Cocoa Research Conference, 9th – 14th October 2006, San José, Costa Rica

In the News:

- Studies Indicate Flavanol-Rich Cocoa Increases Blood Flow To Brain
- Mars promotes cocoa-flavanols' health benefits
- Cameroon revamps cocoa sector, creates growth fund
- Cocoa Rich In Flavanol Improves Blood Vessel Function In Elderly
- Venezuela's chocolate revolution
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- Flavanol-rich cocoa improves blood vessel function in aging baby boomer study participants
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Cocoa Producers Alliance

**International Financial Futures and Options Exchange (LIFFE)
London Futures Market – Summary of Trading Activities
(£ per tonne)**

Monday 31st July 2006

Month	Opening Trans	Settle	Change	Daily High	Daily Low	Volume
Sep 2006	854	850	-5	860	846	10,181
Dec 2006	870	868	-2	873	865	3,085
Mar 2007	886	882	-2	888	879	2,061
May 2007	895	894	-2	899	893	370
Jul 2007	904	904	-3	904	904	15
Sep 2007	915	914	-2	915	914	21
Dec. 2007	928	926	-3	930	927S	115
Mar-08		935	-5			0
May-08		944	-5			0
Jul-08		953	-4			0
Totals		907				15,848

Tuesday 1st August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	851	844	-6	854	836	6,280
Dec 2006	866	869	1	874	861	4,987
Mar 2007	884	883	1	888	878	2,510
May 2007	893	895	1	897S	892	284
Jul 2007	903	906	2	903S	903S	25
Sep 2007	915	917	3	916	913S	565
Dec. 2007	926	929	3	934	925	614
Mar-08		941	6			0
May-08		953	9			0
Jul-08		963	10			0
Totals		910				15,265

Wednesday 2nd August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	843	842	-2	851	840	3,086
Dec 2006	870	867	-2	874	866	2,745
Mar 2007	883	881	-2	887S	880	1,443
May 2007	895	893	-2	899S	893S	410
Jul 2007	906	904	-2	906S	904S	3
Sep 2007	915	915	-2	919S	915	113
Dec. 2007	929	927	-2	929	927S	119
Mar-08		939	-2			0
May-08		951	-2			0
Jul-08		961	-2			0
Totals		908				7,919

Thursday 3rd August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	841	852	10	858	841	2,863
Dec 2006	869	877	10	883	868	4,341
Mar 2007	884	891	10	897	884	957
May 2007	902	903	10	908S	900	73
Jul 2007	916	914	10	918	914	30
Sep 2007	929	925	10	929	925	4
Dec. 2007		937	10			0
Mar-08	949	949	10	949	949	10
May-08		961	10			0
Jul-08		971	10			0
Totals		918				8,278

Friday 4th August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	853	841	-11	859	837	2,992
Dec 2006	879	868	-9	884	865	1,946
Mar 2007	897	882	-9	897	880	725
May 2007	899	894	-9	900	893S	268
Jul 2007		905	-9			0
Sep 2007	915	916	-9	915	915	15
Dec. 2007	929	928	-9	929	929	1
Mar-08		941	-8			0
May-08		953	-8			0
Jul-08		963	-8			0
Totals		909				5,947

**New York Board of Trade
(New York Futures Market – Summary of Trading Activities)
(US\$ per tonne)**

Monday 31st July 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	1487 1490	1486	-6	1498	1483	11166
Dec 2006	1530 1532	1528	-5	1537	1525	7381
Mar 2007	1567 0	1562	-5	1568	1560	943
May 2007	1585 ^B 1589 ^A	1582	-5	1584	1584	20
Jul 2007	1605 ^B 1609 ^A	1603	-4	0	0	0
Sep 2007	1625 ^B 1632 ^A	1622	-5	0	0	75
Dec 2007	0 0	1644	-5	0	0	0
Mar 2008	0 0	1669	-5	0	0	0
May 2008	0 0	0	0	0	0	0
Totals		1411				19,585

Tuesday 1st August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	1476 1479	1487	1	1498	1476	12056
Dec 2006	1520 1525	1530	2	1538	1520	9899
Mar 2007	1558 1559	1562	0	1569	1554	1471
May 2007	1581 0	1583	1	1588	1577	382
Jul 2007	1600 0	1604	1	1600	1600	155
Sep 2007	1615 ^B 1620 ^A	1625	3	0	0	256
Dec 2007	0 0	1647	3	1650	1640	268
Mar 2008	1660 ^B 1670 ^A	1672	3	0	0	0
May 2008	0 0	0	0	0	0	0
Jul 2008	0 0	0	0	0	0	0
Totals		1271				24,487

Wednesday 2nd August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	1490 1491	1487	0	1496	1486	11328
Dec 2006	1534 1535	1530	0	1539	1528	9431
Mar 2007	1566 0	1563	1	1570	1563	1591
May 2007	1586 ^B 1590 ^A	1584	1	1591	1585	214
Jul 2007	1603 ^B 1610 ^A	1604	0	1611	1605	204
Sep 2007	1625 ^B 1631 ^A	1624	-1	1631	1630	100
Dec 2007	1645 ^B 1655 ^A	1646	-1	0	0	0
Mar 2008	0 0	1671	-1	1672	1672	1
May 2008	0 0	0	0	0	0	0
Jul 2008	0 0	0	0	0	0	0
Totals		1271				22,869

Thursday 3rd August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	1493 1496	1523	36	1525	1493	6337
Dec 2006	1538 1542	1565	35	1568	1537	4103
Mar 2007	1574 1575	1598	35	1602	1573	1353

May 2007	1590 ^B 1596 ^A	1618	34	0	0	0
Jul 2007	1610 ^B 1620 ^A	1639	35	0	0	0
Sep 2007	0 0	1659	35	0	0	0
Dec 2007	1649 ^B 1660 ^A	1681	35	0	0	0
Mar 2008	0 0	1706	35	0	0	0
May 2008	0 0	0	0	0	0	0
Jul 2008	0 0	0	0	0	0	0
Totals		1299				11,793

Friday 4th August 2006

Month	Opening Trans	Settle	Change	High	Low	Volume
Sep 2006	1525 1528	1504	-19	1543	1501	6821
<u>Dec 2006</u>	1568 1570	1547	-18	1585	1545	5035
<u>Mar 2007</u>	1602 0	1580	-18	1619	1580	494
May 2007	1618 ^B 1623 ^A	1600	-18	1639	1626	17
Jul 2007	1640 ^B 1645 ^A	1621	-18	1650	1650	31
Sep 2007	1660 ^B 1665 ^A	1640	-19	1652	1651	140
Dec 2007	0 0	1663	-18	0	0	0
Mar 2008	0 0	1688	-18	0	0	0
May 2008	0 0	0	0	0	0	0
Jul 2008	0 0	0	0	0	0	0
Totals		1284				12,538

Spot Prices (US \$ per tonne)

	31 st July	1 st August	2 nd August	3 rd August	4 th August
Main Crop Ghana, Grade 1	1843	1850	1850	1886	1867
Main Crop Ivory Coast, Grade 1	1748	1757	1757	1793	1774
Main Crop Nigerian, 1	1729	1732	1732	1768	1749
Superior Arriba	1769	1787	1787	1823	1804
Sanchez f.a.q.	1704	1707	1707	1743	1724
Malaysian 110	1476	1494	1494	1530	1511
Sulawesi f.a.q.	1504	1520	1520	1556	1537
Ecuador Cocoa Liquor	2442	2454	2454	2513	2482
Pure Prime Press African Type Cocoa Butter	3893	3916	3916	4011	3961
10/12% Natural Cocoa Press Cake	763	912	912	934	922

Source: Cocoa Merchants' Association

News

Studies Indicate Flavanol-Rich Cocoa Increases Blood Flow To Brain

July 31st, 2006

EDT

A team of researchers finds that flavanol-rich cocoa has circulatory health benefits including brain and cardiovascular blood-flow improvement, according to United Press International. Two independent studies, one in a healthy elderly population and another in young healthy women, demonstrate that the consumption of flavanol-rich cocoa can increase blood flow to the brain, according to the Journal of Cardiovascular Pharmacology, in a supplement that focuses on the potential health benefits of flavanol-rich cocoa.

The scientists found that the regular consumption of flavanol-rich cocoa resulted in a significant increase in blood flow in hypercholesterolemic postmenopausal women, suggesting that this cocoa may improve vascular function in this population with higher cardiovascular risk.

Mars promotes cocoa-flavanols' health benefits

By Stephen Daniells

31/07/2006 - Confectionary giant Mars has lauded recently published research as further evidence of the benefits of flavanols from cocoa for a wide range of health conditions, and looks set to lead to a new wave of cocoa flavanol-enriched products targeted at different health conditions. "This new science sets the stage for the potential development of cocoa flavanol-based products useful for a wide variety of important public health issues impacted by decreased blood flow, ranging from, cardiovascular health to dementia," said Harold Schmitz, PhD, chief science officer of Mars. Flavanols are antioxidant compounds found in unprocessed cocoa, tea, wine and some fruits.

The chocolate industry has already profited from the wave of positive research on the health effects of cocoa, with producers increasingly highlighting flavanol/polyphenol content on their labels. CocoaVia, from Mars, and Acticoa, by Barry Callebaut, both boast high polyphenol content and are marketed as healthy options. The Mars Nutrition for Health & Well-Being is a new range from the confectionary giant aimed at consumers who want to be healthy but are reluctant to give up chocolate completely.

Mars has been pro-active in research into the potential health benefits of flavanols from cocoa and has been sponsoring researchers in Germany and the US for about 15 years. A special issue of the Journal of Cardiovascular Pharmacology (Vol. 47, pp. S99-S225) has been published that pulls together science presented at an international meeting of Mars-supported scientists convened last year in Lucerne, Switzerland.

The research presented included two independent studies, one in a healthy elderly population and another in young healthy women, that looked at the consumption of flavanol-rich cocoa on increasing blood flow to the brain. This work was said to be the first of its kind with cocoa, suggested that cocoa may have promising effects on cognitive performance – particularly promising because decreased brain blood flow is associated with dementia and deterioration in brain function. The study by Harvard scientists looking at the effects of cocoa flavanols on two population groups of Kuna Indians who live on islands near Panama, has also been published and was the subject of an article on NutraIngredients.com in February.

Briefly, one group of Kunas still live on the islands and drink large quantities of homemade, unprocessed flavanol-rich cocoa every day, while the other group was made up of those that migrated from the islands to Panama City. They were found to consume less cocoa and the cocoa that they do consume is commercially processed and thus lower in flavanols. The researchers reported that the risk of death from heart disease on the Panama mainland was 1,280 per cent higher than on the islands. Death from cancer was also higher by 630 per cent compared to the Kunas still living on the islands.

Mars also highlights another study published in the journal that examined how different flavanols have different function. Some studies have reported that flavanol-rich diets could decrease the potential for formation of blood clots, while the study published in the Journal of Cardiovascular Pharmacology supports that cocoa flavanols may have beneficial effects on platelets. It also claims to report for the first time that certain flavanols and flavanol-rich cocoa itself may also reduce the cascade of events that can lead to vascular damage. "The totality of this research is impressive and gives us new insights into how cocoa flavanols may improve health in a variety of ways not previously known," said Schmitz. "We are excited by this research as it provides promising evidence

that cocoa flavanols may have an important role [in] possibly preventing a range of health issues related to blood flow problems.”

Critics have been quick to warn against over-consumption of chocolate, as well as stressing the difference between white, milk, and dark chocolate varieties. Critics also warn that many flavanols are lost during the processing of chocolate, leading to products with relatively low levels of these antioxidants. Indeed, Professor Ian McDonald from Nottingham University recently told NutraIngredients.com: “The message must not get out there that all chocolate products have these benefits. It would be a more sensible strategy to develop low-fat, low-energy drinks that are enriched in these flavanols.”

Cameroon revamps cocoa sector, creates growth fund

Wed Aug 2, 2006

YAOUNDE (Reuters) - Cameroon has embarked on a campaign to revive its stagnant cocoa industry by enforcing quality rules and creating a development fund for the sector. The country, the world's fourth biggest cocoa producer, is establishing a Cocoa and Coffee Sector Development Fund, and used the start of the new Aug-July season to kick off a campaign to revive the struggling industry. "The trade minister counts on effective collaboration from all links in the chain, whether growers, exporters, independent buyers, quality control firms or administrative authorities, so the 2006/07 season may be the relaunch of our country's cocoa sector," a trade ministry statement said. The fund would begin operating in the coming weeks, it said.

Trade Minister Luc Magloire Atangana Mbarga issued a directive spelling out the broad regulations governing an essentially free market among registered producers and traders in the country's cocoa growing areas. The rules, a resume of cocoa and coffee sector legislation adopted over more than a decade, ban buyers from forming cartels or fixing a set farm gate price. The document detailed quality control criteria from maximum levels of moisture and mould to guidelines on how to transport and store beans to prevent them becoming damp or contaminated. Under quality rules grade 1 cocoa may have up to 3 percent mouldy beans, 3 percent slatey beans and 3 percent of beans otherwise defective, while grade 2 may have up to 4 percent mouldy, 8 percent slaty and 6 percent otherwise defective. Humidity levels for exports are set at 8 percent maximum.

ORIGIN DIFFERENTIAL ERODED

The directive reiterated a ban on exports of sub-standard cocoa not falling within the two quality brackets, and banned mixing of different quality batches for export. According to the Cocoa and Coffee Interprofessional Board (CICC), mixing batches of different quality grades contributed to a fall of 65 CFA francs per kg in the differential of Cameroon origin cocoa to world markets in the 2004/05 season. It did not say what the differential was, but the fall would equate to a loss of over 10 billion CFA francs for the 157,998 tonnes exported during the season, out of total production of around 185,000 tonnes.

Cameroon said in March it would spend nearly \$6 million over the coming five years on developing cash crops, and aimed to increase cocoa output to 200,000 tonnes by 2010. Cocoa and coffee farming account for 25 to 30 percent of Cameroon's non-oil exports, and generate around 110 billion CFA francs a year, according to agriculture ministry figures. Cocoa output has risen in recent years as higher world prices feed through into local farm gate prices, luring farmers back to the crop many had abandoned. But previous plans to raise quality and output have run into problems. A programme to supply tens of thousands of litres of pesticides and train more than 600 village spraying teams last season had its budget cut and payments were delayed, meaning many farmers missed out.

Cocoa Rich In Flavonol Improves Blood Vessel Function In Elderly

05 Aug 2006

Chocolate could be an elixir as a new study says that it helps repair aging blood vessels. Researchers said that elderly adults who drank cocoa drinks for four to six days. These drinks were rich in flavonols, which are a type of antioxidant. The study followed 15 adults under 50-years-old and 19 adults over 50. All participants drank a specially processed flavanol-rich cocoa for four to six days. Researchers reported in the Journal of Hypertension that blood vessel function improved in both sets of adults, but older ones seemed to benefit more. "Aging is typically associated with deterioration in vessel health, specifically related to function of the critical inner lining, or endothelium," said lead researcher Naomi Fisher, assistant professor of medicine at Harvard Medical School. "Our findings demonstrate that consumption of this flavanol-rich cocoa can improve the function of blood vessels in a healthy elderly population." Medindia on Cocoa Has The Ability To Improve Blood Circulation Consuming naturally occurring compounds in cocoa could improve blood circulation, according to new research.

Venezuela's chocolate revolution

By Greg Morsbach, BBC News, Ocumare

Deep inside Venezuela's tropical forest a quiet revolution is taking place. In the shade of the trees, pink cocoa pods ripen ready for the next harvest in early November. The pods carry a white, sticky pulp and the cocoa beans, which are used to make chocolate. The type of agriculture being used just outside the village of Ocumare de la Costa, is having a big impact on the farming community and its families. Ocumare is just one of several communities in Venezuela to have switched from conventional to organic farming and they are now reaping the rewards.

Organic farmers

Jose Lugo spends five hours a day nurturing his three hectares of cacao trees to protect them against pests, insects and bad weather. "We don't use any artificial fertilisers, just natural compost," he says. "It's twice as much work as before but it's definitely worth it." However, the financial rewards help compensate for the extra work because organic cocoa beans fetch up to four times as much as ordinary beans. Mr Lugo and his friends now earn about \$7 (£3.75) for a kilogramme of beans, whereas they used to get paid just less than \$2 for conventional produce. They no longer sell their cocoa to local intermediaries, which have been priced out of the market, but straight to foreign chocolate manufacturers, which are willing to pay high prices for organic produce. The farmers have joined forces to form an association of organic farmers consisting of 50 families.

Organic converts

Behind the thick white walls of the association building, the cocoa seeds are fermented for six days in large wooden boxes. Trina Arevalo says the seeds are then dried in the sun and points to several clusters of brown beans lying on the patio. "We keep the cocoa beans here on the yard for six days," she says. "Then they are cleaned, sorted and weighed. Finally, they're put into large sacks ready to be exported." It seems like a lot of hard manual labour, particularly during the rainy season when floods can wipe out the crops. Only a week ago, the river burst its banks and destroyed several hectares of fledgling cocoa plants. Yet, in the last three years their annual cocoa production has doubled from close to 20 tonnes to more than 40 tonnes, Mrs Arevalo. "At first we didn't want to know anything about organic agriculture. It seemed too much fuss. But you see that we've been converted."

Single-bean cocoa

Much of the funding to kickstart this new wave of organic farming came from the Venezuelan government, which has injected some \$10m on research and training, as well as from the European Union via a local non-governmental organisation called Tierra Viva. The world's chocolate gourmets are looking to Venezuelan beans.

Word has reached European and North American chocolate makers that this Latin American country is the hottest place on the organic chocolate map. Several Italian, French and American chocolate manufacturers are buying organic beans from Venezuela. Like with exclusive claret wines or single malt whiskies, what the experts value the most is the "single bean origin" label to denote aroma and purity, and Venezuela can offer just that. Andrea Trinci, who owns a chocolate factory and shop in Tuscany, recently visited Venezuela. "Venezuelan cocoa is very fine, elegant and persistent in its aroma," he says. "I would like to see more and more organic cocoa being exported, but only at a just price."

Local production

The local cocoa producers are now making forays into the production of their own chocolate bars. Five kilometres down the road from Ocumare lies the seaside village of Cata, where a handful of cooperatives have started making their own organic chocolate. The sweet smell of melting chocolate greets visitors as they enter one of the cooperative shops. Saturmina Diaz is one of six local women involved with the project, part-funded by the government and local charities. "We offer a wide range of products such as chocolate punch, wine and pudding," says Mrs Diaz. "Lots of foreign tourists come here to ask us whether we're exporting our merchandise, but so far we haven't had the financial means to do this. But that's the next logical step for us."

Facing the world

The cocoa producing zones of Venezuela, dotted along the Caribbean Coast and Lake Maracaibo, have gone through something of a revival. Only a few years ago plantations and farms lay abandoned, following a series of poor harvests and droughts. However, the roots of cocoa industry's decline can be traced back a long way.

William Harcourt-Cooze is a British cocoa farmer who bought land in Venezuela back in the 1990s. "Prior to the discovery of petroleum here and the subsequent oil boom in the thirties and forties, cocoa was Venezuela's number one export," he says.

"But the government of President Chavez is aware that cocoa could once again be one of the country's main exports." Driving around some of these old cocoa communities, with their colonial-style churches and village squares, there seems to be a new sense of pride and purpose in people's faces. As one elderly farmer puts it, with a smile on his face: "The world is talking about us again. I've waited a whole lifetime for that to happen. Sometimes I felt like throwing in the towel, but now I'm glad I didn't."

Mars promotes cocoa-flavanols'...

Food Ingredients, By Stephen Daniells

7/31/2006 - Confectionary giant Mars has lauded recently published research as further evidence of the benefits of flavanols from cocoa for a wide range of health conditions, and looks set to lead to a new wave of cocoa flavanol-enriched products targeted at different health conditions. "This new science sets the stage for the potential development of cocoa flavanol-based products useful for a wide variety of important public health issues impacted by decreased blood flow, ranging from, cardiovascular health to dementia," said Harold Schmitz, PhD, chief science officer of Mars. Flavanols are antioxidant compounds found in unprocessed cocoa, tea, wine and some fruits.

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Critics have been quick to warn against over-consumption of chocolate, as well as stressing the difference between white, milk, and dark chocolate varieties. Critics also warn that many flavanols are lost during the processing of chocolate, leading to products with relatively low levels of these antioxidants. Indeed, Professor Ian McDonald from Nottingham University recently told NutraIngredients.com: “The message must not get out there that all chocolate products have these benefits. It would be a more sensible strategy to develop low-fat, low-energy drinks that are enriched in these flavanols.”

Direct evidence’ that cocoa benefits heart health

Health & Nutrition, By Stephen Daniells

1/17/2006 - A team of international researchers claims to have ‘direct evidence’ for a cocoa flavanol improving blood vessel relaxation. Flavanols are found naturally in chocolate, fruit, red wine and teas, and have previously been linked to improvements in heart health. The new study, sponsored by confectionary giant Mars, examined the effect on blood vessel relaxation of chocolate flavanols in the form of a specially prepared cocoa drink, and then a drink containing isolated, cocoa-derived (-)epicatechin.

“Applying accepted causality criteria and gold standard methodologies, we have been able to advance our understanding of the relationship between the intake of certain flavanols present in cocoa, their absorption into the circulation, and their effects on cardiovascular function,” said lead author Hagen Schroeter, from the University of California, Davis. The initial randomised, double-blind, cross-over study gave volunteers a specially prepared cocoa drink containing either high or low concentrations of specific cocoa flavanols. Only the group that consumed the flavanol rich drink showed blood vessel relaxation.

A follow-on “proof-of-concept” study gave volunteers either a placebo drink or a drink containing isolated, cocoa-derived (-)epicatechin. The latter test group experienced similar blood vessel relaxation as for the flavanol-rich cocoa drink. The role of (-)epicatechin was directly linked to nitric oxide, a molecule used by the endothelium to signal surrounding muscle to relax, thereby dilating the blood vessels and increasing blood flow. This supports previous research by individual team members suggesting a link between nitric oxide and cocoa flavanols.

“Pinpointing specific nutrients responsible for the observed cardiovascular effects, as we are seeing here with (-)epicatechin, opens up new possibilities for the development of dietary interventions for cardiovascular disease,” said co-author Norman Hollenberg from Harvard Medical School. Mars has been very active in this research area, having spent over 15 years researching the benefits of cocoa. Previous research by members of the international team has benefited from Mars sponsorship, and a mounting body of supporting evidence has strengthened the link between flavanols and nitric oxide.

The message is not to eat vast quantities of chocolate however. “This new research emphasizes the importance of understanding the potential public health applications of emerging cocoa science,” said Harold Schmitz, chief science officer of Mars, and co-author of the study. Indeed, Professor Ian McDonald from Nottingham University, recently told NutraIngredients.com: “The message must not get out there that all chocolate products have these benefits. It would be a more sensible strategy to develop low-fat, low-energy drinks that are enriched in these flavanols.”

The study is published in the Proceedings of the National Academy of Sciences of the United States of America (Vol. 103, pp. 1024-1029).

More support for dark chocolate's heart benefits.

By Stephen Daniells

12/20/2005 - A daily treat of dark chocolate can improve overall heart health and reduce the risk of heart disease, say researchers from Zurich. “Only a small daily treat of dark chocolate may substantially increase the amount of antioxidant intake and beneficially effect vascular health,” said Dr F. Hermann and colleagues from University Hospital, Zurich.

Dark chocolate is a rich source of antioxidants, and contains more polyphenols per gram than green tea or red wine. The research, published in the journal Heart (vol 92, pp 119-120), compared the effects of dark or white chocolate on blood flow and the platelet activity of 20 healthy male smokers.

Smokers were chosen as the study group because smoking is a major risk factor in cardiovascular health. Endothelial cells, which line the walls of the arteries, are affected by cigarette smoke, both passive and active. Platelets contribute to blood clotting and then to thrombosis.

The volunteers were randomly divided into two groups and, after a 24-hour period of abstinence from polyphenol rich foods, were given 40g of dark or white chocolate. "Dark but not white chocolate induced a rapid and significant improvement of endothelial and platelet function in healthy smokers two to eight hours after ingestion," said the researchers. "The high flavonoid content of dark chocolate may potentially explain the mechanisms for the reduced platelet activation," explained Hermann. Endothelium dysfunction is caused by reactive oxygen species, but the high antioxidant content of the dark chocolate slows or blocks these destructive species.

The new study adds to a growing body of research about the beneficial effects of chocolate on heart health. Previous studies published in the American Journal of Hypertension (Vol. 18, Issue 6, pp. 785-791) and the Journal of the American College of Cardiology (Vol. 46, pp.1276-1283), also reported positive effects of dark chocolate on the health of smokers' blood vessels.

Other studies have claimed promising results against a wide range of conditions including blood pressure, diarrhoea, breast cancer prevention and decreasing the effects of aging on the brain. The Zurich researchers were careful to stress that further research is required to study the long-term effects of polyphenols on health. Moderation with chocolate consumption was also stressed particularly since it may adversely affect heart health because of sugar and fat content. The chocolate industry has however already profited from the wave of positive health effect of cocoa, with producers increasingly highlighting polyphenol content on their labels.

CocoaVia, from Mars, and Acticoa, by Barry Callebaut, both boast high polyphenol content and are marketed as healthy options. The Mars Nutrition for Health & Well-Being is a new range from the confectionary giant aimed at consumers who want to be healthy but are reluctant to give up chocolate completely.

Flavanol-rich cocoa improves blood vessel function in aging baby boomer study participants

New study suggests natural cocoa compounds may have pronounced vascular benefits for older population
Hackettstown, NJ – July 31, 2006 -- Flavanol-rich cocoa could offer powerful cardiovascular benefits for the nearly 78 million baby boomers in the United States today, suggests a new study published in the August issue of the Journal of Hypertension.

Researchers at Harvard Medical School and the Brigham and Women's Hospital in Boston found that drinking a standardized flavanol-rich cocoa beverage improved several measures of blood vessel function, especially among older study participants. Flavanols are the natural compounds in cocoa that are increasingly being linked to promising circulatory benefits – including improved blood flow and a reduced tendency to form damaging clots.

In the current study, 15 healthy young adults under age 50, and 19 healthy adults over age 50 drank the specially-made flavanol rich cocoa beverage daily for four to six days. The researchers tracked changes in the function of their peripheral arteries using several measures, including peripheral arterial tonometry a standard method for evaluating the health of an individual's blood vessels. At the study's completion, significant improvements in vessel function following the consumption of flavanol rich cocoa were seen in both young and older adults. While aging has previously been shown to lead to a deterioration of blood vessel function, this study is the first to demonstrate that the consumption of flavanol-rich cocoa can improve this age-related loss of vessel function in older adults. In agreement with previous studies using this same cocoa, these improvements in both young and older adults appear to be linked to the ability of cocoa flavanols to influence the body's production of nitric oxide, a key regulator of blood vessel tone.

Compared to the younger subjects, the vessel responses of the older men and women were significantly more pronounced after drinking the flavanol-rich cocoa beverage -- suggesting that the consumption of this flavanol rich cocoa offers a dietary approach for maintaining endothelial vessel function, and indicates the possibility that this cocoa could be useful for improving endothelial function in our aging population.

"Aging is typically associated with deterioration in vessel health, specifically related to function of the critical inner lining, or endothelium," said co-author Naomi Fisher, MD, Assistant Professor of Medicine, Harvard Medical School. "Our findings demonstrate that consumption of this flavanol-rich cocoa can improve the

function of blood vessels in a healthy elderly population. More research is needed to see if older adults with cardiovascular disease can also experience these improvements following consumption of this cocoa, but these initial findings certainly offer great promise. These findings have great potential to impact the health of our aging population."

Partially supported by a grant from Mars, Incorporated, this new research builds on a growing body of evidence demonstrating the potential of cocoa flavanols to improve blood flow (or the body's circulation), and perhaps in turn impact long term cardiovascular health. Working in collaboration with premier research institutions throughout the world, Mars has been a leader in unlocking the nutritional and medical potential of the cocoa bean -- with more than 100 peer-reviewed research articles and 80 patents related to flavanols.

"The body of evidence on blood flow-related benefits of cocoa flavanols is impressive," said Harold Schmitz, PhD, Chief Science Officer at Mars, Incorporated. "For the past 15 years, Mars researchers and scientists around the world have been studying cocoa flavanols. This latest research provides additional support for the concept that cocoa flavanols could help reduce the risk, or even offer future treatment potential, for cardiovascular diseases including heart disease and stroke."

In an accompanying editorial, hypertension experts Claudio Ferri, Davide Grassi and Guido Grassi underscored the importance of these research findings, suggesting that the "introduction of cocoa could result in cardiovascular prevention," yet cautioned that not all chocolate offers the benefit of cocoa flavanols. The researchers stated that, "... the flavanol-rich cocoa products used in experimental studies, and even present in some commercially available flavanol-rich chocolate bars that have been tested in controlled short-lasting studies, should not be confused with a number of commercially available snacks that contains many calories but are low in natural cocoa and flavanols."

To help maximize the amount of cocoa flavanols in chocolate, scientists at Mars, Incorporated developed a patented process called *Cocoapro*® that helps retain consistent levels of cocoa flavanols that occur naturally in cocoa beans. Mars products that are made with the *Cocoapro* process include *Dove*® Dark Chocolate and *CocoaVia*®, a line of heart-healthy snacks that are guaranteed to contain at least 100 mg of cocoa flavanols per serving. *Cocoapro* cocoa is the most studied cocoa in the world in terms of health impact.

For more information on the many research studies on cocoa flavanols, visit www.cocoapro.com.

*Mars, Incorporated is one of the world's top producers of chocolate, and has a strong commitment to health research. With well over 15 years of research into the health benefits of cocoa flavanols, and decades of research invested into improving the cocoa plant and farming techniques, Mars, Incorporated has become the global leader in cocoa science. Mars uses patented and proprietary methods of processing cocoa beans to retain much of the naturally occurring flavanols, marking these products with the *Cocoapro*® seal, a hand holding a cocoa bean to signify the careful handling.*

Fisher NDL, Hollenberg NK. Aging and vascular responses to flavanol-rich cocoa. Journal of Hypertension. 2006; 24(8):1575-1580.

Mars promotes cocoa-flavanols' health benefits

By Stephen Daniells

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More support for dark chocolate's heart benefits.

Barry Callebaut chocolate could be good for the brain

31/07/2006 - Confectionary giant Mars has lauded recently published research as further evidence of the benefits of flavanols from cocoa for a wide range of health conditions, and looks set to lead to a new wave of cocoa flavanol-enriched products targeted at different health conditions. "This new science sets the stage for the

potential development of cocoa flavanol-based products useful for a wide variety of important public health issues impacted by decreased blood flow, ranging from, cardiovascular health to dementia,” said Harold Schmitz, PhD, chief science officer of Mars. Flavanols are antioxidant compounds found in unprocessed cocoa, tea, wine and some fruits.

The chocolate industry has already profited from the wave of positive research on the health effects of cocoa, with producers increasingly highlighting flavanol/polyphenol content on their labels. CocoaVia, from Mars, and Acticoa, by Barry Callebaut, both boast high polyphenol content and are marketed as healthy options. The Mars Nutrition for Health & Well-Being is a new range from the confectionary giant aimed at consumers who want to be healthy but are reluctant to give up chocolate completely. Mars has been pro-active in research into the potential health benefits of flavanols from cocoa and has been sponsoring researchers in Germany and the US for about 15 years.

A special issue of the Journal of Cardiovascular Pharmacology (Vol. 47, pp. S99-S225) has been published that pulls together science presented at an international meeting of Mars-supported scientists convened last year in Lucerne, Switzerland. The research presented included two independent studies, one in a healthy elderly population and another in young healthy women, that looked at the consumption of flavanol-rich cocoa on increasing blood flow to the brain. This work was said to be the first of its kind with cocoa, suggested that cocoa may have promising effects on cognitive performance – particularly promising because decreased brain blood flow is associated with dementia and deterioration in brain function.

The study by Harvard scientists looking at the effects of cocoa flavanols on two population groups of Kuna Indians who live on islands near Panama, has also been published and was the subject of an article on NutraIngredients.com in February. Briefly, one group of Kunas still live on the islands and drink large quantities of homemade, unprocessed flavanol-rich cocoa every day, while the other group was made up of those that migrated from the islands to Panama City. They were found to consume less cocoa and the cocoa that they do consume is commercially processed and thus lower in flavanols.

The researchers reported that the risk of death from heart disease on the Panama mainland was 1,280 per cent higher than on the islands. Death from cancer was also higher by 630 per cent compared to the Kunas still living on the islands. Mars also highlights another study published in the journal that examined how different flavanols have different function. Some studies have reported that flavanol-rich diets could decrease the potential for formation of blood clots, while the study published in the Journal of Cardiovascular Pharmacology supports that cocoa flavanols may have beneficial effects on platelets.

It also claims to report for the first time that certain flavanols and flavanol-rich cocoa itself may also reduce the cascade of events that can lead to vascular damage. “The totality of this research is impressive and gives us new insights into how cocoa flavanols may improve health in a variety of ways not previously known,” said Schmitz. “We are excited by this research as it provides promising evidence that cocoa flavanols may have an important role [in] possibly preventing a range of health issues related to blood flow problems.”

Critics have been quick to warn against over-consumption of chocolate, as well as stressing the difference between white, milk, and dark chocolate varieties. Critics also warn that many flavanols are lost during the processing of chocolate, leading to products with relatively low levels of these antioxidants.

Indeed, Professor Ian McDonald from Nottingham University recently told NutraIngredients.com: “The message must not get out there that all chocolate products have these benefits. It would be a more sensible strategy to develop low-fat, low-energy drinks that are enriched in these flavanols.”

TIT BITS

(Source: Business Recorder – www.brecorder.com)

US MIDDAY: cocoa futures firm

NEW YORK (August 02, 2006): US cocoa futures ended steady Tuesday, bolstered by industry buying into fund selling with contract switching fuelling volatility, market sources said.

New York cocoa dips

NEW YORK (August 02, 2006): US cocoa futures settled in negative territory on Monday, weighed down by light speculative selling and spread trading amid market expectations for steady supply, market sources said. The New York Board of Trade's benchmark cocoa contract for delivery in September shed \$6 to \$1,486 per tonne, after trading from \$1,483 to \$1,498.

US MIDDAY: cocoa flat

NEW YORK (August 03, 2006): US cocoa futures finished virtually unchanged Wednesday, with spread trading accounting for the bulk of turnover and keeping prices pegged inside of a two-week trading range, dealers said.

New York cocoa ends firm

NEW YORK (August 03, 2006): US cocoa futures ended steady Tuesday, bolstered by industry buying into fund selling with contract switching fueling volatility, market sources said.

Indonesian cocoa exports down

JAKARTA (August 03, 2006): cocoa bean exports from Indonesia's main growing area on Sulawesi island fell 12.7 percent in the first half of the year from a year ago due to limited carry-over stocks, industry data showed on Wednesday.

US MIDDAY: cocoa rallies

NEW YORK (August 04, 2006): US benchmark cocoa futures climbed 2.4 percent to settle at a 2-week peak Thursday, bolstered by speculative buying amid dollar weakness and positive technical signals on the price charts, traders said.

New York cocoa ends flat

NEW YORK (August 04, 2006): US cocoa futures finished virtually unchanged on Wednesday, with spread trading accounting for the bulk of turnover and keeping prices pegged inside of a two-week trading range, dealers said.