

World Cocoa Foundation

Promoting Health Benefits of Cocoa

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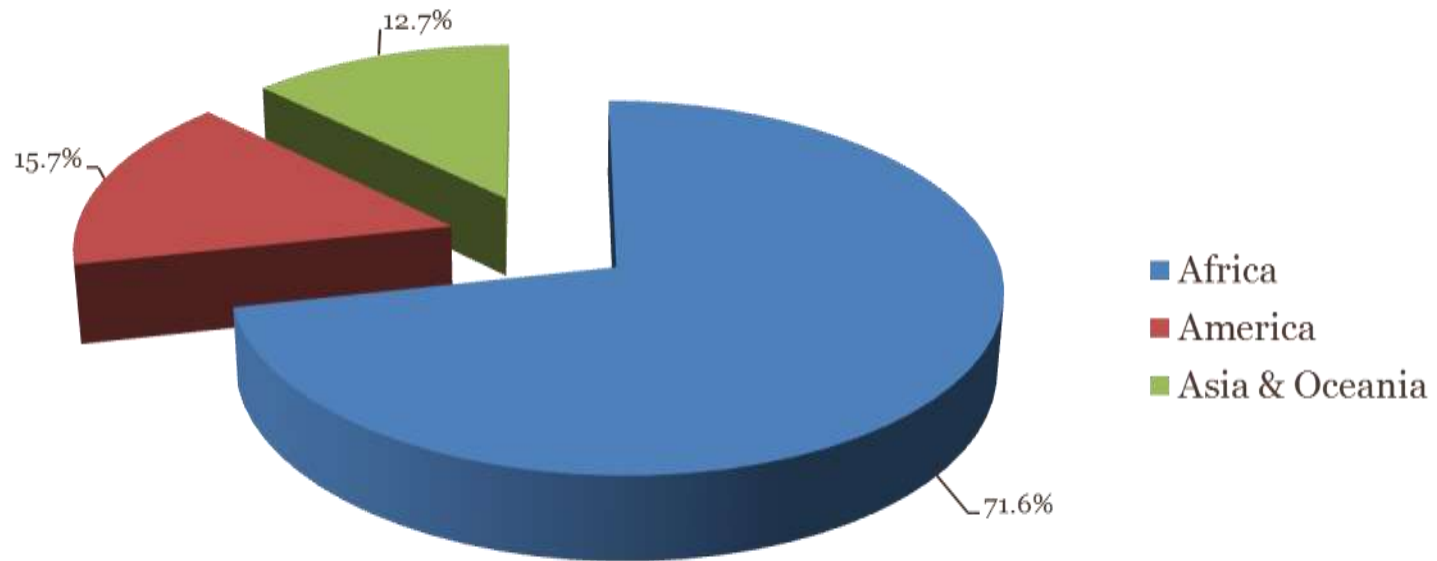
Chief of Party

WCF African Cocoa Initiative

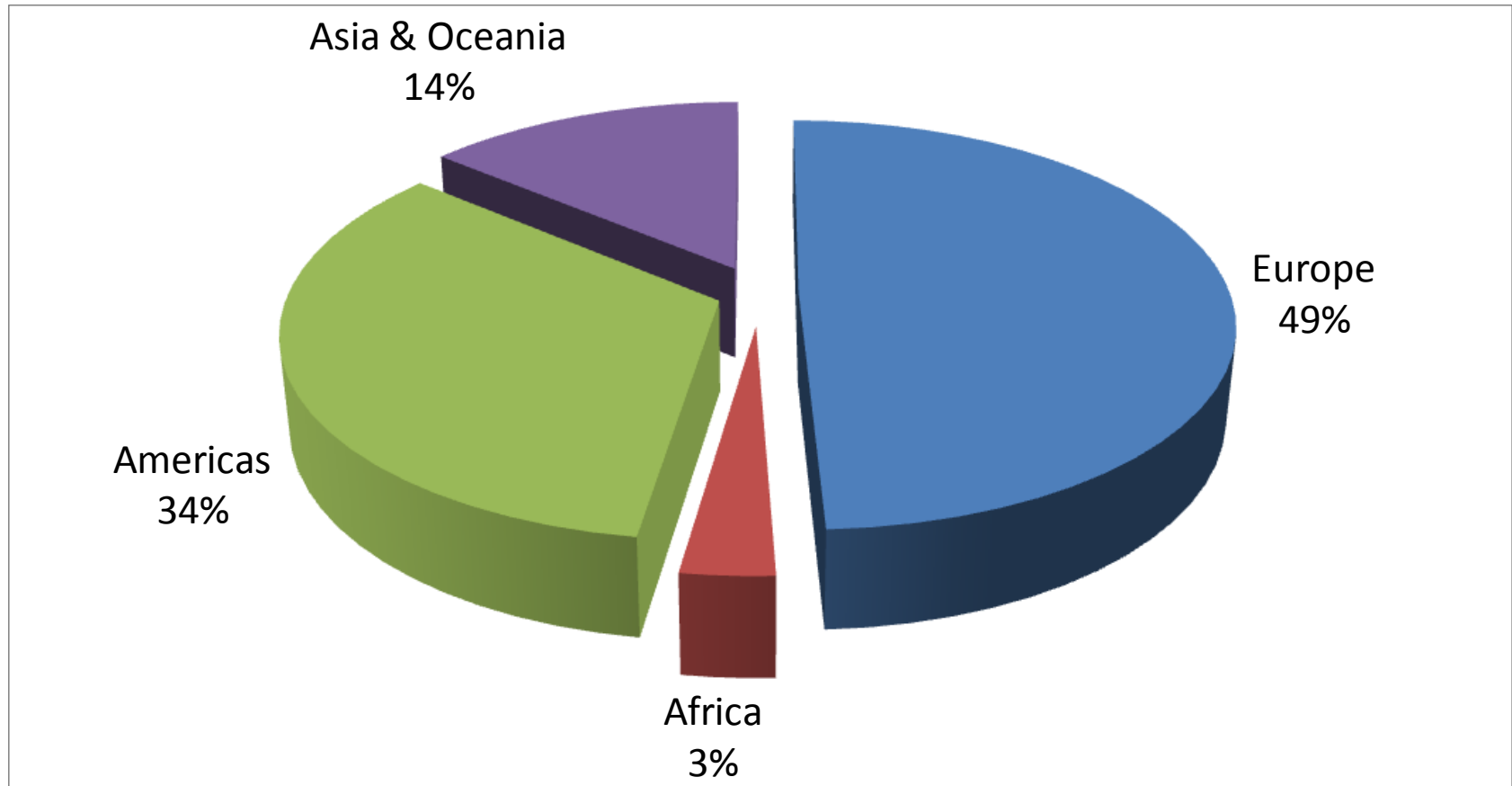


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Africa produces 71% of the world cocoa



However, Africa consume only 3% of world cocoa



How do we promote Cocoa Consumption

1. Brand promotion
2. Generic promotion
 - Aims at communicating the virtues of cocoa to the consumer and making them aware of the positive attributes and characteristics of cocoa.
- Promotion of consumption in many producing countries has suffered from a cycle of short visions i.e. the lack of perceived need when the prices seem to be good and the absence of budgetary allocations when prices are low and falling.



Nutritional Contribution

Can Chocolate/Confectionary products fit into a healthy diet? That is diet that provides the appropriate proportions of energy from carbohydrates, fat and protein and meets our requirements for vitamins and minerals?

The answer is yes.

Nutrient Values of Different Foods

	Filled bar (65g)	Wholegrain Bread (60g)	Raw Apple (120g)	Milk (Whole) (200 ml)
Vitamin A, ug	4	0	3	111
Thiamin, mg	0.03	0.2	0.04	0.06
Riboflavin, mg	0.13	>0.05	0.02	0.34
Niacin, mg	0.13	2.46	0.12	0.16
Vitamin B12, ug	Tr	0	0	0.8
Vitamin C, mg	0	0	16	2
Calcium, mg	104	>32	5	>230
Magnesium, mg	23	46	0.12	22
Iron, mg	0.72	1.62	0.12	0.12
Zinc, mg	Tr	1.08	0.12	0.08

Nutritional Information

- Cocoa is an energy food.
 - It also contains high levels of catechin, fiber, carbohydrates, B vitamins and anti-oxidant-like substances. Calcium, Phosphates, Vitamins A, C and D occur in smaller quantities.
- Cocoa contains the same anti-oxidants (phenols) as red wine.
 - Pure dark Chocolate bars contain greater quantities than wine.



Antioxidants

- Cocoa powder and chocolate are rich sources of high quality polyphenol antioxidants, similar to those found in fruits, vegetables and red wine.
- Cocoa polyphenols were previously thought to only play a role in flavor and aroma development in chocolate, but more recently have been studied for their antioxidant potentials and possible health benefits to humans.
- Research focusing on the potential health benefits of polyphenols in cocoa and chocolate has proven that they are absorbed in the bloodstream.



Top Antioxidant Foods

ORAC* Units Per 100 Grams

13,120	Dark chocolate	980	Brussels Sprouts
6,740	Milk chocolate	949	Plums
5,770	Prunes	930	Alfalfa Sprouts
2,830	Raisins	890	Broccoli Florets
2,400	Blueberries	750	Oranges
2,036	Blackberries	739	Grapes, Red
1,770	Kale	710	Red Bell Pepper
1,540	Strawberries	670	Cherries
1,260	Spinach	450	Onion
1,220	Raspberries	400	Corn
		390	Eggplant

* Oxygen Radical Absorption Capacity (ORAC) measures the antioxidant power of a substance.

Malaria Parasitaemia

- Metabolic products of NO known as Reactive Nitrogen Intermediates (RNI) kill malaria parasites (in vitro).
- Flavanol diglycosides have been shown to retard life cycle of malaria parasites, whereas monoglycosides completely inhibited proliferation of trophozoite stage of parasites.
- Flavonoid derivatives dehydrosilybin and 8-(1;1)-DMA-kaempferide showed antimalarial activity against five *P. falciparum* strains. (De Monbrison F et al., *Acta Trop*, 97(1); 102-107, 2006.)



Sickle Cell Crises

- NO inhibits haemolysis and cellular fragility.
- NO stabilizes cell membranes.
- NO inhibits vasoconstriction, that triggers crises chain reaction.
- High plasma NO after cocoa ingestion would counteract mopping of NO by sickle haemoglobin (HbS).
- NO promotes fetal hemoglobin (HbF) synthesis.
- Precaution – patients must drink lots of water to avoid dangerous dehydration.

F. Kwaku Addai, Department of Anatomy, University of Ghana Medical School, Health Benefits Of Cocoa – Provocative “New” Ideas. 15th International Cocoa Research Conference, San Jose, Costa Rica, October 2006



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Theobromine

- Theobromine in cocoa :
 - ✓ is best treatment for persistent cough.
 - ✓ has anti-asthmatic effect.
 - ✓ has diuretic effect, useful in cases of heart failure, and some forms of hypertension.

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Magnesium

- Cocoa is the highest natural source of dietary magnesium which has been shown to:
 - Facilitate treatment of diabetes mellitus.
 - Help in treating many diseases including angina pectoris, epilepsy, insomnia, kidney stones, menstrual pain, migraine, arthritis, and infant hyperactivity.
- High Mg makes vascular smooth muscle function well.
- High Mg reduces risk of muscle cramps. (Deep vein thrombosis)

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Cocoa Butter

- Cocoa butter modulates/boosts immune system (via eicosanoids)
- Improves digestion (e.g. via increased insulin production; high Cu and Mg content).
- Cocoa butter in cocoa helps to prevent tooth decay.
 - Confers protection on teeth against plaque acids after ingestion
 - Increased salivary pH after ingestion (Addai et al. 2002).
 - Best after meals, drink or snack.

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THANK YOU

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