

Food systems' healthiness, agrobiodiversity and sovereignty: vicious and virtuous cycles

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Context



Brazil is a ‘megadiverse’ country

e.g. more than 200 varieties of beans (very rich in micronutrients, e.g. 200g of *feijão-de-corda* are able to cover 2/3 of the daily recommended intake for women) (IBGE 2011)

Production is able to supply the whole population

Organic ones are ~20% times richer in iron (Worthington 2001)

UPP displacing beans and other traditional foods (IBGE 2011)

+ UPP x BMI

— Rice & Beans (Brazilian traditional meal) x Obesity

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solution problem solution problem

- + Progress artificial measures adding folic acid and other micronutrients to the products that are displacing beans
- + Invest and progress the production of one single GM bean
- + Vanish all the other species
- + Impoverish genetic diversity of beans
- + Modify genetically the only remaining bean, to grow with more folic acid

problem solution problem solution

- + Discover a super healthy highly micronutrient rich beans, make it famous, pay more for them
- + Downscale the production of other beans, and even of other foods
- + Increase the price of other essential foods
- + Export the highly micronutrient rich food
- + Import cheap UPP, and pay more for the beans that used to be produced in a more even and diversified way

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— Rice:Beans (Brazilian trad pattern) x Obesity (Sichieri et al. 2003)



Archer Daniels Midland Company
Food Ingredient Catalog
2013 – 2014



ADM Ingredients for Baking

ADM Ingredients for Beverage

ACIDULANTS	Lactic acids Citric acids
EMULSIFIERS	Lecithins/PC emulsifier
TEXTURANTS/ HUMECTANT/ STABILIZERS/BINDERS/ EXTENDERS	Xanthan gum products Starches Glutens Propylene Glycol USP Glycerin USP
BAKING ENHANCERS	Release agents
HEALTH AND NUTRITION	Vitamin E and mixed tocopherols Soluble dietary fibers VegeFull™ cooked bean ingredients Plant sterols
SPECIALTY SWEETENERS	Crystalline fructose Dextrose Corn syrups Molasses product Honey products Honey coatings Malt product High fructose corn syrups Sorbitol & polyols Sugars (liquid and/or granulated)
PROTEINS	VegeFull™ cooked bean ingredients Wheat glutens Wheat protein isolates Soy protein concentrates Soy protein isolates Soy flours/grits Roasted peanut flours
FLOURS	White whole wheat flour High gluten, spring Spring standard patent High protein bread flour, spring/winter Pan bread flour, spring/winter Hard winter flour Pastry flour, soft Cake flour, soft Sorghum flour
OILS	NovoLipid™ salad oils & naturally stable oils NovoLipid™ enzymatically interesterified oils & st... NovoLipid™ palm products NovoLipid™ coconut oil & palm kernel oil products Partially hydrogenated vegetable oils All-natural roasted aromatic peanut oils
CHOCOLATE AND COCOA	Chocolate drops Chocolate coatings Compound coatings Chunks/specialty products Cocoa liquors Wafers Cocoa powders
PASTRY FILLINGS AND ICINGS	
DRY BAKERY MIXES	

ACIDULANTS	Citric acids Sodium citrates Lactic acids
EMULSIFIERS/ THICKENERS/ STABILIZERS	Xanthan gum products Lecithins Propylene Glycol USP Glycerin USP
HEALTH AND NUTRITION	Soy proteins Soluble dietary fibers Plant sterols Vitamin E Soy isoflavones
SPECIALTY SWEETENERS	Crystalline fructose Dextrose Corn syrups Maltodextrins High fructose corn syrups Sorbitol & polyols Sugars (liquid and/or granulated)
OILS	NovoLipid™ salad oils & naturally stable oils NovoLipid™ coconut oil & palm kernel oil products
COCOA	Cocoa powders
STARCH	Corn starch

ADM Ingredients for Candy

COCOA AND CHOCOLATE	Chocolate coatings Compound coatings Pastel coatings Chocolate drops Compound drops Chunks Cocoa liquors Cocoas
HEALTH AND NUTRITION	Plant sterols Soy proteins Soy isoflavones Soluble dietary fibers Vitamin E
OILS	NovoLipid™ salad oils & naturally stable oils NovoLipid™ palm products NovoLipid™ coconut oil & palm kernel oil products Partially hydrogenated vegetable oils
SWEETENERS	Sorbitol & polyols Crystalline fructose Maltodextrins Dextrose Corn syrups Honey products Melasses products Sugars (liquid and/or granulated)

problem solution problem solution

- + Reformulate UPP (e.g. remove sugar, sodium, fats), without impeding the advance the share of UPP and snacking way of eating in populations' diet
- + Acknowledge that the increase on the demand for UPP...
- + ...pushing the reduction on beans, manioc, kale, *jambo*, *taperebá*, *bacuri*, *sapoti*, *pupunha*, *graviola*, mango, *tucupi*, *vinagrera* are irreversible
- + move agriculture into monotony following BIGSNACK and/or export diversity

OR

- + Preserve beans as a cultural identity, as a daily basis and healthy food (e.g. grow, buy, prepare, share)
- + Progress the preservation and diversification of the native species of beans and culinary traditions (e.g. traditional knowledge)
- + Progress the transition to ways of production that avoids the use of pesticides (e.g. capacity building, economic measures)
- + Reduce the demand for competing products and ways of eating (e.g. regulate promotion, price)

Solution A+B?



Solution A or B?

power



opposite way

Products

Policies (+ objectives, goals, vision, mission)

Practices

Coca-Cola 2020 Vision

‘In 2011, we built strong momentum toward our 2020 goal of doubling our business over the course of this decade.’

McDonald's Mission

‘McDonald's brand mission is to be our customers' favourite place and way to eat and drink.’

PepsiCo goal

‘...making sure our “fun-for-you” products still have a place in consumers’ lives.’ (Indra Nooyi, PepsiCo CEO)

**So called PepsiCo ‘fun-for-you’ includes: Pepsi Cola®, Doritos®, Lays®*

Nestlé

‘We have deep roots in emerging markets, where we have continued to expand our presence.’



Source: Nestlé Annual Report 2012

DECISION POWER SHIFT

Direction/ Strength/ Strategy



National Council of Food and Nutrition Security

1/3 government + 2/3 CSO representatives*
Advise the President of the Republic




*at least one of the most vulnerable, affected populations (indigenous people, maroons, rural settlements)

Food and Nutrition Security Conference





Food and Nutrition Security Conference



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Parágrafo

Estilo

AaBbCcI Normal

AaBbCcI Parágrafo...

AaBbCcI Título 2

alimentos, turismo, agronegócio, pequenas indústrias de alimentos e S.

S, com exceção das empresas multi ou transnacionais;

- c) Sindicatos, federações, confederações e centrais sindicais;
- d) Consumidores e associações comunitárias;
- e) Economia solidária e comércio justo;
- f) Organizações não governamentais (ONGs e Oscips); redes e f

nacionais e estaduais; e movimentos sociais, comunitários, popu

CHANGING THE “P”

PPP - PUBLIC-PUBLIC PARTNERSHIP

Call of projects for urban and semi-urban agriculture

Ministry of Social Development (MoSD) has launched a public call, directed to states and municipalities, for proposals to implement actions on urban and semi-urban agriculture.

MoSD will provide capacity building opportunities to 1000 food and nutrition security promoters

At least a thousand of food and nutrition security promoters will be formed through a virtual/face-to-face education scheme. The MoSD aims at launching a public call for the development of a Virtual Network.

Brazil supports Bolivia in the creation of supply policies

A team of the Bolivian Government visited the Brazilian National Company of Supply this Friday to learn from the experience on supply and production policies. This is part of the cooperation signed in 1996 between Brazil and Bolivia to exchange agricultural knowledge.

Brazilian Food and Nutrition Security Public Policies

Access

- *Microcredit:*

Bolsa Família *USD 10 bi (2012)*

- *Food and nutrition programmes:*

School Meals National Programme (PNAE)

USD 1.5 bi, 45 million children, min 70% fresh, 30% from FA (priority to rural settlements, indigenous)

Alimentos a grupos poblacionales específicos

Cisterns

Restaurantes populares

Bancos de alimentos

Urban agriculture/Community gardens

Sistema de Vigilancia Alimentaria y Nutricional (Sisvan)

Distribución de vitamina A (Vitamina A+)

Distribución de hierro (*Saúde de Ferro*)

Alimentación y nutrición para pueblos indígenas

Educación alimentaria, nutricional y para el consumo

Alimentación Saludable / Promoción de Hábitos Saludables

Con incentivos fiscales:

Alimentación para los trabajadores (PAT)

Con la reducción de impuestos:

Tax reduction on basic foods' basket

Family agriculture

National Programme for Strengthening Family Agriculture *USD 4.5 bi*

Garantia-Safrá (garantías en caso de sequía)

Seguro de agricultura familiar

(garantía de 65% del ingreso)

Programa de Adquisición de Alimentos (PAA)

compra de agricultores familiares para abastecer poblaciones con inseguridad alimentaria

Income generation

Calificación social y profesional

Solidarity and inclusive production

Food Security and Local Development Consortia

Organización productiva de comunidades pobres

Desarrollo de cooperativas de catadores

Microcrédito productivo dirigido

Social mobilisation

Casa de Familias – Centro de Asistencia Social

Movilización social y educación ciudadana

Capacity building of social actors

Brigadas y donaciones

Asociaciones con empresas y otras entidades

Control social – consejos sociales





