

Agriculture, Food and Nutrition

Malaquias Batista Filho ¹

 <https://orcid.org/0000-0002-1490-0590>

Déborah Lemos Freitas ³

 <https://orcid.org/0000-0002-6068-8623>

Maria de Fátima Costa Caminha ²

 <https://orcid.org/0000-0003-0653-5324>

^{1,3}Instituto de Medicina Integral Prof. Fernando Figueira. Rua dos Coelhos, 300. Boa Vista. Recife, PE, Brasil. CEP: 50.070-902. Email: malaquias.imip@gmail.com

To what extent, or putting it in other terms, the curious plots of Brazil's history in the field of agriculture, food and nutrition justify the diversity of experiences, reports and, why not say, the varied and very rich contribution that characterizes the participation of our country from the beginning of the discovery to our current days in this trilogy relationships explained in the uniterms of the title?!

The chronicle of the discovery of new lands since the pioneer and even somewhat adventurous fleet of Pedro Álvares Cabral's squadron landed in Brazil, was, curiously, a summary of notes of facts that fit as the opening of new pages, or better yet, suggestive chapters of inauguraís books on food and nutritional issues in Portuguese-speaking Latin America.

Thus, Pero Vaz de Caminha's writings could be considered a humanistic and discreet letter from behind the official scenes describing the ceremonial of the discovery through the mark of the Malta Cross as a symbol of a white European occupying the beach of Porto Seguro inlet. However, in his notes he described the colonizing expeditions to consolidate the possession of the new continental lands, up to the successive vacancies of larger and safer vessels.

In fact, in this letter he was presenting the potential richness that permeated our future as a world food basket between the new and the old world, of the triangle Brazil, Europe, Asia, mixing colors, flavors of old and new continents, colonized by the boldness of generations, making and remaking customs, outcomes and, therefore, history.

Caminha, more than a bureaucrat excited by the nakedness of the Indians, realized that the land here is "*plaina, chã* and *mui formosa*" (plain, flat and very beautiful) was, in fact, a privileged soil where, if planted, everything would prosper.¹ These prophetic perspectives of the European explores would soon stimulate the coming and going of peoples and cultures.

These peoples came from Asia, from the Middle/East Europe (Spain, France), a bit of Slavic ethnicity, and many Africans, the latter were already pushed by the whip and the dungeon of slavery, stained with the slaves' blood and hunger with all its symptoms of, procession in which rickety rosaries were drawn on the costochondral joints like the beads of religious rosaries that exalted the



sacrifice of the miserable stigmatized by the diseases of the body and soul.²

And so, the implements of faith, mixing with the rituals of Christian beliefs, were spread across the coast, the woodlands, and the savage, where nature offered the richest soils of the new world, alongside the extensive plains between the geographic walls of the Rocky Mountains and the Alleghans or Appalachian Mountains, delimiting the map of agricultural soils made with the geological patience of alluvium, of the sticky clay of marl, in the endless lands of the Americas.

It is an Impressionist drawing, but it is the stains and colors of a world pigmented by the pandemic signs that redraw the cartography of exclusion, with the symptomatology of the plagues, of pelvic rickets in women, of osteomalacia, of *béri-béri*, scurvy, the hemorrhagic suffusions, the paralytic forms of thiamine and riboflavin deficiency, the most “innocent” of famine diseases, and which now resurface in the ecosystems of poverty, which reappear in the new and even in the old world of God and man.^{3,4} Verify the technical reports of the World Health Organization (WHO), the Food and Agriculture Organization (FAO), and other institutions.^{5,6} The subject, which had apparently fallen asleep with the sleepiness of the centuries, returns to the current world.

There is, of course, a bit of frustration, of revolt, of internal and external grievances in selecting these woes as marks that will not be erased. Yes, the world is still stained, as in the times when Josué de Castro wrote *Geografia e a Geopolítica da Fome* (Geography and Geopolitics of Hunger).^{3,7} And, in even darker cases: *O livro negro da fome* (The Black Book of Hunger), also by Josué de Castro, with its dozens of books and more than two hundred articles, published in several languages and even in languages already extinct, such as Sanskrit.⁸

It is unfortunate and even revolting the unfolding of scientific progress, which assumes all levels of growth without the healthy advice of ethics that can moderate the pantagruelic appetite for profit, semantically expressed as deceit. Economy of consumerism, creating a unilateral version that defends the most current and, above all, the most futuristic explanation of what comes to be understood as Aldous Huxley's *Admirável Mundo Novo* (Brave New World).⁹

One is left in embarrassing doubt: the end of new paths, without the healthy signaling of ethics. Genetics as a starting point and point of arrival, associated with behavioral conditioning of the orthodox Pavlovian type.

The Portuguese, our ancestors in the pages of history, good with the plow pulled by oxen to remove the cultivable layer of land and, above all, as a driving force, the toothed gears of the sugar cane mills, and the historically criminal labor of blacks brought by force from Angola and Ivory Coast, mark the image and consolidate the first and great

agro-industry in the very fertile lands of the Portuguese colony. From the abundance of the mills, brown sugar of the precursor models of the sugar mills. Later, white sugar, pioneered by the lords of the mills, became the landowning and slave-owning agro-industry.^{10,11} And there was a political and health crisis.

Since the petroleum crisis, alcohol fuel also substitutes imported gasoline, that is, industrialized from the fossil black gold of our rich and deep pre-salt. But what we want to point out is that a large part of Brazilian agriculture radically changes its economic function, leaving the pots and dishes of the well-off and the poor to the biological furnace of new consumers.¹²⁻¹⁵

And now, where do we go from here? Only the next 20 years will point the biological metabolism destination, (pathophysiological/metabological deviations), or the internal explosion engines, already proposed and even exposed, as fuels from renewable sources by the magic of photosynthesis.

Authors' contribution

All authors contributed equally to the design of the article and declare no conflict of interest.

References

1. Caminha PV. A Carta de Pero Vaz de Caminha. Rio de Janeiro: Editora Vozes; 2019.
2. Gurgel CBFM, Lewinsohn R. A medicina nas caravelas-Século XVI. Cad História Ciênc. 2010; 6 (2): 105-20.
3. De Castro J, Branco JC. Geografia da Fome. Rio de Janeiro: Casa do Estudante do Brasil; 1952.
4. Ferreira RL. Doenças, germes e curas. Cad História; 2013. 8 (1): 236-48.
5. FAO, IFAD, UNICEF, WFP, WHO. 2021. The State of Food Security and Nutrition in the World 2021. Transforming food systems for foodsecurity, improved nutrition and affordable healthy diets for all. Rome: FAO; 2021. [acesso em 2022 out 15]. Disponível em: <https://www.fao.org/documents/card/en/c/cb4474en>
6. FAO, IFAD, UNICEF, WFP, WHO. The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable. Rome: FAO; 2022. [acesso em 2022 out 15]. Disponível em: <https://www.fao.org/documents/card/en/c/cc0639en/>
7. De Castro J. Geopolítica da Fome: ensaio sobre os problemas de alimentação e de população do mundo. São Paulo: Editora Brasiliense; 1961.
8. De Castro J. O livro negro da fome. São Paulo: Editora Brasiliense; 1960.

9. Huxley A. Admirável mundo novo. 2aed. Porto Alegre: Editora Globo; 2001.
10. Godoy MM. Civilizações da cana-de-açúcar: dois paradigmas de atividades agroaçucazeiras no Novo Mundo, séculos XVI a XIX. *História Econômica & História de Empresas*. 2007; 10 (2): 7-62.
11. Miller JC. O Atlântico escravista: açúcar, escravos e engenhos. *Afro-Ásia*, n. 19-20, 1997
12. Leite RC, Cortez LAB. O etanol combustível no Brasil. [Internet]. *Rev Biocombustíveis no Brasil: Realidades e Perspectivas*. 2008. [acesso em 2022 out 15]. Disponível em: https://sistemas.mre.gov.br/kitweb/datafiles/NovaDelhi/pt-br/file/Biocombustiveis_04-etanolcombustivelnobrasil.pdf
13. Bastos VD. Etanol, álcoolquímica e biorrefinarias. [Internet]. BNDES Setorial. 2007; 25: 5-38. [acesso em 2022 out 15]. Disponível em: https://web.bndes.gov.br/bib/jspui/bitstream/1408/2527/1/BS%2025%20Etanol%2c%20Alcoolqu%2c%20admica%20e%20Biorrefinarias_P.pdf
14. Santos FA, Queiroz JH, Colodette JL, Fernandes AS, Guimarães VM, Rezende ST. Potencial da palha de cana-de-açúcar para produção de etanol. *Quím Nova*. 2012; 35 (5): 1004-10.
15. Masiero G, Lopes H. Etanol e biodiesel como recursos energéticos alternativos: perspectivas da América Latina e da Ásia. *Rev Bras Política Int*; 2008. 51: 60-79.

Received on October 15, 2022

Final version presented on October 16, 2022

Approved on October 18, 2022

Associated Editor: Lygia Vanderlei