Market Access Dynamics for Brazilian Crop Protection Inputs

Brazil presents itself as one of the largest and most sophisticated crop protection market worldwide. A good understanding of the driving forces shaping local competition, channels dynamics and customer niches are the first task one must excel to consider positioning a new product on it. Also, recent market consolidation via M&A is fundamentally changing the scenario in a faster and unprecedent way, which unfolds into an unique entry point opportunity for new players to participate in the coming years growth.

Whitepaper: ArenaAgri & Mérieux NutriSciences

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ArenaAgri® is an agro-industrial strategy and planning consulting firm, specialized in crop protection technologies for the Brazilian market.

Merieux NutriSciences® one of the world's largest laboratories is dedicated to protect consumer's health by offering solutions in chemical analysis and studies to a wide range of industries, including food sector, water and environment, agrochemicals, and crop protection.

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The Miracle of "*Cerrado*"

In the article "The Miracle of *Cerrado*," The Economist reaffirms Brazil as a major food producer that "in less than 30 years has gone from a food importer to one of the largest granaries in the world. It is also the first tropical food giant; the others are all temperate producers."[1]

The tipping point that shaped this transformation has been credited to the soybean expansion to the "Cerrado", a savanna like region once considered unsuitable for agriculture. This movement has come first via Embrapa, followed by southern farmers that moved to the north.

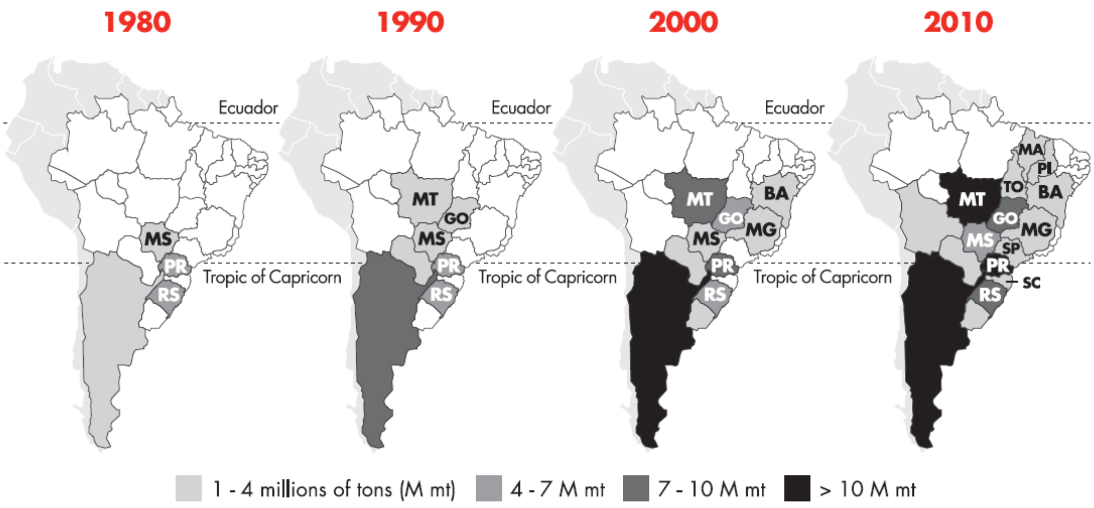

Figure 1: Evolution of soybean planting over four decades (Bain © 2012)[2]

In order to be competitive in such a context, Brazilian farmers had to aggressively create economies of scale by consolidating into having average farm sizes larger than European or American producers. In the *Cerrado* region, for example, each farm ranges from 5,000 to more than 20,000 hectares. Large corporate farms in MAPITO start production with at least 20,000 hectares and can be as large as 100,000 hectares. This makes it possible to amortize costs and

[1] Free adaptation from The Economist - "The Miracle of the Cerrado", August 26th, 2010.

2 Agribusiness in Mercosur: transformations of the past and promises for the future – 2012 Bain & Company, Inc.

capital invested in human resources, machinery, and irrigation equipment much more efficiently than in other parts of the world.

The soybean expansion to *Cerrado* also meant the development of synergic cultivation practices like double harvest in a single year by rotating soy with corn and/or cotton, which eventually reached back the southern portion of the country with soy/corn/wheat rotation. Such unprecedent movement enabled by technology development has placed Brazil in the first quartile of cereals value chain competitiveness and transformed the country from a net importer to a net exporter of food.

Soybeans evolution in Brazil has designed the way farmers access for inputs.

Supply dynamics

Supplying this new market with crop inputs, specifically crop protection, has never been straightforward considering the inexistence of previously stablished infrastructure and supply routes. Along these years, private investors have developed a series of access channels that resulted in the patchwork of overlapping multi-crop regional access for agrochemicals, each of them with specific go-to-market conditions. These can be summarized roughly into three major channels reaching farm level:

- **Direct sales** – when the industry accesses the farm directly by offering its inputs to the farmer. It is usually considered for large farming enterprises with an integrated offer of crop protection and other inputs in a way to stablish a long-term relationship that touches financial risk management tools and strong on-farm technical presence.
- **Cooperatives** – the traditional cooperative-like organization in which farmer is an associate of that distribution channel and participates in its results. Cooperatives operates under specific tax legislation that benefit associative procedures in order to provide distribution capillarity to a geographic region. Brazil has immense cooperative groups (e.g. Coopercitrus, Coamo, C.Vale) that have grown to operate in a verticalized way, the largest ones receiving, industrializing, transporting and marketing food staples, operating their own banking/financial system and, of course, reaching farmer with its own sales personnel.

Distributors or dealers– Everything that is not sold via Direct Sales nor within a Cooperative shall reach the farmer via a distributor, which abound in all sizes, regions, countless commercial practices, business models and portfolio granularity. A Brazilian distributor may generally operate in a geographic sub-region, reaching specific crops given its expertise and choosing few brands to work with. Brand loyalty tend to be proportional to the strength of commercial conditions provided by technology providers (akin to rebates, portfolio access, technology portfolio and conditions). It is a common sense to draw a traditional distributor choosing one R&D brand partner (Bayer, Syngenta, BASF, Corteva) and selecting two or more of-patent player to fill-up the range of its technology offer.

Most active **trading companies** also act as a distributor or dealer by providing inputs alongside financial tools and commercialization means. Despite different enterprise goals, the business model supporting this kind of channel is very similar to a distributor, which can also engage in grain trading, logistics, barter, etc.

The strategy to choose in which channel (or channel combination) to operate in the Brazilian arena is critical to the success of an agrochemical enterprise and is one of the greatest challenges a new entrant will have to stablish its brand in this market.

Clashing forces

The market access for agro inputs in Brazil is undergoing an unprecedent challenge given three new forces that emerged in the past decade. These forces are rapidly re-shaping market dynamics and will continue to do so unless a strong disrupter or regulation emerges. They are:

1) the **industry consolidation** in a global and regional scale (e.g. Bayer/Monsanto, Syngenta/Adama/Chemchina, Dow/Dupont) changing the balance of forces among agrochemicals and seeds suppliers. Driven by access to seeds and traits, this force seeks to improve portfolio offer in order to create a one-stop-shop effect for those who hold such offer. A mixture of high value R&D AI's and germplasm can leverage the perceived

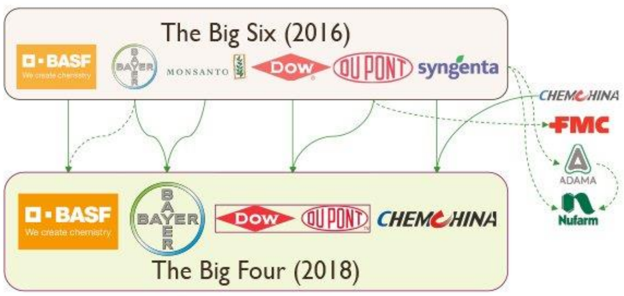

Figure 2 - AgChem Industry Consolidation from 2016-2018 / adapted from Agropages

value of a complete offer which includes off-patent portfolio, significantly extending the life cycle of old AI's. More recently, fertilizers companies are also entering into a consolidation movement with off-patent firms in order to secure and even improve access to key channels.

2) the new market footprint from global **trading houses** moving both upstream and downstream in this market, seizing logistic opportunities in new routes and making use of complex financial instruments as risk mitigation tools. Access to ports has long been an issue to farmers given poor logistics and limited storage capacity. Tradings have revamped their competitive claims in grains origination by offering new routes and financial services in exchange to privileged access to cereals. Model has become evident by the new investments in the so called northern-arch.

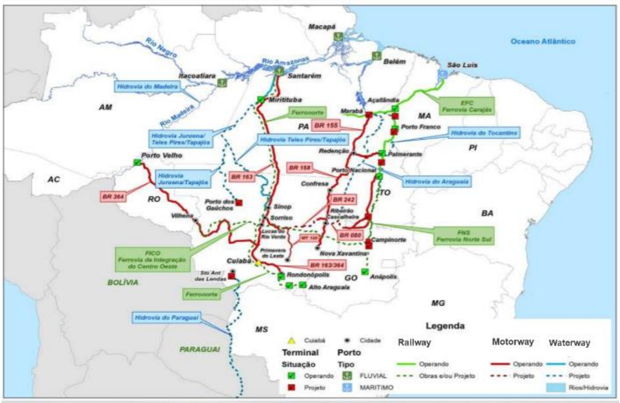

Figure 3 - Northern logistic arch under development - Brazilian Ministry of Agriculture (2019)

3) the emergence of **disruptive technologies** like electronic marketplaces and precision agriculture, which forces channels alike to understand and cope with new technologies. Although still incipient and most of them still under proof of concept stage, this technology environment has shed light into several inefficiencies that such a complex value chain has, most of which could be enhanced in the coming years.

Figure 4 – Ag technologies development environment / adapted from Distrito

These three forces do not exhaust all the movements reshaping market access in Brazil. Important to mention the emergence of **purchasing pools** organized by farmers (directly accessed by the industry in the Direct Sales model) and distributors themselves, relevant **changes in demographic** driving the adoption (or at least experimentation) of new technologies upwards and overall **5G data connection** must be mentioned as important factors contributing to raise the bar in market access opportunities.

Business models and management capabilities

The main point this article aims to demystify is that regardless the fast pace environment change for Agro inputs in Brazil, there has never been so many opportunities for new entrants, especially those with off-patent technology. Every new entrant will see little resistance to experimentation and low brand fidelity in comparison to the last decade practices. The key movement is to join forces with a stablished knowledge base and advisory partner that will guide a new entrant into the correct positioning of each product, in specific market niche and with the correct sales offer.