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## Pesticides and seeds manufacturers' predicament

Every decade or so, any industry seems to have to undertake a fundamental shake-out. This is now the case of the pesticides-cum-seeds sector. Large strategic, financial, regulatory, and political uncertainties cast a shadow over the big six, in alphabetical order BASF, Bayer, Dow, Dupont, Monsanto and Syngenta, now chased by other important global players such as Adama (ChemChina + Makhteshim Agan), Arysta, FMC-Cheminova, Nufarm and Sumitomo, and United Phosphorus.

Some developments are part of business as usual. Thus, variations of commodity inventories and prices, or of farm revenues, determine comfortable margins during plentiful years, and rapid decline thereof when world markets indicators become simultaneously unfavourable. What is new however, is that the impatient financial world has less and less understanding for such cycles.

This is an inherently risky business. Product development takes a very long time, the height of regulatory hurdles rises continuously, and the demands from environmentally motivated lobbies never cease, requesting the ban of single products or of entire technologies. Similar to what happens in the pharmaceutical industry, high net margins must be obtained to meet such challenges. However, this is counteracted by the existence of an active generic manufacturing industry, mostly in China and in India. Also, innovation should be a strong driver of such a life science business, but in fact, having reached a very high level, it is somehow stagnating. The difference between novel products and good patent-free ones is getting thinner, technically as well as for the value they bring to the farmer.

Looking for softer, more environmentally compatible solutions, new products are being sought in the field of bio-control or of whole

systems that contribute to enhance the health, and thus the growth, of plants. Large companies have acquired smaller and medium-size boutiques in the hope to integrate “bio” or “organic” solutions into their product ranges (e.g. Bayer-Agrquest, Syngenta-Pasteuria). Also they are seeking alliances with other technology leaders (e.g. Monsanto-Novozyme, Syngenta-DSM) in the hope of paving the way for new innovation routes. But such solutions –however attractive for a productive and sustainable agriculture they might look– will not only be more technically sophisticated, they also imply that much more intense resources for marketing and sales support (aka “stewardship”) must be mobilized.

Originally delivering a range of single products with single modes of actions, the development of agricultural inputs needs to evolve toward integrated approaches, not only involving all physical ones (seeds, nutrients, pest control and growth enhancement products), but also an array of precision farming tools for soil and crop phenology management, meteorological surveillance, and market data. Intellectual property protection (patents, seed variety registration) is still a fundamental justification for R&D projects; beyond the products however, the ways of using them in a reasoned manner must become a key competency, difficult to be matched for any competitor. The grower must appreciate the value of new technologies by knowing their limitations, no more by just looking at application efficacy. Life is getting more complicated for a still profitable business; it shall not become a quagmire.

The response to this changing business environment has been quite diverse. In a mix of true and bold strategic shift combined with careful communication, Syngenta took up in 2013 to reorganize itself by abolishing the

traditional division between the seed and the pesticide businesses, and to take a more crop-oriented approach. Although intellectually brilliant, the jury is still out to determine if such strategy is on a successful path and if the customer, the deciding farmer who pays for his inputs, feels well and values being served in a more wholesome way. In this respect, a short term need to satisfy anxious shareholders should not create an incoherence, such as the decision to divest the global vegetable and flower seed business.

Monsanto, who took total distance from chemicals two decades ago (except glyphosate, of course), has shown its regrets. After achieving that more than 200 million hectares worldwide are now planted with four major crops (maize, soybean, canola, cotton) being genetically modified by basically two input traits (glyphosate resistance and control of chewing worms), the promised stream of breakthrough innovations does no more look so secure and plentiful. This is why two attempts were made to acquire Syngenta and its large range of small molecules, with a fiscal twist added. One may predict that soon a large synthetic chemical player will be swallowed; candidates abound. In addition, with its "Climate Corporation" and the "BioAg" alliance, decisive moves are made in widening and complementing the scope of the company's activities.

The two other Americans are still divisions of larger diversified chemical groups. Dow AgroScience's employees know since many years that they will have a new owner one day. This does not help profound strategic thinking; or rather, a transaction is now required to initiate such fundamental review. The rumour mill concerning Dupont is also grinding. However, with both sizeable seed and crop businesses and an on-going stream of new products, this profitable division can reasonably remain within the portfolio of its century old owner.

The Germans Bayer and BASF are more difficult to read. Both lack critical mass in seeds technology. With the large acquisitions they made in the bio-control direction they are accumulating a worthwhile experience at large scale. However, being under the scrutiny of holding companies that have another perception for business development, a fundamental scope

and structural change may not be encouraged. In addition, mergers or acquisitions among the largest players may become rather unproductive, as competition laws shall apply.

Consolidation has been going on, and will continue to do so, in the group of followers, trying to reach a scale that warrants the maintenance of a large enough R&D, up to enable an entrance into the first peloton. Chinese investors may also participate in a shake-out when another large transaction will look possible. The weakness of Syngenta's board and management, almost exclusively British, may offer an opportunity.

Large fertilizer companies are not involved in these games. Or rather, the ones who are engaged in the logistics of huge energy uses and product volumes are in a totally different situation and face totally different challenges. But on the specialty level, plant nutrition will also need to be integrated in a wholesome range of products and services.

What will result at the end of this current game? Pretending to know would be preposterous.

However, one should never forget that agricultural inputs have only one customer: the farmer. Yes, there are many other stakeholders, in the food chain or in the environmental communication business, who are influencing the choices that can be presented to the grower, or imposing restrictions to further innovations. Also, the need for more and better food will not be stopping by just satisfying the caloric needs of one billion ill-nourished people. Providing inputs to an agriculture that has demonstrated its sustainability since millennia, companies were historically driven by biology and chemistry; they must know how to master the wider area of agronomy to participate in an economic sector that still has to improve its productivity over a constant or decreasing arable land area, and simultaneously to eliminate any irreversible impact it may inflict onto the environment.