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Exploiting Megatrends: Collaboration vs. Origination in Farm Inputs

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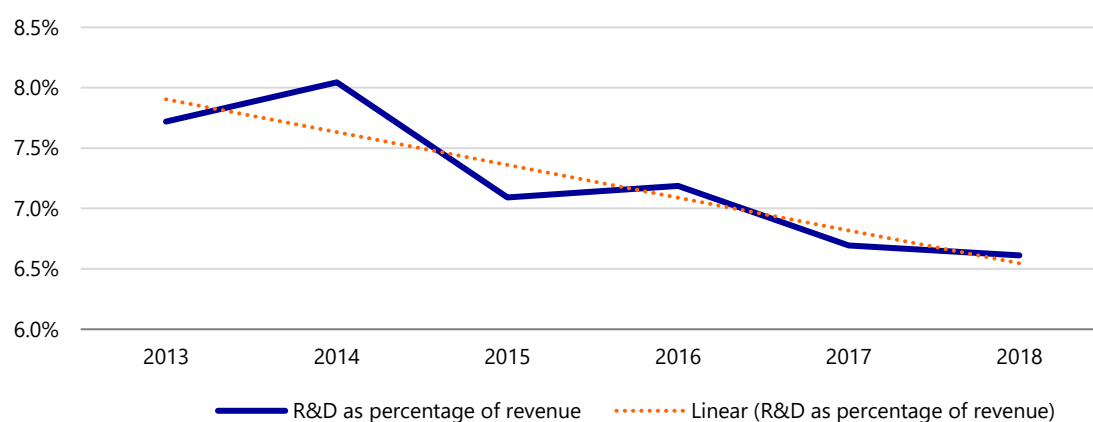
Summary

For input companies, what defines success in the future is unlikely to be a corollary to what defined success in previous decades. Input companies are likely to face the parallel pressures of low commodity pricing and environmental sustainability over the coming years, begging the question of how to seek growth. Transformative farming practices are likely to open market opportunities, but how input companies enter markets will present challenges.

Product Development Today

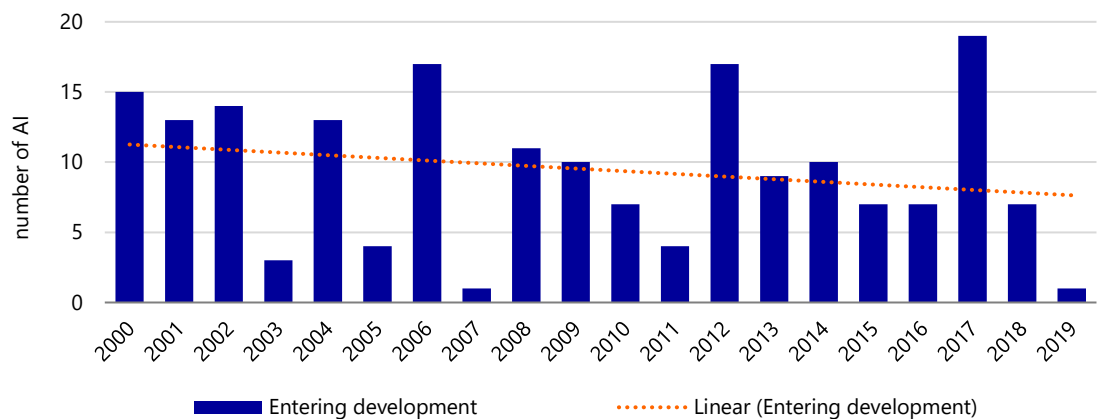
Over the previous half decade, key US and European seed and crop protection businesses have shown a downward trend in research and development (R&D) on a pro forma basis, both in actual terms and as a percentage of revenues (see *Figure 1*). Under GMO production, the dominant perceived synergistic value for inputs companies is an integrated pest management platform (IPM) that marries a seed trait with a specific chemical active ingredient (AI), whereas European and Asian IPMs are more inclusive of cultural tools. The process of developing new AIs can be burdensome (~10 to 12 years and over USD 200m), with some of the newest GMO IPMs built upon older synthetic chemical technology now facing increasing regulatory and environmental scrutiny. In our previous article, [Glyphosate: Not Too Big to Fail](#), we highlighted the need for farmers and agrochemical companies to look beyond their horizons to find the operating model of tomorrow. Given the scrutiny surrounding these IPMs, low underlying commodity prices, and changing farming practices, what options do input companies have to deliver growth? Greater collaboration with external parties could provide an answer.

Figure 1: Industry R&D as a percentage of revenue is in a downward trend, 2013-2018



Source: AgbiolInvestor, Bloomberg, company reports (BASF, Bayer, Corteva*, FMC Corporation, Monsanto, Syngenta)
* pro forma Dow and DuPont numbers

Figure 2: Number of active ingredients entering development continues to slow, 2000-2019



Source: AgbiolInvestor, Bloomberg, company reports (BASF, Bayer, Corteva*, FMC Corporation, Monsanto, Syngenta)
* *pro forma* Dow and DuPont numbers

Two megatrends of the future that could provide growth opportunities for input companies are biologicals and digital services. The first hurdle that existing input companies may face when venturing into these two spaces is likely to be human capital. When assessing biological product development, many of the R&D synergies lie more closely with animal science than synthetic chemistry. Similarly, when looking at digital avenues of growth (such as e-commerce or predictive applications), it is even harder to see the synergistic overlap with existing input company R&D. This works both ways, however, as existing input companies have the potential to offer both product validation and routes to market for a number of the existing biological/digital companies attempting to 'revolutionize' farming practices and change customer interaction platforms. Collaboration could offer expeditious routes to market, allowing for first-adoption advantage into new realms of growth.

Potential Benefits

- **Utilizing an asset-light structure.** Industry R&D as a percentage of revenue for core global agrochemical/seed companies can range from ~1% to 15%. Cutting the percentage and underlying assets required for R&D could allow companies to focus capital elsewhere.
- **Reducing risk.** Whether it is an agrochemical company looking to expand a biological portfolio or a fertilizer company pivoting into microbials, collaboration offers a tepid entry into a potentially growing space.
- **Expeditious geographic/portfolio growth.** Existing companies within the biological and agtech space have developed products lacking distribution, proof of concept, or scale. Multiple global partnerships could leverage existing assets while bridging different regulatory frameworks.
- **Capturing value from the capital markets.** Whether it is the perennial quest for a premium multiple or a defensive posture against growing environmental, social, and governance pressure from the markets, collaborations could provide short-term answers about sustainability.

In the next article on this topic, we will discuss the role of government in finding the agricultural systems of the future.

Imprint

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