

PRESS RELEASE

May 2018

In treatment – Patient seeds



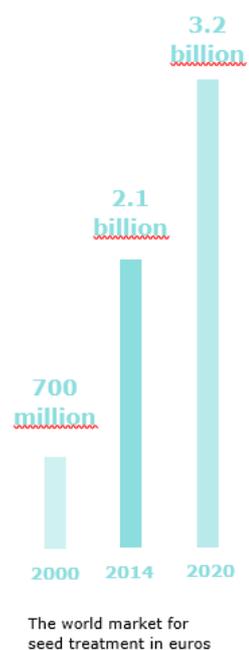
How a high-tech product is derived from a grain of seeds

There have been attempts to improve agricultural efficiency ever since the history of human civilization. The struggle for increased agricultural production to ensure being fed has accompanied human activity since ancient times. Nowadays, the growing world population combined with changing nutritional habits is especially demanding improvement of agricultural methods. In recent years, seed treatment – not to be mistaken with genetic modification of seeds – has played an important role in meeting this demand which has accordingly opened new opportunities for raw material suppliers and plant manufacturers. Schlegel und Partner supports its clients in serving this market and providing a basis for market entry.

We live in a time in which agricultural land cannot necessarily be further developed. Newly cultivated areas are often characterized by adverse growing conditions (dryness, poor soil condition). Additionally, crop yields per unit of area are stagnating in many regions due to erosion damage or depletion through crop diseases for example. Therefore, the focus of current agrarian research has been turned to increasing the efficiency of agricultural production on agricultural areas that are now available. In addition to new tilling techniques, changed pesticides and genetic modification of plants, seed treatment has also become more important.

Seed treatment is defined as the application of biological, physical or chemical agents and techniques directly on to the seeds with the goal of protecting the seeds from insects and diseases (and not the development of patentable breedings which can occur through genetic engineering). Generally, every type of seed can undergo treatment which has a long tradition in the history of farming: the Egyptians and Romans were using a technique with onion brine several thousand years ago and seed treatment with liquid fertilizer and chloride was already being conducted as early as 500 years ago.

Modern seed treatment products are complex formulations with active components with the goal of reducing environmental impacts and improving occupational safety. In the 1990s, research for seed treatment underwent a boom which was soon after reflected in the rapid growth of the market. The worldwide market for



the chemical and mechanical treatment of seeds (without any genetic modification processes of plants) has more than tripled since 2000 and is currently around EUR 2 billion according to estimates from Schlegel und Partner. Market participants assume that the market will continue to see strong growth at rates between eight and 10 percent per year so that a global market of over EUR 3.2 billion can be expected for the year 2020.

Alongside the numerous products used for seed treatment, very different methods are also available – some of them very complex. In the standard process, dressing, the seed is sheathed with a formulation. More complex treatment techniques involve an encrustation that requires, in addition to the active ingredients, a special bonding agent to promote adherence to the seed. The most demanding technique of all is the pilling method in which the seed form changes physically. This method is particularly appropriate when processing various formulations and additives in layers on the seed and enables very precise placement of the active ingredient.

The growing segment of seed treatment opens up new opportunities for companies which are already manufacturing coating materials and additives for other applications – from the food industry to industrial applications. In the future, complex coating process will also gain in significance in agriculture. This applies not only to seeds, but likewise to fertilizer treatment, feedstuffs and tools for enhanced water efficiency.

However, entering this market or expanding into new regions or sub-segments requires a wide range of information that is not necessarily available in a rather non-transparent market. For example, a reliable estimation of market size and growth is crucial. Furthermore, potential customers' demands must be ascertained and competitors must be assessed. Finally, the overall market structure and the regulatory landscape are not to be overlooked.

The seed treatment industry is positioned somewhere between the extremes of the highly fragmented agricultural market and the typical B2B market structure with the treatment products and methods. Familiarity with both sides is essential in order to generate the required information. With the benefit of years of extensive experience in the consulting of chemical companies and machine manufacturers combined with a comprehensive knowledge of product application in agriculture, Schlegel und Partner is able to serve as a missing link between the extremes. Our team is composed of chemists, process engineers and agricultural scientists who each contribute broad expert knowledge from their field.

Schlegel und Partner can serve as the **Missing Link** between the supply conditions of the chemical industry on the supply side and the wishes of users on the agricultural demand side.

Schlegel und Partner compiled insights and generated knowledge about markets which provide the basis for our clients' strategic corporate decisions. These insights include:

- Market volume and growth among sub-segments in various countries and regions
- An overview on the competitive landscape and its dynamics
- Identification of growth perspectives in individual countries and sub-segments and a ranking as a basis for a roadmap
- Evaluation of user requirements for seed treatment methods and products

All this enables us to evaluate the supply-side of the market as well as to engage in technical discussions with agricultural users on a global level. Our strategy is to conduct interviews with our own consultants as much as possible. If it turns out that a large number of quantitative interviews are also required, we can then call upon the support of partners in the most important countries of production.

Interested in further information?

Please do not hesitate to contact:

Dr. Thorsten Böhn, Telefonnummer +49 6201 9915 79,
Thorsten.Boehn@SchlegelundPartner.de

Dr. Isabelle Symonds, Telefonnummer +49 6201 9915 10
Isabelle.Symonds@SchlegelundPartner.de

© Schlegel und Partner 2018