

# 125 years of Norddeutsche Pflanzenzucht

One of the RAPOOL-RING Shareholders is celebrating 125 anniversary this year. 125 years full of successful variety breeding, 125 years of progress for agriculture and 125 years of plant breeding.

The RAPOOL RING Shareholder Norddeutsche Pflanzenzucht Hans-Georg Lembke KG (NPZ) is a private, medium-sized plant breeding company with its headquarters in Hohenlieth near Eckernförde (Schleswig-Holstein). NPZ's second location is on the island of Poel in Malchow (Mecklenburg West Pomerania). This is where the family business originated: Hans Lembke took over his parents' agricultural business in 1897 in the 10th generation and began the first breeding work in winter oilseed rape 125 years ago. Over 270 employees are working for NPZ and breed winter and spring rapeseed, field beans, peas and forage plants. More than 80 varieties are grown on a significant scale in over 40 countries around the world. Today, Dietmar Brauer is the managing partner. At the same time, he is also one of the managing directors of the RAPOOL RING.

## 125 years of winter oilseed rape breeding – old virtues – new visions and digital tools

In 1897, the young farmer Hans Lembke had started to select "beautiful rapeseed plants with long pods" in the "Poeler Landsorte" and thus laid the foundation for rapeseed breeding. Hans Lembke used the severe winter of 1908/09 and the strongly varying yields the following years to avoid a zig-zag selection and to improve stability, ripeness, oil content and the branched variety type. In September 1917, the variety which developed in this way was registered in the high breeding register of the Deutsche Landwirtschafts-Gesellschaft under the name "Original Lembkes Winterraps".

In the 1960s and 70s, new quality and breeding analysis methods made possible the reduction of erucic acid and the glucosinolate content. Both revolutionized the feeding of animals with rapeseed meal and human nutrition with rapeseed cooking oil from the end of the 1980s.

With the first MSL (Male Sterility Lembke) hybrid varieties from 1996 onwards, the next chapter of a success story began on the one hand with a new type of plant for practical use and on the other hand with increasingly diversified breeding work at three further locations with independent teams of breeders.

During this, breeding research has been systematically built up within the company since the year 2000. Today, the company has its own laboratories, marker technologies, greenhouse resistance tests, digital data acquisition, sensor technologies and the latest bioinformatics evaluations for research, breeding, seed optimization and quality control form the basis for professional variety development.



Since 2015, the new challenges of climate change signed off, accompanied by cuts in fertilization and crop protection, as well as energy Greenhouse gas savings and the preservation of biodiversity. The classical breeding of NPZ is undergoing an "internal" transformation process to a large amount of data (big data) and a renewed breeding and testing structure to increase the accelerate breeding success. Additional breeding goals such as pest resistance, water and nutrient efficiency are being pushed, as well as improvements in protein and other ingredients, to find new uses in aquaculture, insect farms and in human nutrition. With new breeding methods these processes could be pushed even faster. Currently, a new cycle of varieties for RAPOOL began, which will mark the breeding course: Yield, stem health, N-Efficiency, adaptability to different locations and growing conditions.

Varieties in the anniversary year, if possible, without zig and zag.

Andreas Baer, Norddeutsche Pflanzenzucht