

equipment of buildings and apparatus and about 30 acres of land which are devoted exclusively to plant breeding and seed selection work. This scientific staff works together with a commercial organization which is known as the General Swedish Seed Company. The superior selections of wheat, oats, barley, grasses, rye, potatoes and other crops produced by Nilsson and his staff are increased on the larger areas of land and ultimately sold for seeding by the commercial company.

Sweden is a storm-driven and rust-ridden country. The climatic conditions are not dissimilar to those of the north of Scotland. Prior to 1890, Swedish farmers suffered heavy losses from their grain crops being driven down by storms and badly rusted. Dr. Nilsson conceived the idea of going to those storm-driven and badly rusted fields and selecting individual plants which had shown their ability to resist both the storm and rust and were otherwise of good quality. These individual plants of outstanding merit he calls mutants, or sports that will increase true to type. Such mutants he has found to be produced by natural cross fertilization, which occurs but rarely with wheat, oats and barley. He has found such sports the type of which was not fixed but would continue to vary in a manner quite similar to artificial crosses. The good grain from these individual plants is sown with hand drills in rows about seven inches apart, to correspond as nearly as possible with field conditions, both as to soil and thickness of seeding. Out of the 100 or more plants which were first selected and increased in these single rows, a few of the very best are selected and continued the next year on larger plots. From the larger plots the yield and the milling, feeding or malting qualities are determined and only the very best of the new selections—those which are superior for certain conditions of their soil or climate to any of their older sorts—are increased and handed over to the commercial company.

Formerly the average yield per acre of the cereal crops of Sweden ranked low when compared with the other countries of Europe. During the last three years Sweden has ranked in yield of cereal crops per acre among the first five European countries, which is somewhat remarkable considering her position to the far north. If we are to consider the south of Sweden alone, the yield per acre of her grain crops is second only to that of England. Practically all of the cereal crops now grown in Sweden are traceable to Nilsson and his staff, and in their publications the people of Sweden frankly acknowledge their indebtedness to Nilsson for the advanced condition of their agriculture.