

(Winter) Desk study – Effects of ancient grain cultivation on biodiversity



For millennia, cereals such as spelt, einkorn, emmer, barley, buckwheat and oats have been an essential part of Dutch agriculture. Since their introduction in the Netherlands during the Neolithic, these ancient grains have adapted to local circumstances and have formed a wide variety of so-called landraces. However, during the twentieth century, many of these landraces were replaced with more productive hybrids. These hybrids though have less genetic diversity, making them more dependent on external inputs and more

vulnerable to the effects of climate change. In recent years, more and more initiatives to bring back the original Dutch landraces have started. These initiatives want to not only preserve the genetic diversity of our cereals, but also to preserve our own agricultural history.

We want to investigate how initiatives that grow ancient grains, such as [Graangeluk](#), [Landschapsbeheer Zeeland](#), [Kerkhovense Molen](#) and [Doornik Natuurakkers](#), link the biology and history of old cereals to the ecological consequences. Consider questions such as: did they use certain sources to set up their initiatives, and if so, which ones? Which crops do they use, what were the reasons for choosing these cereals and how did they obtain the seeds? Which cultivation and management measures do they take, such as sowing, water use, fertilization, do herbs grow in the field? And is there also an effect on biodiversity in these fields¹, for example on the amount of type of field weeds? And what could we learn from these production methods to make our conventional cereal production more nature-inclusive?

What: Internship on biodiversity of agricultural ancient grain production and possible recommendations for conventional cereal production.

Profile: Master student with affinity for social initiatives and with an interest in history and biodiversity of agricultural lands. Good mastering of Dutch language is required.

Where: Ecology Department, with visits to various ancient-grain initiatives throughout the Netherlands

Duration: 6 months, part time possible, can start now!

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Extra: Depending on the interests of the student and the availability of a History internship student, this study can be extended into a duo-internship between Ecology and History. In this duo-internship the focus will be on ecological data in monastery archives, at the [Erfgoedcentrum Kloosterleven](#) at the oldest still inhabited monastery in the Netherlands, [St. Agatha](#) (Cuijk). For more information, please see the info-sheet on the duo-internship “Ecological data in Monastery Archives”.

¹ See [Akkerflora VNBL](#) – Peter Verbeek, Bureau Natuurbalans