The shift from foraging to farming, known as the “Neolithic Revolution”, marked a major cultural transformation in Europe. Around the middle of the sixth millennium BC, plant and animal husbandry reached Poland with the arrival of the first farming communities, called by the archaeologists the Linear Pottery Culture. These early settlers came from the Danubian regions, establishing their new way of life in southern and south-eastern Poland, among other regions. Despite the great importance of food production in this period, research on plant remains from archaeological sites in Poland has been limited, and in south-eastern Poland are especially scarce. This gap in knowledge has hindered our understanding of how agriculture spread and developed in this region.

To bridge this gap, our team has focused on recent excavations in south-eastern Poland, particularly at two Early Neolithic sites in Łańcut. These sites revealed settlements from both the LBK and a later group called the Malice culture, also of Danubian origin. During these excavations, researchers systematically collected archaeobotanical samples, and plant remains laid the groundwork for a comprehensive study of first agriculture and human-environment interactions.

The project aims to answer five key questions about Early Neolithic farming in south-eastern Poland:

1. What crops were grown by people of the LBK and Malice cultures?
2. How did wild plants contribute to their diet?
3. In what ways did they use plants beyond food, such as in construction or for fuel?
4. What were the environmental conditions when these early farming communities settled?
5. How did the environment change over time due to prolonged human activity?

To tackle these questions, the project will analyse plant remains preserved as charred seeds, fruits and wood charcoal, as well as plants found in pottery and daub fragments. The study will also examine lithics (flint and obsidian), stones and pottery to better understand the technology of tools and vessels, and also recognize the chronological development of two settlements of these communities. One major challenge in our research is establishing an accurate chronology based on plant remains rather than solely on pottery. To address this, we will use radiocarbon dating technique on identified plant specimens, providing a precise chronological framework for these sites. By dating specific plant species, this approach will also contribute to understanding their history in south-eastern Poland, given that the first cultivated plants are not native to Polish flora.

This interdisciplinary research, combining the expertise of archaeobotanists and archaeologists, aims to fill significant gaps in our knowledge. By examining plant remains and utilising radiocarbon dating, the project expects to provide new insights into how early farming communities in south-eastern Poland lived, interacted with their environment, and how their agricultural practices evolved, how they utilized plant resources, offering fresh insights into the Neolithic way of life beyond the traditional focus on pottery and tools. This research promises to enrich our understanding of human history and the early development of agriculture in Europe.