

The presented project addresses the subject of agricultural development, and the accompanying social, cultural and settlement changes based on three sites in the South – Western Asia - Gurga Chiya (5000-3500 BC) in Iraqi Kurdistan, Nippur (4000-2000 BC) in Iraq, and Tel Qedesh in Israel (3700 -2500 BC). The evolutionary changes referred in presented summary find their origin in the Neolithic age develop in Chalcolithic (Copper Age), and reach their apogee in the Bronze Age - i.e. the period of the emergence of the first cities. The process of transformation of the societies based on hunting – gathering economy, to sedentary farming communities, and then first civilisations, remains of the most hotly debated topics for archaeologists. Researchers usually distinguish two stages of this transformation – the Neolithic revolution, and the Urban revolution. The process of domestication of plants and animals, being a part of Neolithic revolution had a culture-forming nature, causing rapid population growth – and thus sedentism. This formative process triggered profound changes in all domains of life of prehistoric communities impacting the trajectory of development of ancient cultures and civilization and ultimately leading to the Urban revolution. Surplus food, arising with development of agricultural societies, led to the formation of non – farming specialists, causing the emergence and development of such professions as metallurgy, textile production, administration and trade. It is increasingly recognised then, that ability to grow plants played a fundamental role in their economic and cultural transformations. However, although domestication of cereals is a topic that has been thoroughly studied the domestication of perennials remains poorly recognized, especially in the context of the impact of human activities on the process of domestication. The period between the first settlements of Neolithic farmers and the emergence of first cities is about 4,000 years. During this time, people start cultivating perennial plants, used mostly for trade (such as olives, dates and figs) or industry – e.g. textile (flax). This kind of crops, which are grown on a large scale for commercial purposes are called cash crops.

The emergence of cash crops signals significant changes, such as increased human impact on the natural environment (e.g. cutting down forests for arable fields), and the emergence of the idea of ownership. However, very little is known about the very process of domestication of perennial plants and the development of cash crops. The aim of my project is to examine the changes that have occurred in agriculture during the transit period – between small-scale crops, whose purpose was to meet the needs of the local community, and market crops, resulting from the stabilization of society and food surpluses. Therefore I will examine what plants have enriched the range of cereals, known since the Neolithic, and when and how did the domestication of perennial plants evolved. Moreover, I will try to supplement the information about the cultivation method - irrigation, manuring, and harvesting techniques. Finally, I will place the acquired data in the context of previous research on social and cultural changes in the Chalcolithic era. The expected results of this research will allow to recognize the Chalcolithic transformation from agriculture cultivated on a microscale, to large-scale market crops, and supplement the ongoing discussion on urbanization processes.