CHAPTER 1

Oats and oat production in history and pre-history

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1.1 INTRODUCTION

In most communities throughout the Western world cereal crops have always played a pivotal role in human nutrition and thus, both directly and indirectly, have been closely associated with the sociocultural development of those communities. Whether we are considering the activities of collecting/gathering cultures in the Near East in the sixth and seventh millennia BC, or the advanced agricultural economy of mid-Victorian Britain, annual cereal yield at the local level was of the profoundest importance both to human survival and social organization. In the absence of any well-coordinated inter- and intraregional trade arrangements, climatic aberrations or disease epidemics limiting harvest productivity could impose serious social stresses, to which the sporadic and often spontaneous outbreaks of corn riots in the eighteenth and nineteenth centuries bear witness.

Although they have been able, to some extent at least, to modify soil conditions and water supply, humans have hitherto failed to exercise any significant effect upon the prevailing climate which has always been, and is likely to remain, a factor of production over which they have little power. The temporal variation in the European climate over the past seven millennia has probably been the single most important determinant of cereal yield and, indeed, of the feasibility of growing cereal crops at all. Thus the decline in mean annual temperature in the later Middle Ages enforced the wholesale abandonment of cereal growing in Iceland (Bath, 1963). Given the short- and longer-term climatic factors and the limited range and efficiency of manures available before the mid-nineteenth century, the student of agrarian history cannot fail to be impressed by the remarkable ability of our ancestors to cope with changing circumstances and to sustain cereal production for growing populations under what were...
often the most trying conditions. Clearly if an increase in population was not accompanied either by an expansion in the area of cultivated land or by further intensification of existing cultivated areas, the result would almost inevitably be famine or widespread undernourishment with the concomitant effects of predisposition to chronic disease and mental/physical lethargy. Where reliable storage facilities were not available from which the surpluses of previous years could be released, even modest shortfalls in annual cereal yield would have serious consequences. An increase in harvest yield would have equally profound effects. If, for example, yield could be expanded from three- to fourfold, the proportion of the total crop to be reserved for next year’s seed would fall, thereby releasing more of the product for immediate consumption. Moreover, if this increase could be sustained, the effects of yield rise would be cumulative, and might come to influence the whole system. Thus, where husbandry was based on the use of draught animals, a sustained increase in the yield of the oat crop might facilitate a change from ox to horse-based cultivation, with the extended flexibility and expanded work-rate which this implies. The reverse, of course, would also be applicable. In a situation where it was possible only to achieve a low yield in relation to the amount of seed sown, a wider area of land would need to be cultivated and more draught animals brought into work. Where a two-course rotational arrangement was practised, such that oats were grown on the same piece of ground once every four years, oat productivity would, in all probability, have been sufficient only to sustain oxen. Consequently, unless the community was enabled, by some means, to grow oats on land beyond the two-course rotation, the continued use of the ox would be forced upon them. Under these circumstances, presumably, the adoption of the horse could only be effected by switching from a two- to a three-course rotation thereby increasing the potential oat output. This, however, would only be achieved in the wake of important modifications to husbandry practice and community organization and infrastructure. The profound implications of such a change for the society in general, including tenurial systems, labour organization and a whole complex of rights and obligations, underline once again just how significant were seemingly minor agrarian adjustments to the totality of human cultural development. Historians painting on a broader canvas ignore this at their peril.

1.2 OATS IN PREHISTORY AND EARLY HISTORY

The archaeological evidence for early crop production is based to a considerable extent on the distribution of carbonized grains and the impression of grains in pottery fragments, and although increasingly sophisticated archaeobotanical and palynological techniques are being recruited, much of the detailed evidence remains sketchy. A major prob-