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Floods and Famines in Ancient Rome

While the geographic setting of the city of Rome offered many advantages, its location in the alluvial plain of the Tiber river also ensured that the city would be the victim of frequent and destructive floods. By the first century AD, when Rome's population had swollen to an enormous size, importing sufficient foodstuffs to feed the capital city of the empire had resulted in the development of a vast and complex supply system of ships, boats, docks, warehouses, merchants, and administrators. This paper will examine the effect that Tiber floods had on this food supply system, and will consider a number of specific instances when inundations resulted either in food shortages or outright famine. Analysis of the vulnerability of Rome's stored food supplies reveals ways in which this vital stockpile upon which the survival of the city's inhabitants depended was highly vulnerable to floods in certain respects, but surprisingly resilient in others.

Tiber flooding could create a shortage of food by disrupting transportation, destroying crops, and most importantly, by causing the spoilage of stored food supplies. In instances when large quantities of stored food were ruined or new supplies were not readily available, these shortages could even lead to widespread famine and starvation. The location of the warehouses which contained Rome's food stockpiles made them particularly susceptible to floods since they tended to cluster along the banks of the Tiber, especially in the low-lying Emporium district below the Aventine hill. There are extant accounts of slightly more than 30 serious floods that inundated parts of the city of Rome between 400 BC and AD 400, including at least seven occasions when a Tiber flood is explicitly linked to a subsequent famine. These incidents will be considered with a view to detecting patterns in the vulnerability of Rome's supply system to flood damage. In addition to ancient sources, comparative and modern agricultural data can be employed in order to assess the ways in which stored supplies, especially grains, are affected by immersion in water. Also, certain specific characteristics of Roman warehouse construction, which have traditionally been ascribed to the need for security or to the special requirements of storing grains, may have had vital secondary benefits in preserving the precious grain from flood-related damage or spoilage.