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### *Adopting new technology and methods*

Agricultural improvement, as a unified movement, appears to begin in the sixteenth or seventeenth centuries, with the widespread adoption of convertible husbandry, water meadows and land draining.<sup>1</sup> It is, however, unclear how effective these techniques were.<sup>2</sup> The ‘classic’ agricultural revolution began during the mid-eighteenth century and continued into the early nineteenth century. This period saw a great flowering of agricultural literature and much experimentation with livestock breeding, machines, rotations and other technologies. It is clear, too, that economic factors contributed. It is possible, for instance, that increasing rents in Scotland during the eighteenth and early nineteenth centuries is related to increasing improvement during this time.<sup>3</sup> On a national scale it is quite likely that increasing conversion of pasture to arable during the Napoleonic Wars was fuelled by higher grain prices.<sup>4</sup> However, alongside economics was the development of farming as a fashionable pursuit in which agricultural technology gained symbolic or social value.<sup>5</sup> Improvements which offered no monetary return were occasionally made<sup>6</sup> and contemporary literature often presented the adoption of improved agriculture as a moral imperative.<sup>7</sup> Improvement in agriculture was thus seen as an index of civilisation by contemporaries, making its practice a patriotic duty. The use of improved methods, then, demonstrated subscription to these beliefs.<sup>8</sup> The fact that the people who participated in this fashion for improvement were wealthy gentry or aristocracy supports the idea, popular in the earliest scholarship,

1. Kerridge, *The agricultural revolution*.
2. Overton, *Agricultural revolution in England*.
3. M. Johnstone, ‘Farm rents and improvement: East Lothian and Lanarkshire, 1670–1830’, *Agricultural History Review*, 57 (2009), pp. 43–4.
4. Prince, ‘Changing rural landscape’, p. 30.
5. Tarlow, *Improvement*.
6. Tarlow, *Improvement*, pp. 52–4.
7. E.g. A. Young, *A six weeks tour through the southern counties of England and Wales* (Edinburgh, 1772), p. ix.
8. Tarlow, *Improvement*, p. 35.

that the agricultural revolution was led by a small group of aristocratic or gentry improvers.<sup>9</sup> In its simplest form this idea is clearly incorrect, however, as, for instance, the advice given by farming manuals was often inaccurate or even wrong, and, as we have already seen, the tenantry were more than able to drive change.<sup>10</sup> It is possible that, while perhaps not being the sole or even the most significant force behind improvement, a genuine effort on the part of certain aristocrats may have created an atmosphere favourable to improvement in their local area;<sup>11</sup> but it is clear that the tenantry were at least as important as the landlords as, for instance, improvement occurred on some farms of the Holkham estate in Norfolk before attempts were made by the estate to enforce such practices.<sup>12</sup>

The end of the Napoleonic War in 1815 led to a depression which lasted into the 1830s and may have slowed improvement. The situation improved from the 1830s onwards and, indeed, the 1840s and 1850s were a favourable time for arable agriculture. At this time a new phase of the agricultural revolution, known as ‘high farming’, began. This movement stressed the importance of scientific practice in agriculture and relied heavily upon manure inputs for maintaining fertility. This manure was imported from outside the farm itself, coprolites and guano being particularly important. However, depression set in again in 1873, when grain prices dropped. Farming did not recover from this depression until 1914, bringing us to the end of our period of interest.

We have seen, then, that various different things – prices, fashion, estate policies, landlords’ attitudes, tenants’ efforts and probably many others – are implicated in the narrative of agricultural improvement and influenced the local uptake of improvements. These may be observed directly in our townships, and as a result we may develop a much more subtle and complex understanding of individual improvement events than has hitherto been possible. It will be shown that improvement occurred only when a large number of people and things came together, but these were never exactly the same in any two cases. Thus, it is not possible to identify a set of factors which *necessarily* led to improvement. This is best understood one township at a time.

### Howick

Howick has particularly rich documentation, allowing a window onto many aspects of its improvement. It shows that, on the home farm, improvement occurred in bursts of intensive activity separated by periods of reduced innovation. The leasehold farms show similar bursts of activity, but are less well documented. A variety of reasons

9. Prothero, *English farming*, p. 161.

10. Overton, *Agricultural revolution in England*, p. 4.

11. D. Brown, ‘Reassessing the influence of the aristocratic improver: the example of the fifth duke of Bedford (1765–1802)’, *Agricultural History Review*, 47 (1999), pp. 182–95.

12. S. Wade-Martins and T. Williamson, ‘The development of the lease and its role in agricultural improvement in East Anglia, 1660–1870’, *Agricultural History Review*, 46 (1998), pp. 127–41.

embodying the factors discussed above, and many others, lie behind this sporadic activity, but it was usually associated with the arrival of a new owner or tenant.

### The eighteenth century

Little can be said about eighteenth-century improvement at Howick. However, the fact that several leases were granted in 1712<sup>13</sup> may imply that the estate was reorganised at this time, perhaps because of Sir Henry Grey's inheritance of Howick in 1710.<sup>14</sup> More formal control over the estate, through the use of written leases, is itself a form of improvement. A description of two cows bred and fattened at Howick in Culley's *Observations on Livestock* shows another type of improvement.<sup>15</sup> This describes two cows belonging to Sir Henry Grey, son of the Henry Grey who introduced the leases, suggesting that he was using the farm to demonstrate his knowledge of agriculture to his peers and thus following fashion.

### The early nineteenth century

From 1804 there was a great deal of activity relating to farming at Howick that constituted a distinct phase in its improvement. Some changes were to administrative practice. Several forms were introduced for the information of Charles Grey, to whom the estates had passed. Of these the most numerous are the rentals and farm returns. The former give the amount of rent due from, and paid by, each tenant every six months. The latter were completed fortnightly, and give details of the purchase and sale of stock, use of different types of grain and the labour performed by each worker on each day.<sup>16</sup> This represents a greater amount of attention paid to farm and estate management. In addition to being an improvement in themselves, they provide a source for tracking improvement at Howick. The farm returns show considerable building work between 1804 and 1808,<sup>17</sup> as they recorded labourers and hinds transporting or breaking stones.<sup>18</sup> Some of this construction may relate to drainage or field boundary construction, although some activities, such as thatching and 'assisting the mason', are certainly connected with the construction of farm buildings.<sup>19</sup> Some of this work may be connected with the division of the farm into two halves to allow South Side Farm to be let to a tenant, as it was by 1810.<sup>20</sup> It is likely that this prompted refurbishment of the farmhouse.

13. DUSC GRE/X/P72.

14. Bateson, *Northumberland*, p. 352.

15. DUSC GRE/X/P302/100.

16. DUSC GRE/X/P81, DUSC GRE/X/P7-12.

17. DUSC GRE/X/P7.

18. 'Hinds' were farm workers hired on a year-long contract at the end of which they were paid a lump sum. This was in contrast to 'labourers' who were paid an hourly wage which they received at the end of the week.

19. E.g. DUSC GRE/X/P7, DUSC GRE/X/P7.

20. DUSC GRE/X/P81.