

## *Chapter 3*

### *How symbols of ‘good farming’ develop: the historical development of ‘tidy farming’*

In Chapter 2, we illustrated how the concept of the good farmer developed and has been used in the literature since the emergence of the earliest agricultural publications. These broad notions of what a 'good farmer' was, based on – God, family, community, production, stewardship, and so on – address the issue of what the role of the farmer is in society, community and the family. However, as we outline in Chapter 1, the 'good farmer' concept is not a simple typological construct defined in the literature alone, but a living concept used by farming communities themselves to distinguish who is a 'good' farmer and who is not. Within these groups with local understandings of the practice of agriculture, the good farmer is constructed at a far more detailed level – on the basis of shared roles performed within the farming community and, in particular, the efficacy with which those roles are performed. As laid out in Burton's (1998, 2004a) seminal work on the issue, the good farmer is constructed from symbolic meanings associated with the performance of agricultural practices – where farmers are able to read from displays in the landscape the skills and knowledge applied to production. The good farmer's world is thus rich with symbols that represent both good farming and bad – visible only to those with the experience and knowledge to understand them.

One of the criticisms that has emerged of the good farmer is the notion that the concept is static or even deterministic. In particular, the focus of the first good farmer research on productivist symbols and later outlining the difficulties of environmental symbols becoming part of the 'good farmer' (Burton, 2004a; Burton et al., 2008) has led some to warn against tying notions of good farming strictly to productivist behaviours – instead arguing that farmers' habitus is shifting (Riley, 2016a; Saunders, 2016; Sutherland & Darnhoffer, 2012). This raises an interesting question. How do symbols of “good farming” change?

A problem with studying symbolic change is the time frame over which such changes are likely to occur. The adoption of silage in the United Kingdom provides one example of this. Originating in continental Europe in the 1880s it took a century before the practice – an ideal way to produce winter fodder in wet climates – was accepted as good farming in the United Kingdom despite being widely adopted in the U.S. a century earlier (Brassley, 1996). Numerous reasons are given for this including the weight relative to hay, the cost of the additional labour, the cost of building storage facilities, and even the smell of the product. Brassley also notes that in the first decade of the 20<sup>th</sup> Century, the “cultural importance” of the then dominant root crop played a role in the lack of interest in silaging, while change towards silage began at the end of World War 1 as younger farmers began to take an interest in American methods of employing large wooden silos. Today the production of silage dominates with 8.8 million tonnes of silage produced in the UK in 2017 compared with 46000 tonnes of hay (the lowest figure ever) – yet, it is the result of a debate that went on for more than a century and involved many generations of agriculturalists before reaching the final conclusion.

While it might be possible to gain an understanding of how symbols change by interviewing the farmers of today, using historical data allows us to explore change over an appropriate time frame without relying on recollections of distant memories. In this chapter we examine how maintaining tidy practices and a tidy landscape became important features of good farming (e.g. Birge & Herzon, 2019; Carr & Tait, 1991; von Glasenapp & Thornton, 2011; Guillem et al., 2012) over a period of decades. Maintaining a tidy landscape with modern agricultural equipment, skilled tractor-drivers and farm workers, and almost all aspects of the production process mechanised, is relatively straightforward, but this was not always the case. Historically much of the farm work was done by unskilled labour by hand or with rudimentary instruments. As the “tidy farm” is one of the most important symbols of good farming we contend that understanding how the strong preference for tidy agriculture developed can provide us with the desired understanding of how symbolic meaning changes.

### **The value of untidy farming**

The oldest guidebooks for practical farming in the English literature make little reference to farming in a tidy manner. Neither Fitzherbert (1534) nor Tusser (1580) emphasise neatness (such as the need to plough straight or turn over soil at a regular depth) as a requirement for

good farming. Some mention of regularity in the landscape is made. For example, Tusser (1580, p. 98) observes of hop farming:

Five foot from another, each hillock would stand  
As straight as a levelled line with the hand  
Let every hillock be four feet wide,  
The better to come to, on every side.

However, here there is no extolling the virtues of tidy farming, only an observation on geometric patterns in agriculture. Without a substantial series of publications to draw from it is difficult to establish with certainty whether tidy farming was part of the “good farmer” identity in the past. Publications at the time were more concerned with outlining the basic practices of agriculture – such as the timing of plantings and other aspects of farm work – rather than describing whether they should be straight and tidy or not. Nevertheless, there is some indication that farmers were less concerned with tidiness. Rham (1845, 401), for example, observed how in earlier times farmers in Great Britain paid very little attention to the straightness of furrows – preferring to follow the crooked boundaries of the field. This, he notes, became such common practice that eventually “no straight furrow was to be seen; and there was a prejudice, if not a superstition, in favour of crooked ridges.” In Lothian in Scotland Buchan-Hepburn (1794) observed how it was only in 1723 that farmers John and Alexander Cunninghams, began to level and replough ridges to straighten them. More importantly, he notes that the neighbouring farmers “at first derided the practice” but were later convinced by dramatic improvements in the crops such that the innovation quickly spread throughout the county. He notes that the benefit of having a clear and straight furrow

struck every man so forcibly the instant he saw it, that the ridges in almost every corn field were straightened progressively as it came in its rotation to be fallow. (p. 52)

However, this practice does not seem to have spread rapidly everywhere. For example, it was only towards the end of the century that straight furrows “at last” became the preferred method of “every rational farmer” in Perth, Scotland (Robertson, 1794). James and Malcom (1794) similarly suggest that in the Northern part of Buckinghamshire farmers “plough their lands in

a complete serpentine form” which they suggested could be attributable to the “rich and fertile” soil meaning that farmers did not have to follow good farming practices.

Tidiness was not seen as necessary in a number of other situations. For example, a number of commentators complained that drawing straight boundaries in the process of enclosing the commons simply did not make any sense. Robertson (1793) referred to the straight field boundaries in Midlothian enclosures as “an absurdity” as they enclosed an array of different environments in a single field. Instead, he noted the field boundaries should vary depending both on the wetness of the land and the quality of the soil itself – such that “land of opposite qualities may not be included in the same close”. In other places, customary beliefs dictated there was value to irregular landscapes. In Perthshire, Scotland, Robertson (1794) observed how boundary hedges in the region were invariably curved with “scarce ten yards of a straight hedge to be seen together in the county” which, he noted, was an extreme inconvenience to ploughmen. However, crooked hedges were believed to offer more shelter to cattle than straight hedges and thus were not straightened.

Buildings not maintained in a tidy fashion could also be seen in a positive light. For buildings, function was a primary concern, with the most attractive buildings being those that were “most convenient and useful to those who are concerned in them” (W.R., 1840, p. 373). This could mean maintaining buildings in an untidy form. An anonymous report in the *Quarterly Journal of Agriculture* (Anon, 1836, p. 332) observed that the much esteemed and valued Kerry (Ireland) butter was produced in “a shabby and apparently inconvenient house of mud walls, unplastered and without windows”. This was not simply a matter of the financial position of the farmers. Rather, the shabby dairies were maintained in the belief that mud buildings without windows were best for production because “either lime or glass would be injurious to the butter process” while the high value of Kerry butter made it apparent that a well-constructed dairy house was “not absolutely necessary”.

Untidy management of fields could also have benefits for farmers. One of the areas where this was important was in the use of non-agricultural plants (“weeds”) as indicators of soil or climatic conditions that could benefit farm management. Many plants that grew incidentally around the fields alerted the farmer to underlying soil conditions, their potential for agricultural use and/or their need for improvement. For example, “*The Complete Farmer*” published in

1777 discussed how valuable “the spontaneous produce of earth” was for assessing the nature and quality of farmland noting:

Wild thyme shows it to be good for feeding cattle; betony and strawberries dried to wood; camomile points out a mellow soil fit for wheat; burnet indicates land fit for pasture; and mallows denote it proper for the uses of the kitchen-garden. (A Society of Gentlemen, 1777, p. 330)

Throughout the 18<sup>th</sup> and early 19<sup>th</sup> century reference to the value of weeds as indicators is relatively common. The “gravel bind-weed” was a sign that gravel was lying near the surface (A Society of Gentlemen, 1777), “knob-weed” was seen as an indicator of poor quality land (Rudge, 1807), while “spurry” was a “sign of great poverty in a sandy soil” (Batchelor, 1808). Weeds could also indicate aspects of good farming. Pitt (1794) for example, observed that groundsel (“a garden weed”) is plentiful in the Kentish hop grounds where it “is considered there as a sign of land in good condition.” Although scientific knowledge of soils gradually replaced the importance of reading these signs in the fields, references to the importance of weeds were still being made into the second half of the 19<sup>th</sup> Century. In 1862, Henry Cox (1862, p. 496) presented a paper to the Kingscote Agricultural Society on the natural history of weeds noting that “weeds too are of much use to the farmer in indicating to him the geological formation of the soil”, and provided a long list of what weeds were believed to indicate about the soils they occupied.

In some places, farmers maintained their land in an apparently “untidy” or “slovenly” state because, in order to manage the farm, fields needed to produce more than simply agricultural crops. One example, of this is furze, which was noted by Potts (1809) as being tolerated on the uplands of Northamptonshire because of its value as fuel. In another case, farmers tolerated “scanty” oat crops as they believed it produced good straw for feeding to cows and horses – whereas if they grew 'good' oats, the stem would be too fibrous. The improver Sinclair (1814, p. 391) observed that “it is a miserable sign of the husbandry of any district, where such an observation is generally applicable”. Yet farmers needed the straw to feed livestock. One of the best examples of how necessity dictated good farming practices is that of the anthill meadows that were once relatively common across England (see Burton & Riley, 2018). Anthills were widely derided by improvers as a blight on the landscape because of the way

they impinged on the ability of the farmer to implement effective meadow management – for example, making harvesting more difficult and leading to unusable wet areas.

However, reports from the English county of Buckinghamshire around the turn of the 19<sup>th</sup> Century suggested that many dairy farmers maintained large numbers of anthills on their meadows in the belief “with much seeming confidence” that anthills enhanced production due to the larger surface area on the field, produced an earlier flush of spring grass on the south side of the hills, and sheltered lambs in the spring (Potts, 1809 – also see Tusser, 1580, p. 59, who advises farmers to “make hillocks of mole-hills, in field throughout”). In the second report for Buckinghamshire, Priest (1810, p. 284) also observed that farmers in this region allowed anthills “in size scarcely to be credited” to form on the pastures such that “they are found not scattered here and there, but nearly as thick as the pasture can hold them from the tops of the ridges to the furrows”. This, he noted, created an environment whereby water gathered in the unmown furrows and encouraged the growth of rushes. Priest viewed these as a “pernicious weed”. However, when asking the farmers about them he noted

... more than one farmer informed me, that such rushes were valuable, and they should be very loth to exchange them for what others might esteem more productive plants, since such rushes served them instead of straw for their yards. (p. 285)

In this case, there was a clear discrepancy between the way improvers such as Priest and Young saw the anthills and how the farming communities involved viewed them. Despite this form of management being seen as an example of slovenly farming by the improvers, it took over a century after the first criticisms appeared in the literature in the early 1700s for ant-hill meadow management to disappear. Farmers’ reluctance to abandon the practice (despite financial incentives from landlords) illustrates how farmers’ views of what practices represent “good farming” depended strongly on their needs. For the ant-hill meadows rushes were required in place of straw, for furze fuel was required because of a lack of alternatives, in Perth curved hedges were seen to provide necessary shelter, while the tolerance of scanty crops of oats was a compromise between the size of the oat crop and the need for palatable straw. In all these cases from the perspective of farmers the tidy farming symbols of neatly grassed hillsides, straight field boundaries, “weed” free properties, flat and easily managed hay meadows, and oat crops heavy with grain were diminished by the need to provide other essentials for the farm.

## **The development of tidy farming in fieldwork – furrows, ridges and drilling**

One of the earliest cases of agricultural authors promoting the virtues of tidy farming can be found in reference to the establishment of furrows. Straight furrows improved the drainage of the fields and enabled ploughing to be conducted with “no short turnings” – making it easier for less experienced ploughman to plough the field straight. Symmetry was also an important part of the ridges. For optimal field management, ridges needed to not only be straight but parallel and “equally broad in all places” with the broadness and height selected depending on the soil type. The initial laying out of ridges in the field was also a skilled practice. Anon (1808a, p. 342) observes how sometimes the furrow would not deviate over a 250 – 300 metre distance within a few centimetres from a straight line which he notes

... is not only a satisfactory evidence of the skill and dexterity of the ploughman in his art, but is really of importance towards the most perfect tillage of the land.

Badly constructed ridges created a number of problems. Firstly, if the ridge was not straight the plough would need to run in a curve, increasing physical resistance and making ploughing more strenuous. Secondly, in making ploughing more difficult, plough cuts often ended up being too wide or too narrow when the ploughman lost control. Thirdly, crooked furrows made sowing more difficult. Finally, irregular ridges could lead to horses causing “great harm” by treading on the crop when turning (Dickson, 1762; Kames, 1776). Tidiness in ridge construction thus became strongly connected to good farming practices.

Perhaps one of the most important practices in the development of the tidy-farming ethos was the invention of drill husbandry by Jethro Tull in the early part of the 18<sup>th</sup> Century. Tull’s invention began a slow transition from hand sowing to drill husbandry and, eventually, the abandonment of hand sowing entirely. Both practices required high levels of skill. However, the required skills were radically different and, consequently, so were the footprints they left on the farmed landscape.



Figure 3.1 Broadcast sowing (Stephens, 1856, p. 22)

Broadcast sowing involved a relatively simple act of scattering seed from a basket but was nevertheless a highly skilled job. The sower required a “measured step marking the time” in order to time the progress of the work, simultaneous actions of the limbs, a muscular body, and a “steady eye directing the flight of corn with a rainbow-like sweep to its destined place in the earth” (Anon, 1838, p. 104). Fitzherbert’s (1534, 19) description of sowing peas is a good example of how developing a rhythm was critical to being a good hand sower. He describes how the farmer should strap a bag filled with seed over his shoulder, and then

set your left foot in front and take a handful of peas: and when you take up your right foot, then cast all the peas away; and when your left foot rises, take another handful, and when the right foot rises then cast them from you. And so at every two paces you will sow a handful of peas and if the foot and the hand agree, and then you will sow even. And in your casting, you must open your fingers as well as your hand, and the higher and further you cast your corn, the better it will spread.

The desired outcome was a thick and even coverage of seed. Where seed was not evenly distributed, emerging patches of dense growth represented areas where the seed had been applied too thickly, while clear areas (later covered with weeds) represented areas that had been

missed by the sower. In order to ensure the dense coverage required to prevent weed growth among the crop (a key rationale behind broadcast sowing), large quantities of seed were often sown – making broadcast sowing an expensive process, and one where much of the seed sown was wasted. The lack of skilled hand sowers meant that the process was often done poorly by unskilled labourers.

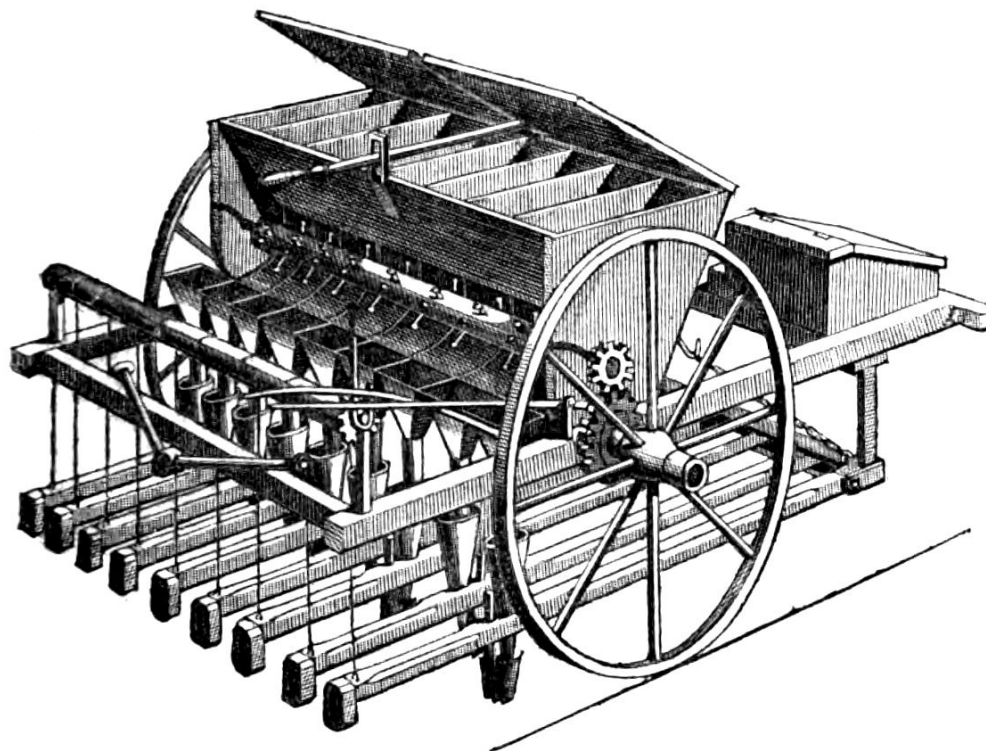


Figure 3.2 Norfolk Drill (Loudon, 1825, p.387)

Drilling, in contrast, involved geometric patterns, regularity, and tidiness. To drill seed properly the land needed to be properly prepared, the seed positioned in regularly organised trenches – all of an equal depth suited to the particular variety of seed being sown – and the seeds distributed at regular intervals. Rather than smothering weeds by blanketing the land with seed, drilling, by virtue of leaving gaps between the rows and planting crops in straight lines, allowed workers to get between the rows to hoe between the plants. Anon (1796, p.95) outlines the advantage of precision in planting:

... if the rows are placed very straight, (they ought to be exactly so) the shim will be of incomparable use, as it may be directed so near the rows as nearly to save hand work, except for extricating such weeds as grow among the plants, for which purpose a pronged hoe is of use.

This ability to use a hoe to remove weeds made drilling reportedly both more efficient and cheaper than hand sowing a crop (Anderdon, 1791). Hillyard (1837, p. 103) observed that the drill system was one of “the greatest improvements in the cultivation of land” primarily because it allowed the farmer to keep the land cleaner than was possible with broadcast sowing, with the ability to do so, he contended, being “the real difference between good and bad farming.”

The move to drill husbandry also represented a considerable change in labour requirements. With broadcast sowing it was possible to take any labourer, even an unskilled one, and sow seed in a manner that would result in a crop. While skilled labour would do a better job, farmers were able to make do with what labour they had. Tools were simple. A basket was required to hold the seed, and, on emergence of the crop, hand tools could be deployed by labourers to remove the weeds. Preparation of the land for sowing could be as thorough or lax as the farmer desired, with some sowing done directly on unprepared fallow land.

Drill husbandry was an entirely different matter. To be drilled properly the soil needed to be carefully prepared while the drilling itself was a precise operation – carried out with machinery that was often difficult to operate. Not only did operating the equipment require technical skills that were not widely available before the 19<sup>th</sup> Century but repairing the machinery when it broke also required highly skilled technical labour. As a result, the success of drilled crops depended “upon the intelligence, attention, perseverance, and capital of the farmer” (John Sinclair, 1821, p. 339).

Symbolically, drill husbandry also represented a significant change. With broadcast sowing crops emerged as a surge of vegetation that (ideally) covered the field with an impenetrable blanket of green and signified suppression of any weeds, thus allowing the crop to grow without hindrance. Bare soil was an indication of failure where weeds were certain to establish themselves. With good drill husbandry, on the other hand, bare soil was essential for maintaining a weed-free crop and signified not the imminent arrival of weeds to compete with

the crop, but that the crop could be readily managed with a hand or horse hoe. The pattern on the fields at emergence was thus one of straight drilled lines of thin crops with bare soil in between – a complete anathema to those used to broadcast sowing.

The introduction of drill husbandry thus made interpreting signs of good farming difficult for farmers. After the initial emergence of the crop, where the gaps between rows were viewed as a sign of failure, the drilled crops grew strongly to the point where the productivity was greater than broadcast sown crops. However, there were still concerns that drilled crops were somehow fooling the farmer's eye. Agricultural improver Arthur Young (1792, p. 325) suggests that drilled lucerne eventually began to look the same as broadcast sown lucerne but:

there is a fallacy to the eye in the drilled crops in proportion to the distance of the rows; they appear, thick while they are really thin, but in broadcast ones, which satisfy the eye, there is no deception, and these immense burthens, through which the scythe is with difficulty moved, produce more at one cutting than two-feet drills would at three with the advantage of the herbage being finer and softer.

Through generations of use, broadcast sowing had become part of the established culture of farming. Skills associated with broadcast sowing had come to represent a valuable commodity which “conveyed a superiority on the possessor” (Anon, 1838, p. 104). The practice of sowing itself also had aesthetic qualities that led to strong sentiment developing about the importance of its presence in the countryside. The same observer notes:

We own we should not like the idea of abandoning this ancient practice, though for nothing else than for the many pleasant associations by which it as endeared to every lover of field labour.

Many field experiments were carried out to test whether broadcast or drill husbandry produced higher yields, and these almost invariably came out in favour of drill husbandry. Nevertheless, hand sowing continued long into the 19<sup>th</sup> Century. In some cases, the approaches were seen as being applicable in different circumstances. For example, broadcast sowing of lucerne was advised for situations where farmers were “doubtful of being able to give a very regular and constant attention to hand and horse hoeing” (Anon, 1796 p.89). In other words, where farmers

were unable or unwilling to pay the attention to the fields required for drill husbandry broadcast sowing provided a workable alternative, and this is perhaps one reason broadcast husbandry was not rapidly overtaken by drill husbandry. Drill husbandry required not only new machinery, but a new type of farmer.

### *Ploughing – a critical symbol of good farming*

The requirement of drill husbandry for well-prepared fields meant that skills in other areas of agriculture became increasingly important – in particular, those required for good ploughing. Ploughing and thereby ploughmen had long been recognised as socially important. Morey (1998, p. 41) for example, observes that ploughmen had a vital role in food production in the medieval era and, in recognition of their “obvious social value and their idealised moral status” ploughmen were provided with special legal protection, making the plough a form of sanctuary. On 19<sup>th</sup> Century farms ploughing was equally valued with ploughing cited as “the most important of all agricultural operations” as all subsequent operations depend on getting the ploughing correct (Anon, 1845, p. 63) and a “good ploughman” considered “the most necessary and useful man upon a farm” (Anon, 1843, p. 311). However, unlike drilling which involved revolutionary machinery, changes in ploughing – up until the invention of the “steam plough” in the mid 19<sup>th</sup> Century at least – generally involved incremental improvements. By the mid-19<sup>th</sup> Century, Coleman (1842, p. 461) observed how the skill and art of ploughing had moved from digging the ground with a stick to its “perfect inversion” with a plough. As with drilling ploughing had a geometric aesthetic quality of its own. He notes:

A ruffle from under a crimping iron does not present a more beautiful object than a well-ploughed field from under the hands of an English or a Scotch artist. The lines are all straight; the furrows well turned; the headlands cross-ploughed; the corners finished. A well-disciplined mind enjoys the highest pleasure from seeing an operation of any kind, even the most humble, well performed, and perfected according to its proper measure.

The importance of ploughing to the good farmer is evident in the emergence of ploughing competitions. Formal matches appear to have begun with the Agricultural Societies of the 18<sup>th</sup> Century, where premiums were offered in order to assist in the development of new technologies and to promote the improvement of agricultural practices (e.g. the Odiham

Society of Agriculture and Industry, Baxter, 1785; Treby, 1792). In an article in the *Annals of Agriculture*, Erskine (1797, p. 332) asserts that the impact of these matches on ploughing skills in Clackmannan was substantial, with local ploughmen going from being “notorious for their want of skill in tillage” to “among the very best in Scotland” while now “the fields of the good farmers, indeed, appear cultivated like gardens”. Reports of ploughing matches (which were frequent in England, Scotland and Wales) suggest they played an important role in removing prejudices to new technologies, increasing the skills of ploughmen, and enhancing the geographical spread of innovation by enabling farmers to compare old technologies with new ones under similar conditions (Young, 1797; Sinclair, 1821).

Judging the skill of the ploughman in such a match was an expert task. Once again, straight lines were important. Clod (1844, p. 520) observes that ploughmen in one match got into trouble at the start with veering furrows which he saw as problematic because

there is no other part of his day's work, unless perhaps the finishing furrow, that demands so much expertness on the part of the ploughman as the veerings. It is requisite that they be straight and equal throughout.

However, this was not the only component of skilled ploughing. In a ploughing match at Glasquin organised by the Bishop of Kildare the judges described perfect ploughing as:

In all good ploughing of grass land for corn, we consider a perfectly straight furrow, cut perpendicular on the land side, at least five inches deep, the furrow cut completely horizontal at bottom, the sod of a moderate breadth, not thrown too much on the back, nor cocked too much on an edge, will be most likely to cover seed well, and to ensure a full crop (Anon, 1808b, p. 307).

The extent to which ploughing thus came to involve symmetry and regularity – the straightness of the lines, the angle the sods were cut at and the depth at which to which the plough was operating – illustrates the growing importance of regular landscapes and tidy fieldwork. Tidiness and regularity were seen as indicative of how well the seed would be covered and thus the ability of the work to “ensure a full crop”. That this visible manifestation of good ploughing was of social symbolic value can be seen in Clark’s (1859, p. 210) observations of how

ploughmen in Long Sutton did their “primest work” on Saturdays so that it could be viewed by passers-by going to church. This in turn, he notes, led to Sabbath-breaking where “groups of young men might be seen every Sunday taking their stroll round the district or through the marshes to see the straight furrows.” The fact that farmers would risk the wrath of God (or their god-fearing neighbours) in order to view others’ displays of good farming illustrates how important these social displays could be. It also illustrates how “roadside farming” (See Chapter 4 and Burton, 2004a) has long been an important means of transferring information on good farming credentials around the farming community.

### *Constructing the “good ploughman”*

As with other forms of symbolic activity in agriculture, the visible work of the ploughman was simply a manifestation of an array of other skills necessary to be a good ploughman. Embodiment of an instinctive ability was a critical aspect for being a good ploughman – as noted by The Society for the Diffusion of Useful Knowledge (1837, p. 41):

There is, in fact, a certain degree of taste in ploughing as well as in everything else, a kind of tact which is difficult to be taught and hardly to be acquired, except by a sort of instinct, when once attained, it is perhaps the most healthy and agreeable of all agricultural exercises; the body being kept upright, the arms and legs brought into action, and also the eye and the mind to keep the furrow straight, and of regular width and depth, and the voice to speak to the horses.

Part of this embodiment was the development of the so-called “voice” – a way of talking that enabled the ploughmen to maintain control over the horses (Louden, 1825). Clod (1844) observes how ploughmen often communicated with the horse through a series of “indiscriminately and indistinctly applied” sounds rather than issuing any clear directions to the horse. Repeated performance of ploughing also embedded skills at a subconscious level, for example, an understanding of how the plough moves through the soil (which enabled the ploughman to exert control over the plough), or being able to feel when the soil has been ploughed to a condition of “kindly mellowness” (Tucker et al., 1838).

In addition to these characteristics, many aspects of a good ploughman were related to personal qualities that were not developed through experience but were innate personality of physical characteristics of the individual. For example, Anon (1845) observed that brute strength (which, he contends, is the basis of ploughman selection for many farmers) is not all that is required to be a good ploughman, but he should be dexterous, show good judgement, keep an upright stance, be even tempered, and be attentive to the work.

Knowledge of a more conspicuous kind was also required – in particular setting the plough (and harness) was considered to be “one of the most difficult lessons of ploughmanship” (Johnson, 1842, p. 38). Farmers needed to build up a store of experience-based knowledge on how to set the plough to suit particular crops, soil types and soil conditions (e.g. wet or dry) was a key part of being a good ploughman. For example, Boswell (1783, p. 361) observes how pillar-pins could be used in a Norfolk plough to raise, lower and alter the direction and beam of the plough – thus setting it to plough deeper or shallower. A “good ploughman” ploughing uneven ground would make these adjustments two or three times in a furrow.

At a time where ploughs were often locally manufactured, the construction and “goodness of the plough” could also affect the quality of the work (Young, 1797, p. 514). The type of plough was also important. A report on the “Implement department of the Warwick show, 1859” (R.S.B., 1860, p. 126) outlines a discussion on the “vexed question of the wheel and swing ploughs”. Both types of plough had been in use for centuries by this time, with the wheel plough finally ousting the swing plough only with the arrival of the power tractor in the 20<sup>th</sup> Century (Fussel, 1966). Each plough had its advantage. Using the wheel plough would “enable an inexperienced workman to perform work of a tolerably useful character, while the swing-plough would be almost entirely useless” to the same person who would have great difficulty ploughing to a uniform depth (R.S.B., 1860). The author further suggested that the swing plough is an “implement” which requires considerable application of skill by the ploughman for correct operation but can respond to “the peculiarities of a soil or crop constantly varying in character”. On the other hand, the wheel plough was seen as a “machine” which acts in the same way whatever soil it is acting upon. The machine was thus not able to do as good a job, but the ability to do it more economically made up for any loss in production. The skill displayed by the farmer and the tools used were thus inextricably intertwined.

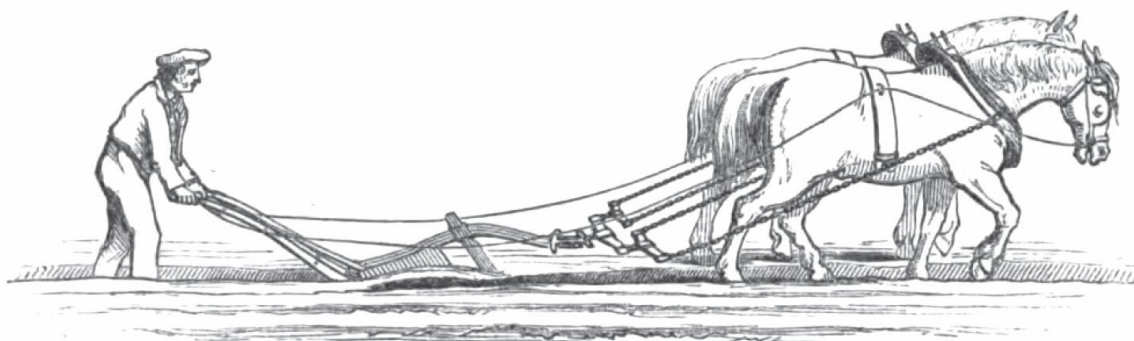


Figure 3.3 swing plough (Stephens, 1856, p. 3)

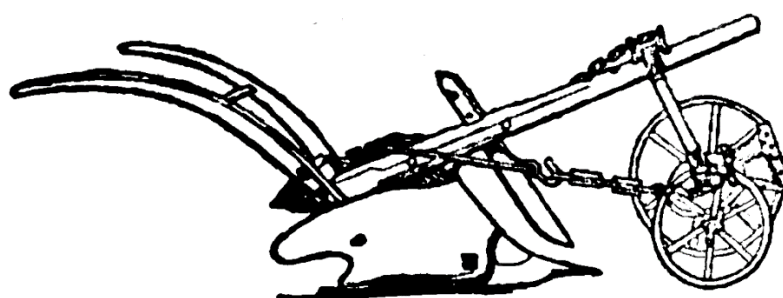


Figure 3.4 Norfolk wheel plough (Louden, 1825, p. 379)

The above analysis of ploughing symbols suggests there are three main embodied components to producing symbols of good ploughing, namely:

- 1) Innate aspects of the body or person. While good ploughing could be learned, qualities associated with the basic physiology or personality of the farmer that contribute to being able to plough were also important in becoming a good ploughman. Some of these could be acquired through repeated practice in ploughing but others could not. The strong but dexterous, even-tempered, attentive farmer/farm worker was more likely to become a good ploughman than one lacking those qualities – no matter how much experience of ploughing he or she had.
- 2) Embodied characteristics learned through practice. Building on innate characteristics, the repeated practice of ploughing would lead to the development of embodied skills related to the way the ploughman connected to the physical world. This is effectively developing a “feel” for the practice of ploughing – whether it be through having the eye required to keep the furrow straight and regular, being able to hold a plough steady, having “the voice”

to speak to the animals, the ability to read the body movements of animals to know instinctively how to respond, or the development of the correct body position required to be able to operate the plough. Ploughing patterned the ploughman.

- 3) Knowledge gained from practice or taught. A number of sources suggested that ploughing was a skill that could not be taught but only learned through experience, however, there were some aspects of ploughing that relied on learned knowledge. How to prepare the tackle for the horse, how to care for the horses, how to set a plough for the numerous different soil and weather conditions that were likely to be encountered, and even how to disassemble and reassemble a plough to move it from one field to another. Chomel (1725, p. 257) suggests the ploughman should also know the nature of the earth, the seasons of the year, and “the customs and fashions of the place wherein he lives”. Unlike the other two categories that contribute to producing symbols of being a “good ploughman” this knowledge could be passed on directly.

In addition to these components of the “good ploughman” the materials associated with the practice were also critical – in particular, the plough construction, the nature and condition of the animals, and the soil structure and condition. Unlike contemporary agriculture where much of the machinery has become standardised, historically ploughs were often designed and manufactured locally or even on the farm itself. Fitzherbert (1534, p. 2), for example, observes

There be ploughs of diverse makings in diverse counties, and in likewise there be ploughs of iron of diverse fashions. And that is because there may be many manner of grounds and soils. Some white clay, some red clay, some gravel or Chiltern, some sand, some normal earth, some mixed with marl, and in many places heath ground, and one plough will not serve in all places. Wherefore it is necessary to have diverse manners of ploughs.

This level of diversity was present well into the 1800s. As a result, the choice of plough (or the plough provided to the ploughman by the farmer) could make a significant difference in terms of the quality of the plough work. The training of the horses or oxen to walk at a steady pace also improved the quality of the performance (Lawson, 1827). Finally, the quality of the plough work was dependent on the material state of the soil – both in terms of its physical qualities (stoney, peaty, clayey, etc.) and ephemeral condition caused by everyday variations in the

weather. In this case knowledge of how to plough in different conditions and which equipment to use would affect the outcome.

### *Other straight lines and tidy symbols*

While tidy sowing and ploughing were (and still are) key areas where good farming could be displayed, the general principle that untidy farms displayed poor farming practices extended across many other aspects of farm management. One area where tidiness was advocated was in the storage of harvested crops in stacks, cocks and ricks – as these were both critical for successful farming and highly visible in the landscape. Oversized structures were advocated by farmers with limited practical experience in agriculture “talk-workers” but were strongly advised against by Lisle (1757) as they were unable to be pitched into a cart without being trampled and therefore shedding seed. The roofing of haystacks – which involved tying the hay tightly together to protect it against bad weather – allowed farmers to create ornate patterns that made the stack waterproof and provided the opportunity for the display of considerable skill. As the eaves of the stack were in particular danger of wind or rain damage, farmers were able to invest considerable effort in making them tidy without risking being accused of wasting time (Stephens & Norton, 1851).

Regular geometric patterns were an important part of indicating good practice in some cases. For example, Marshall (1778, p. 265) observed that for a stack frame a square (rather than a circle or parallelogram) is the best figure because it “is more pleasing to the eye, takes less thatch, and stands firmer, taken jointly, than on any other.” It is interesting here that being “pleasing to the eye” is elevated in importance to lie alongside the practical advantages of the structure. In comparing bean stacks to oat stacks Marshall (1778, p. 264) asks “which stack is the least handsome?” answering the bean stack because “the stem and the roof are out of proportion, and the bottom is too large”. In an oat stack, having “too much belly” and a “heavy appearance” was a sign that the stack maker has been unable to keep the stems upright. The shape of stacks thus revealed aspects of the skill of their maker to those familiar with their construction.

Other highly visible constructions were also important symbols of good farming practices and, once again, the value of straight lines was recognised. Marshall (1778, p. 125) for example, observes that:

In rural economy, straight lines and right angles are first principles, which can seldom be deviated from with propriety; either in laying out a farm, or in planning farm buildings.

However, it was not just straight lines that made farm structures symbolic of good practice. Other aspects of the construction also contributed. In particular, thatched straw rooves on buildings could reveal a great deal about the quality of the practices employed in harvesting and preparing the straw. Kent (1775, pp. 161-162) for example observed that:

The common, injudicious, slovenly practice of beating the straw to pieces with the flail, and then laying it on with some of the seeds and many weeds in it, causes it very often to grow quite green, after it is laid upon the building ; and, being bruised in all parts, to collect and retain the wet, much more than it would if the straw were whole, and consequently to become quite rotten in a few years.

Thus, roofs thatched with straw prepared in an “injudicious” or “slovenly” manner would show clear signs of poor preparation – in the short term by sprouting green, and in the long term by rotting sooner than necessary. Kent also notes that when straw is meant for thatching, the corn should be cut earlier than usual. In contemporary cereal production cutting too early would carry an economic cost with no other benefit and would thus be read automatically as an indication of “bad farming”, but if a farmer were also concerned about straw quality the economic implications of early cutting would be less clear. This secondary use would make it more difficult to assess whether the early cutting was an indication of good or bad farming.

Fences too were required to be tidy. As with roadside farming in contemporary agriculture, the first thing passers-by would see from roadsides is the condition of the fences and hedges and, Anon (1869, p. 81) observed “Broken fences and gates in a falling condition are a sure mark of slovenly management in other respects.” In particular, ragged or wide hedges were seen by the improvers not as providing shelter for fields and livestock, but as occupying space that should have been used for productive farming (e.g. Bearn, 1852; Stephenson, 1874). Trimmed

hedges, on the other hand, with the weeds pulled up from around the roots were seen as good farming. However, work on the hedges – like other aspects of good farming – needed to be in proportion to their value in enhancing production as farmers could be criticised for expending too much labour on keeping the hedges tidy purely for aesthetic purposes (e.g. Stephenson, 1874).

### *Fluctuating symbols – economic conditions and control over land*

Periods of boom and bust in agriculture driven by factors such as climatic abnormalities, changes in trading conditions and the outbreak of war also affected the meaning of the symbolic displays. When it was considered expedient (or at least unnecessary) to be a tidy farmer, the value of tidy farming declined accordingly. Untidy farming was not looked on positively, but there was a level of understanding not present when conditions were good. For example, an observer writing in the *Farmer's Magazine* (Anon, 1835, p. 135) observes that:

when good husbandry meets with so bad a return, the state of agriculture will retrograde, and a more slovenly system be substituted. This is even now the case in the hilly districts where improvement was making its way, but its march is absolutely stopped by the extreme distress of the farmers, who confine themselves to the supply of their own moderate wants from the produce of their lands.

Periods where agriculture was too profitable could also have a negative effect on good farming. A report in the *Farmers' Magazine* (Handley, 1838, p. 192) observed that during wartime any crop remunerated the grower and that “the most slovenly farmers amassed wealth, the usual inducements to extraordinary exertions were wanting”. Thus, historically, there were some periods where “good farming” was disincentivized by lack of return, while in other periods “good farming” was disincentivized by the high profitability of even poor agricultural practices.

As well as the effect of economic boom and bust on good farming practices, some agricultural practices required significant amounts of capital that put “good farming” outside the realm of the common farmer. Young (1771, p. 107) for example, notes of carrot production at the time that “such noble crops must not be expected without great expense” and that it is therefore clear

that they cannot be grown by “common farmers, whose husbandry, in general, is so bad, from a want of money to carry on better.”

The ability to produce symbols of good farming was also affected by the power of the landlords. Occasionally, farming customs or attempts to negate them became embedded in leases. For example, Lisle (1757) observes of the farmers in the “strong deep lands of Buckinghamshire” that prejudices against excessive barley planting had become institutionalised in leases that limited the planting of barley – even where it might have been good practice to do so. Likewise, Billingsly (1797, p. 303) noted that a tradition of over-exploiting land once it was ploughed – keeping it under constant tillage – led landlords to insist in the leases that no new land was to be tilled. The result was that the “regular and well-conceived rotation of crops ... the most promising feature in good farming” was prevented for all farmers, good and bad.

The length of leases provided another impediment to good farming. Brown (1799) noted for Yorkshire, for example, that three quarters of the land was rented from year to year, while even longer leases went for a maximum of only 21 years. This led farmers to think predominantly in the short-term and limited farmers’ custodial practices. The need to lengthen leases to improve agriculture was recognised and fought for by the agricultural improvers during the 19<sup>th</sup> Century as, as Brown (1799, p. 30) noted, the renting of land by short-term lease which “to us seems destructive of good farming, is upon the increase”. The end of the lease could also be problematic in cases where no compensation was paid for unexhausted improvements as it left no incentive for the farmer to steward the land properly for the next tenant (Caird, 1852).

Bad landlords could, and did, make good farming simply impossible. In explaining why observers of impoverished regions of agriculture with poor cultivation should not blame the farmers, a report of a meeting of the London Farmers’ Club (Anon, 1848, p. 38) notes that underlying these practices was land that had not been drained, hedgerow trees that could not be cut down, dilapidated buildings, crops “overrun with game from the neighbouring preserves” and land that was “rack-rented” (rented at an exorbitant price). Trees maintained by landlords for timber in the hedgerows shaded the crops and limited the field sizes – thereby restricting the types of machinery that could gain access to the fields (Anon, 1848). The effect varied regionally. Caird (1852, p. 416), for example, observed of Northamptonshire that despite there being many excellent farmers “good farming was still the exception”, with one of the key

reasons being that landlords “have no interest in their farms beyond the annual rent they receive, know nothing of the management of land themselves, and do not employ an agent who does.”

Lack of control over farming practices was clearly problematic for displaying symbols of “good farming” historically. In particular, when developments in agricultural techniques and technologies began to gain pace in the 19<sup>th</sup> Century, bad farming in some places was as much led by the failure of landlords to move from traditional leasing arrangements as by any failure of the farmers themselves. In this case, discerning the extent to which aspects of bad or good farming were attributable to the farmer would have been difficult. However, some symbols of good farming would have remained. For example, even where the farmer is required to use a cropping system considered by the peer group as bad farming, the skills involved in straight ploughing and other aspects of making a good job of field preparation would still be evident.

Today, subsidised production and high land values ensure that access to capital does not present the same limitations, rental agreements are generally not as prescriptive, and customary practices of landlords less prevalent than historically. In times of downturn, European farmers can fall back on subsidies for support without having to abandon all good farming practices. This said, subsidies and payments for environmental practices also allow new economic strategies oriented toward a maximization of subsidies, even if this leads to practices that are contradictory with good farming symbols. At the same time, tenant farmers have greater legal rights while the power of the landlords have diminished considerably – leaving farmers free in most cases to make key decisions about farm management. As a result, the responsibility of the farmer for the appearance of his farm is stronger than may have been the case in the past. However, it is still possible – in the United Kingdom at least – to see when an invisible boundary between farms that are rented and farms that are owner occupied has been crossed, simply by observing the shabbier appearance of buildings and fence lines.

### **Putting it all together: The story of symbolic change in agriculture**

Until the 19<sup>th</sup> Century, tidiness did not dominate the ethos of the 'good farmer'. Seeds were often sown broadcast rather than being drilled in lines, and the primary objective was to smother as much of the land as possible with seed in order to prevent the emergence of weeds.

Initially the pattern of straight lines with bare soil patches between was an anathema to farmers. The debates that raged on the question of whether drill or broadcast husbandry was better practice – despite overwhelming evidence in favour of drill husbandry – illustrate the difficulties of moving away from more traditional symbols of good farming. Other “untidy” practices could also be useful. In particular, a lack of soil science and geographical knowledge meant that many of the non-agricultural plant species acted as indicators of the soil conditions and underlying geology, helping farmers to optimise their farm management practices. While weeds within field crops had no value, naturally occurring plants “the spontaneous produce of the earth” in meadows and crop boundaries played an integral role in good farming. Knowing the conditions under which these indicator plants grew was of discernible economic worth.

Prior to the widespread establishment of scientific agriculture, symbols of “tidy farming” were somewhat difficult to interpret as the result of the multifunctional use of crops. In some cases, crops optimised for secondary purposes were not organised and tidy in the way food crops were. Whether tolerating poor oat crops (as measured in grain yield) in order to provide better straw for feeding to cows and horses, harvesting crops early for straw, growing furze for fuel, or allowing ant hills to develop to provide rushes for use as roofing material, the lack of necessary materials for other aspects of farm management meant that “tidy” production did not always serve the farmer’s needs.

This gradually changed. Increased knowledge of plant physiology, better understanding of soil chemistry and geology, and the availability of geological mapping progressively reduced the need for tolerating non-crop plants in the fields. At the same time, transport systems in the 18<sup>th</sup> Century had been notoriously bad – limiting both the export of agricultural produce and the import of other necessities such as materials for roofing, heating, or fodder for animals. As part of the wider industrialisation processes, improved roading systems and the development of canals and railways opened up areas of the countryside to the import and export of goods. As such the need for secondary uses of crops diminished. Pressure from the “agricultural improvers” of the time was also heavily directed towards optimising production in market-based agriculture – to the point where actions that failed to optimise productivity, even when there was a practical purpose for doing so, were widely derided (see Burton & Riley, 2018).

However, a key factor in the move towards “tidy farming” was the development of improved agricultural machinery and management techniques. Whether in terms of the invention of ploughs that enabled less skilled workers to plough straighter lines to a more even depth, or the development of drills that dispersed seeds in straight rows and at even depth, almost every step towards mechanisation was a step towards tidiness and regularity becoming an important symbol of good farming practice. Even the development of a broadcast sowing machine led to more regular patterns in the landscape, with the scattering of seed no longer dependent on the ability of the sower to walk at an even pace and move limbs with uniform rhythm potentially resulting in bare patches or over-seeding.

Simultaneously, the development of new machinery began to erode the skills necessary for “good farming”. Whereas simple agricultural implements required operation by workers with innate skills, practice-based skills, and knowledge-based skills, agricultural machinery made these embodied aspects of “good farming” increasingly redundant. No longer was a skilled ploughman (who demanded high wages) required to plough a difficult field with a swing plough. Instead, a relatively unskilled labourer could operate the wheeled plough. Although not as efficient in terms of being able to respond to changes in soil conditions as the swing plough, the lower cost of labour meant that, overall, it was a more economic means of production and, on average, resulted in higher production as unskilled labour performing skilled jobs led to poor outcomes.

The move from broadcast sowing to drill sowing was one of the most critical moments. Studies comparing horse drill and horse hoe agriculture to conventional broadcast agriculture repeatedly illustrated that crop yields were higher under drill agriculture. However, traditionally the symbol of a good farmer had been a lush verdant carpet of green emerging after broadcast sowing. Farmers struggled both with the concept that drill husbandry left large patches of open ground that weeds could colonise (as the main form of weed control had been to outcompete the weeds with crop plants), and that the thin lines of plants resulting from drill husbandry could possibly produce more than the thick carpets of green evident in broadcast sowing. Eventually a generational shift occurred as farmers who were neither attached to the old ways nor ignorant of the value of the scientific evidence took over.

The development of the “tidy farm” ethos presented in this chapter has provided some interesting lessons concerning the long-term development of symbols of good farming.

First, technological advances in agriculture have a critical role in the development of “tidy farming” symbols. Machinery leaves an imprint on the landscape that is distinctive, visible, regular and often symmetrical. Our current array of agricultural implements pulled by powerful tractors can produce highly regular forms in almost all soil types – restricting symbols of poor performance to factors such as working the soil when it is too wet, setting the machinery incorrectly, or failing to set straight tramlines when sowing the crop (see Burton, 2012). For other farming practices, technology removed all symbolic importance by making the practice redundant. For example, while the tidiness with which stacks and ricks were finished was once an important symbol of good farming, round baling and silage production have eliminated the need for drying or field storage of hay in most cases – and thus the construction of weather resistant structures in the fields. As technologies and practices change new symbols emerge and others diminish and disappear.

Second, changes to what symbolises good farming can take decades or even generations. The length of time required for a symbol to lose or gain meaning is related to a number of factors including the strength of customary beliefs (attachment to old practices), the availability of the technology or the skills required, and the extent to which the practice/technology is considered an improvement over previous approaches. In the move from broadcast to drill husbandry, complex mechanical engineering in the drills limited farmers’ ability to purchase, operate and maintain the drills, while the straight lines and open soil appearance was simply too different to the pattern produced by broadcast sowing for it to be easily accepted.

Third, as the wider socio-economic and environmental context within which farming takes place changes, so can the symbols of good farming. Examples such as managing ant-hill meadows for reeds for thatch or producing furze on the hillsides for fuel show how what is considered “good farming” is tailored to the farming community’s needs outside as well as inside agricultural production. The demise of ant-hill meadows was in part the result of the arrival of alternative roofing materials, while leaving furze on the hillsides is likely to have been locally considered a symbol of bad farming once coal could be obtained through improved transport links.

Fourth, the analysis of the “good ploughman” provides us with a framework for identifying the components of the 'good farmer'. A good ploughman is a combination of innate features of personality and physiology, embodied characteristics that have been incorporated through practice (a “feel” for the plough), and the knowledge gained through either experience or teaching. The extent to which the work of the ploughman is symbolic of “good ploughing” is then moderated by material factors such as the training of the animals, the equipment available, the nature of the soil, or the control exerted over the practice by the landlord. We contend this can also be applied as a general model of the qualities of a good farmer – to display symbols of good farming the farmer needs the necessary innate, embodied, and cognitive characteristics with the performance moderated by the tools and materials at his/her disposal.

Perhaps the most important observation is that there appears to be a progressive decline in the symbolic wealth of agricultural landscape over the centuries. Historically, farmed landscapes were more complex arenas of practice with beliefs about good farming locally embedded, machinery locally constructed for local conditions, shortages of farming materials creating local needs for dual purposes in the cropping, a need for ecological as well as agricultural knowledge, and so on. The countryside of today is much more symbolically standardised. Because of the globalisation of food production (in particular crop varieties and machinery), a farmer from Scotland can read and understand the significance of cropping displays from a farmer in the south of England, continental Europe, or even other parts of the world with relative ease. It is this homogeneity that has contributed to “tidy farming” being globally recognised as important as a symbol across conventional industrial farming cultures (Burton, 2012). In the future, as systems are increasingly globalised and new technologies remove the risk of sub-optimal farming competencies, we expect the number of symbols that represent displays of “good farming” will continue to decline. Ultimately smart or precision farming could eliminate symbolic displays of competence from the land entirely and replace it with hidden skills such as knowledge of machinery maintenance, IT skills and specific knowledge of relevant computer software. Symbols that have had a significant role in farming communities for centuries – if not millennia – could become a relic of the past.

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