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A D D R E S S
TO THE
S O C I E T Y
FOR THE
IMPROVEMENT OF BRITISH WOOL.

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ADDRESS

TO THE

SOCIETY

FOR THE

IMPROVEMENT OF BRITISH WOOL;

CONSTITUTED AT EDINBURGH,

ON

MONDAY, JANUARY 31. 1791.

By SIR JOHN SINCLAIR, BART.

EDINBURGH:

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GLASGOW; ANGUS AND SON, ABERDEEN.

M,DCC,XCI.

ADVERTISEMENT.

THE following Paper was very hastily drawn up, and is, in every point of view, a defective performance. But the Society, to whom it was read, being of opinion that Publishing it might diffuse a spirit of investigation and experiment, and a zeal for the improvement of Wool in the country at large, the Author could not refuse his concurrence to any measure that could possibly tend to promote so desirable an object.

There are two objects, for the advantage of this Country, which cannot, indeed, be too often inculcated. The first is, to raise a sufficient supply of Fine Wool at home. The second, to produce within our own territories

territories the Naval Stores necessary for our fleet. Until these two objects are attained, Great Britain cannot be justly accounted either an Independent, Manufacturing, or Maritime Nation. The first will probably be secured by the exertions of the Society now constituted for that purpose. The other is equally practicable, with a very moderate degree of public spirit, attention, and perseverance.

Edin. Jan. 31.
1791.

A D D R E S S, &c.

G E N T L E M E N,

AS it is proposed, on the anniversary of this day, that a regular account shall be drawn up of the progress made by the Society in the important object which it has undertaken, viz. that of improving, and it is to be hoped of bringing to perfection, the most valuable production of which the country boasts, it may not be improper, on the first day in which we are assembled, to trouble you with some observations tending to point out the many public advantages which may be derived from this institution. It is a circumstance which ought more particularly to be dwelt on, that, though the commerce of wool is the most antient which history records, though in former times Kings were shepherds, and females of the highest rank were anxious to display their dexterity at the distaff; and above all, though it is well known, that no country ever acquired great commercial
A opulence

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opulence without carrying the manufacture of wool to a very high degree of perfection, yet, strange to tell, there is not in this, nor I believe in any other country in Europe, a single individual (M. D'Aubenton in France alone excepted) who has paid that attention to this important subject to which it is so well entitled, or at least who has ever acquired such an universal theoretical and practical knowledge of it as would be desirable. Particular *breeds* of sheep, if I may be allowed that expression, have been brought to great perfection in England, and indeed, in other countries, many individuals have shewn great knowledge of the natural history of this valuable animal, and have collected information respecting the different kinds which exist in various parts of the world. Much practical knowledge has also been acquired by shepherds tending their flocks at different times and various places. In Spain a very curious system, for the management of flocks, adapted to the peculiar nature of that country, has been formed: But, as far as my information reaches, all the experiments which are necessary for precisely ascertaining the effects of climate, food, or management have never been made, nor is there

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there any work published upon this subject which can sufficiently guide the unskilful shepherd how to manage, and still more how to improve, the fleecy store with which he is intrusted.

This circumstance is perhaps owing to the prejudice, that, in regard to sheep, climate is every thing, and that we are fighting against nature, when we attempt to bring the animals or the productions of one country into another. This absurd and dangerous tenet cannot be too loudly reprobated. Were Great Britain at this moment confined to those particular articles which its soil naturally produced, many of the most valuable productions of its fields, and almost all the productions of its gardens, would never have existed here, and this Island could never have been able to have fed one half of its present inhabitants.

Indeed, so far is climate from being an objection, that its effects on that particular production which we wish to bring to perfection in this country, to wit, fine wool, has never been yet ascertained. Some people imagine that hot climates

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climates are those in which we are to expect it in the greatest perfection, and yet we cannot but acknowledge the great beauty and excellence of the wool produced on the cold and rugged shores of the Shetland islands, as appears from the specimens before us. Others imagine that the finest wool is to be expected from sheep which are perpetually kept wandering about in the open air, as is the case in Spain, and that confinement is ruinous: Whereas, on the other hand, it can be indisputably proved that the antient Romans kept and fed their finest woolled sheep in houses, and even clothed them to make their wool more valuable. These, and other circumstances which might be mentioned, seem to render climate, though of some, yet undoubtedly of less essential, consequence. For my own part, I have no doubt, that if a good breed of sheep is procured, and if they are put under a proper system of management, that we may grow in Scotland as much fine wool as the extent of the country will admit. I shall therefore restrict the observations with which I am now to trouble you, to the two heads of breed and management.

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I. B R E E D.

I do not propose to enter into that speculative question, Whether all the various kinds of sheep which are now scattered over the face of the globe have sprung from the same original, or whether different kinds have existed from the beginning? It is certain that great varieties now actually exist; and the first point undoubtedly is, to procure that particular breed, which either from natural causes, or by art and management, has been brought to the greatest perfection, or is the most likely to answer the object we may wish to obtain.

The first point of view in which the different breeds of sheep may be considered, is bulk or size. There are certainly advantages in a large sized animal, were the carcase the only object in view. In the space of two years, the large sheep of Lincolnshire, and of other parts of England, are supposed to be fit for the butcher, while smaller sized animals must be kept one or two years longer, at a considerable risque and expence. Where food, therefore, can be procured in sufficient abundance, the large sized
sheep

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Sheep must naturally be preferred by the farmer, as being on the whole the best calculated to yield him profit*. Not a moment need be lost in bringing the carcase to market; and, though the wool is coarse, and consequently low priced, yet the enormous quantity, in some measure, makes up for the deficiency of quality. If, therefore, this country had no occasion for fine wool, either to cloth its own inhabitants, or to export, when manufactured, to other nations, the sooner that the large sized, though coarse wooled sheep, could be spread over the whole kingdom the better. But our situation is very different: We are obliged to import considerable quantities of clothing wool from another kingdom; and, from the progress of improvement in this Island, the quantity of that valuable species of wool calculated for the manufacture of cloth is daily diminishing; we cannot, therefore,

* There is one advantage attending large sized sheep, which deserves to be mentioned. From their quiet disposition a small quantity of them can easily be kept with horses or cattle; and in places where the fences are very imperfect, which could not confine the more active sorts generally produced in Scotland.

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fore, too soon endeavour to remedy what, in a manufacturing view, must be considered as an evil, before it takes too deep a root, and becomes more difficult to eradicate. Fortunately, also, the nature of the soil and pasture of the northern parts of England, of Wales, and of Scotland, by judicious management, seem to be well adapted to the production of that species of wool which is the most essential to us at present.

Wool is considered by a most intelligent manufacturer*, as properly comprehended under two grand divisions, viz. *combing* and *clothing* wool. A variety of sorts may be classed under each division; but under the one or the other, every kind of wool may be comprehended. The combing wool is distinguished by the length of its staple, and is peculiarly well calculated for stockings, worsted stuffs, and the like. It is universally acknowledged that this kind of wool has been brought to the greatest perfection in England. It is, however, becoming of less value every day. Those worsted stuffs in which women of all ranks were formerly clothed, have
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* Mr Anstie of the Devises.

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given way to silk, to linen, and to cotton *. Some new uses have been discovered for this species of wool; but it is already produced in such abundance, that any addition to the quantity, (particularly were a war at the same time to take place), would so much reduce its price, as to render it scarcely worth the attention of the farmer.

The other species of wool known under the name of short, the carding, or the *clothing* sort is of a very different nature. Its staple is not so long, but the pile is finer and instead of terminating, like the combing sort, in a point, is exactly of the same thickness from one end to the other. Hence the hairs easily incorporate together, and the cloth acquires that firm texture so desirable in that species of goods. The sheep which

* The combing wool is sometimes cut to pieces, and used in the manufacture of cloth. Perhaps it would be better to cut the fleeces of the long woolled sheep for that purpose twice or thrice a year, and to keep them in houses in bad weather; the expence of which their manure, and the great quantity of wool they would produce, might repay. This at least would be worth the trial.

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which produce this sort of wool are small, delight in an extensive range of pasture, and do not thrive in those narrow bounds with which the long woolled, and large sized sheep are content. They were formerly to be found in those extensive commons in England, of which so many have been inclosed by the authority of the legislature since the commencement of his present Majesty's reign. It is computed, that above a million of acres have been inclosed during that period; and if the same progress continues for some years to come, there will scarcely be a vestige of an extensive common in the southern parts of the Island *. Unless therefore the clothing breed

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* A very intelligent and respectable Gentleman, has sent me the following account of the progress of this system in the western parts of England. It is only within these 40 years that inclosing of commons began to prevail there; and before that took place, every farmer in the dry lands thought it his interest to attend to the fineness of the wool, whence his chief profit arose, and not to the size of the animal, the carcass being of so little value, that his fat sheep, even in the month of March, did not fetch above 3*d.* a pound instead of 4½*d.* its price at present. Soon after this period, the turnip and clover husbandry began to flourish; and the best farmers, encour-

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of sheep will thrive in the open and extensive pastures, which the northern parts of England, which Wales, and which Scotland furnish, Great Britain must every day become more and more dependent on foreign countries for the raw material of its most important branch of manufacture. Now, therefore, is the time to try every necessary experiment for that purpose, not only

encouraged by the better price for meat, began to think that their land might be turned to a more productive use, by introducing larger sized and more bony animals. The sheep of 8 lib. per quarter producing 1 lib. of wool worth 1 s. 3 d. were, by procuring Dorsetshire rams, changed to 14 lib. per quarter, and gave 3 libs. of wool worth 2 s. 3 d. The difference of value between the two animals amounted to about 9 s. per head. Such large sized animals could not thrive upon the short grass which uncultivated commons produced. It became an object therefore to inclose and improve the commons, by which system of husbandry, the produce of the lands has been so exceedingly increased, that what was formerly common or sheep walks is now generally let at 15 s. per acre, and the antient inclosure of 7 s. value is now let at 20 s. This accounts for the alteration in the quality of the wool, but the new system, in a national view, has produced the happiest consequences, by increasing the general wealth and produce of the country.

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only for the peculiar advantage of those districts of the united kingdoms above alluded to, but for the general interests of the empire.

It is the more necessary to attend to this circumstance, especially in Scotland, because any improvement of wool that has been attempted here, has in general been by substituting the *combing* for the *clothing* sort, which, though well adapted for particular parts of the country, is far from being calculated for the whole kingdom. At this moment also sheep farming is beginning to extend itself to the most distant corners of the kingdom; but on principles which seem to me to be of a very dangerous and noxious nature. The value of that part of the country, and the rents of the lands, have been greatly increased by these means. It is well known that, in the space of 25 years, the income of an estate in the Highlands has been raised from L. 400 to about L. 1800 a year, without any other improvement than merely converting it from cattle, into sheep, farms. The wool which it produces is nevertheless sold at the rate of only $4\frac{1}{2}$ d. a pound. What an amazing addition would it be to the value
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of that property, and of other estates in the same situation, were the wool which they produced rendered four or five times more valuable. By attention and good management there is not the least doubt of obtaining this desirable object.

In fact, nothing can be more detrimental than the mode now used of converting cattle, into sheep, farms in the Highlands. The first thing that is done is to drive away all the present inhabitants. The next is to introduce a shepherd and a few dogs; and then to cover the mountains with flocks of wild, coarse wooled, and savage animals, which seldom see their shepherd or are benefited by his care. The true plan of rendering the Highlands valuable would be to follow a different system. As many as possible of the present inhabitants ought to be retained. They ought to be gradually brought to exchange their cattle for a sufficient stock of valuable sheep. A flock of three hundred sheep might be maintained on the generality of Highland farms as they are at present constituted; and the profit of such a flock, with a few cattle, is sufficient to maintain a family in the manner in which the natives of the Highlands are accustomed

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customed to live. Thus the value of the country might be at least doubled, without diminishing the numbers of the people. Sheep farming, when conducted upon proper principles, is not so great an enemy to population as is commonly imagined*.

Having premised these general observations, it may now be proper to consider what particular breeds of sheep seem to be the best entitled to the attention of this Society.

In the first place, it is certainly necessary that we should endeavour to bring the native sheep of the country to the greatest perfection of which they are susceptible. By attention, and by breeding from the best of each species, that point may easily be obtained. Scotland possesses within itself many excellent sorts, which can easily be multiplied. In Tiviotdale, in the parish of Mochrum, and in other parts of North Britain, the clothing wool, though still capable of much improvement, is at present of great value. The small

* In Naismith's observations on the Industry of Scotland, this idea is very ably enforced.

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small white faced native Scotch sheep yields a species of wool that might answer many valuable purposes *. With respect to combing wool, the Shetland sheep produces that article in

* A friend of mine, who resides in the north of England, in the course of our correspondence upon sheep and wool, mentions a very curious circumstance. About 50 years ago, a vessel was stranded on the coast of Cumberland, that accidentally had on board some of the native sheep of Scotland, who were put ashore, and were purchased by the farmers who lived at Waddalehead, in the neighbourhood of Keswick. It was soon discovered that they possessed an instinct of foreseeing an approaching storm; that they faced the coming blast; and, taking the most exposed side of the mountain, were never liable to be overblown. The inhabitants of Waddalehead thought this breed such an acquisition, that they wished to preserve it entirely to themselves, and came under an obligation to each other, that none of them should ever sell a ram, and never above five female lambs in a season. Means, however, were found, by smuggling and otherwise, to get the better of this shameful stipulation; so that they are now very common in all the mountainous districts of Cumberland and Westmorland. They are known under the name of the Hardwick breed; and, though in a great measure extirpated in Scotland, may be found in very great perfection in the northern parts of England.

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in almost unequalled perfection. I need not descant on this point, when I have the honour of laying before you so many specimens of its peculiar beauty and excellence. So valuable, indeed, is the Shetland wool, that our manufacturers could afford to give from 7s. 6d. to 10s. 6d. per pound for the best sort of it, when properly prepared.

In the next place, it is necessary that we should propagate in this country those English breeds which are distinguished by the excellence of their fleeces, and which are likely to thrive in North Britain; confining our attention, however, principally to the carding breeds, without excluding, at the same time, combing wool, where it ought to be cultivated. Of these the most remarkable are, the breed of Herefordshire and of the South Downs in Suffex. Of the first, a fair experiment will be tried, in consequence of a very liberal offer from a gentleman in England to procure us a small flock of the very best that Herefordshire produces. They are rather of a tender and delicate nature, but may be familiarised to this country and climate, and have been already tried in the most northern county of Scotland

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Scotland with success. It is now, indeed, about four years since I tried some Herefordshire sheep in Caithness, where they have thriven beyond expectation. They are housed, however, at night, when the weather is unfavourable. It is thought that the wool of the South Down breed resembles, more than any other in England, that of the Spanish. By the assistance of Lord Sheffield, whose public spirit on this occasion cannot be too much commended, we have already some of that breed in our possession.

But, besides the breeds of England, it would be proper for this Society to try what would be the effect of introducing into this Island the sheep of foreign countries, for the purpose of ascertaining the possibility of their thriving in this kingdom, or of meliorating our breed*.

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* The foreign breed, from which I entertain the highest expectations, are those which are to be found in the neighbourhood of Mount Atlas in Africa, which there is reason to believe, are, in every respect, greatly superior to the Spanish, and to a mixture with which the Spanish breed itself, in a great measure, owes its excellence. That gallant veteran, Sir Robert Boyd,

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If Arabia is to be ransacked, for the improvement of our race of horses, why may not similar means be used for improving our breed of sheep? Many animals, in different parts of the world, produce various kinds of fine wool or fur, which, in consequence of the extended commerce and navigation of Great Britain, might be procured with little difficulty. These animals would probably thrive here, and furnish materials of the utmost consequence to our most valuable manufactures.

To conclude this branch of the subject, I have no doubt, that, by pursuing a regular system of experiments, it will soon be in our power to ascertain what kinds of sheep are the best calculated for the soil, the pasture, and the climate, of this country, and the most likely to prove profitable to individuals and useful to the state.

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previous to his departure, a few months ago, to take possession of the government of Gibraltar, was so obliging as to promise his best endeavours to procure some of that breed for the use of the Society.

II. MANAGEMENT.

It is unnecessary for me to trouble you with many observations respecting the proper management of sheep. One of the first steps which the Society will naturally take, will be, to offer premiums to persons who furnish it with the best information concerning sheep in general,—the different breeds of that useful animal,—the manner in which they ought to be managed,—the food best calculated for them,—the best mode of preventing or curing the distempers to which they are subject,—and, above all, the best means of meliorating their wool; together with any other fact or observation that may be judged material. By means of such works, drawn up in a plain and distinct manner, and published under the sanction of this Society, the necessary knowledge concerning this great branch of rural oeconomy may be soon brought to perfection, and rapidly diffused over every part of the kingdom.

There are some points, however, to which I beg leave to call your peculiar attention.

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In the proper management of sheep, the first thing to be considered is to procure the *food* best calculated for them. The nature of the food has a great influence upon the size and health of the animal, and consequently upon the wool. Where the pasture is rich, either from the natural fertility of the soil, or by the art and industry of man, and where the turnip husbandry or artificial grasses prevail, long and coarse wool is the necessary consequence. Whereas, in the words of an elegant Poet, who has celebrated the glory of the fleece,

On spacious airy downs, and gentle hills,
With grass and thyme o'erspread, and clover wild,
Where smiling Phoebus tempers ev'ry breeze,
The fairest flocks rejoice! Wide airy downs
Are health's gay walks to shepherd and to sheep*.

In regard to pasture calculated for sheep, there are few hilly districts in Scotland, where it may not be found in great perfection and abundance, or may not be improved either by means

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* Sir Dyer's Fleece, Book 1. Virgil, in his Georgics, lib. 3. l. 284, also tells us,
" Si tibi lanicium curae, fuge pabula lacta."

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of lime, or by a judicious system of watering. In Summer and Autumn no scarcity of food is to be apprehended. It must be acknowledged, at the same time, that, during spring and winter, a considerable degree of foresight and exertion is requisite to provide a sufficient quantity of wholesome food for a numerous flock; but the late improvements in husbandry furnish an active and intelligent farmer with ample means for that purpose.

Shelter from the inclemency of the seasons is, I am persuaded, an object entitled to the shepherd's peculiar attention, and without which fine wool cannot be expected in great abundance or perfection. The natural shelter of wood has been often recommended against too violent heat, and still more against cold and piercing winds. The severity of the weather, particularly when sheep are exposed to it both night and day, certainly affects the wool, makes it coarse, and fills it with hair. To obviate this inconvenience, the Herefordshire farmers, have long ranges of buildings with low ceilings, each three or four story high, with a slope at one end of each floor, reaching to the next, by which

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which the sheep ascend to the upper story. Having such houses built in hilly countries would be of great service in the improvement of wool; and, when properly used, would prevent the rot, so ruinous to the shepherd*. The Romans, as has been already observed, kept their finest sheep in houses, and even clothed them. The manner in which they were treated is thus described by Columella. "Of all the wool bearing kind, the Grecian or Tarentinian is the most tender and delicate. They can neither endure excessive heat nor cold. They are seldom fed without doors, but for the most part in the house, and are exceeding greedy of food. The fields in which they are fed must be free of all manner of bushes, sprigs, or briars, lest both their wool and their covering be pulled off them, and even at home they must be frequently uncovered, refreshed, and cooled †." Inquiries are making, on the part of this Society,

* See Marshall's Rural Economy of Gloucestershire, &c. vol. 2. p. 235. where there are many important observations on the utility of housing or coting sheep.

† Columella, book 7 chap. 5. from the English translation printed at London, anno 1745.

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ty, whether there are still any remnants of this breed, or any vestige of this mode of treatment in Sicily or Calabria. It would be desirable to know what is the result of such a system of management, if it still exists in other countries. The effects of housing the sheep in Herefordshire ought also to be ascertained. If by cloathing sheep* or keeping them in houses, fine wool could be obtained sufficient for the consumption of these kingdoms, would it not be better to employ the poor in the operations necessary for this purpose, than support them without exacting the least return of labour for their maintenance?

The effects of salt upon sheep is a point which merits particular attention, and has never yet been fully investigated. We know that it is given
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* To cloth the whole sheep would certainly be expensive; but I am told, that if the back were covered with a piece of coarse Osnaburg, the expence would not cost above 3 d. a piece, and if tarred it would last several years. In some parts of the country, tender or sickly lambs are thus treated, and it is found to answer well. The covering is fixed to the fleece, and cannot then be easily removed.

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in considerable quantities to the flocks in Spain; and we see that fine wool is produced in the Shetland Islands, the pasture of which being peculiarly exposed to the sea spray, is necessarily impregnated with a considerable quantity of saline particles. It is certain that salt contributes much to the preservation of the health of granivorous animals; and it is well known that the finest wool can only be produced by sheep in a state of perfect health. Salt may possibly supply the stimulus necessary to preserve their health, and to enable them to digest the great quantity of coarse fare, which they are often under the necessity of taking for want of better sustenance.

Another circumstance deserving notice is, that, if we propose to have fine wool in this country, it will be necessary to preserve our sheep much longer than we commonly now do; for, the wool grows finer in proportion to the age of the animal. It was formerly not unusual to keep healthy weathers to six, eight, nay ten years of age, for the sake of the fleece: But now they can hardly be met with
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even five years old. This is certainly one great cause of our wool degenerating*.

Many other points might be mentioned connected with the proper management of sheep. I shall however at present only advert to the practice, very prevalent in this country, of *smearing* or *salving*, as it is called, the sheep with a mixture of oil or butter, and tar, which is supposed to be absolutely necessary for the safety and preservation of the animal in the greater part of the hilly and northern districts of this kingdom.

The origin of this practice is unknown †, and the effects of it are still doubtful. There is reason,

* As one mode of improving wool, a tax has been suggested of 2 s. or 2 s. 6 d. on every lamb killed in the Island of Great Britain, before it was 15 or 16 months old. By some such regulation sheep might be preserved until their fleeces were more valuable than at present. It is observed of all furred animals, that the fur continues to improve until the animal arrives at perfection.

† Even in antient times, tar was considered as a remedy for diseased sheep; but its use as a preventative is probably a modern practice.

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son, however, to believe, that an alteration in the system of smearing may be attended with the most important consequences. It is now done about the commencement of winter, with a view of protecting the animal from the hardships of the approaching season, and of destroying the vermin with which it is infested. Smearing, however, ought rather to take place immediately after the sheep are shorn. This is an antient practice, recommended by Columella. It was accidentally tried in this country some years ago, and proved in the highest degree successful. Anointing the sheep immediately after they are shorn, must be attended with much less difficulty, trouble, and expence. The vermin with which sheep are infested must then be destroyed in the state of nits, and are not allowed three or four months to gain strength, which is the consequence of the present practice. It is affirmed by Celsus, that, if a proper ointment is thus used, the wool becomes softer and longer, and that no sheep will be troubled, for that year, with the common diseases to which they are liable. To have this system fairly tried, is, I hope, one of the first objects to which this Society will direct its attention; and this may be

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done by giving premiums to the shepherds, who, in different parts of the country, are the most assiduous and successful in carrying it into effect*.

Such are some of the means by which the wool of these kingdoms might be greatly improved. And, since fine wool is of essential consequence to the manufactures of this country, Why should we not endeavour to raise, within our own territories, what we require? Why should we suffer our supply of it to depend on the caprice of a foreign power, who might
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* The medicament recommended by Columella and Celsus, is the juice of thoroughly boiled lupins, the dregs of old wine, and the dregs of oil, an equal quantity of each to be mixed together. The sheep to be thoroughly soaked with this liquor after it is shorn; and, three days afterwards, to be washed with sea water, or with boiled rain water mixed with salt. But, it is believed that butter would answer fully as well as oil for encouraging the growth of the wool; and that a slight decoction of tobacco juice would destroy the vermin as well as any other liquor. If by these means a good fleece of wool was produced, there would be no occasion for any tar to shelter the animal from the inclemency of the season.

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resolve to injure himself *much*, in order to injure us *more*; and who, therefore, might be tempted to prohibit the exportation of wool entirely, or to load with exorbitant duties an article, without which a number of our most industrious subjects would at once be deprived of their usual means of employment and subsistence?

But, as the Society may wish to have some information respecting the value and amount of the fine wool imported into this country from Spain, I shall now proceed to give an authentic account of it for nineteen years, ending in 1789.

Spanish

	Pounds weight.
Spanish wool imported anno 1771	1,829,772
to 1772	1,536,685
1773	1,477,284
1774	2,133,496
1775	2,031,973
1776	2,062,628
1777	2,853,065
1778	489,869
1779	519,664
1780	323,618
1781	2,478,332
1782	991,510
1783	2,629,692
1784	1,602,674
1785	3,135,252
1786	1,554,637
1787	4,188,252
1788	4,173,584
1789	2,693,889
Total	38,705,876

The

The average of the whole importation is 2,037,151 pounds weight each year, which, at 3 s. per pound, amounts to L. 305,572 : 13 : 0. But, if we take only the average of the last ten years, it is 2,377,144, which, at 3 s. per pound, is equal to L. 356,571 : 12 : 0. As Spanish wool is imported in the grease, it loses considerable weight in scouring, so that the wool, in fact, when adapted to the purposes of manufacture, costs us from about 4 s. to 5 s. a pound. The value of the labour necessary for manufacturing that quantity of wool is estimated, by Mr Anstie, at L. 400,000 Sterling.

One important circumstance appears from the preceding account, that, though in time of peace, the importation of Spanish wool exceeds even four millions of pounds weight, yet, in time of war, it fell off to 3, 4, and 500,000. This tends to prove, what I am persuaded is the case, that the importation of Spanish wool is not essential, and that, by proper attention and encouragement, we might supply our own looms with that important material. Nothing, however, can be more discouraging to the grower than to have the exportation of his wool prohibited,

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bited, while foreign wools are admitted duty free. Perhaps a small duty upon foreign wool, to be laid out in encouraging the growth of fine wool at home, would be the best plan that could be adopted for the general interests of the country.

It may be proper to take notice of another circumstance. If the average importation for 19 years is 2,037,151 pounds weight, at the rate of three pounds to each fleece, it would require 679,050 sheep to produce it; and if one acre could maintain five of those sheep, it would require 135,810 acres to feed the number of fine wooled sheep adequate to the demands of this country.

One other calculation I shall beg leave to trouble you with. It is supposed that about 100,000 head of cattle are sent every year from Scotland to England; to keep up which supply, there must be at least 300,000 head, young and old, fed in Scotland. The same quantity of pasture that supports them would maintain 1,200,000 sheep, which would produce above double the quantity of wool that England im-
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ports from Spain, without diminishing the quantity of meat raised for the sustenance of the people of this Island, only converting it from beef to mutton. The cattle sent from Scotland may fetch about L. 3 per head, or L. 300,000 in all; whereas the fleeces of 1,200,000 fine wooled sheep and lambs would produce at least twice as much money, and we should have the carcase into the bargain.

I should be happy to be able to gratify the curiosity which this Society will naturally entertain respecting another point of still greater importance, to wit, What is the probable quantity of wool produced in Great Britain, the value of the raw material, and still more of the whole manufacture? But this cannot be given with accuracy. It is better, however, to have some information upon the subject, than to be totally in the dark.

The wool of England, in the reign of Edward III. is generally supposed not to have exceeded in quantity 150,000 facks, of 360 pound weight each, which is equal to 225,000 packs, of 240 pound, according to the packages of
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these days. In later times, computations have greatly varied. According to Davenant, there was in England alone, at the commencement of the present century, about 400,000 packs, worth L. 5 each; which, when manufactured, produced eight millions in value. Trowel, in his plan for preventing the clandestine running of wool, printed *anno* 1738, supposes 800,000 in England and Ireland, and about 925,000 packs in the three kingdoms*. Others, about the same time, computed the number of packs at 1,274,000. Mr Arthur Young calculates the number of sheep in England alone at nearly 29,000,000, and the value of the whole growth and labour of the wool of Great Britain and Ireland at L. 17,695,529; furnishing employment to about a million and a half of people. We shall suppose, however, that there are only 28,800,000 sheep in the whole Island of Great Britain, producing, at an average, 5 lb. weight

* A respectable member of this Association, (Mr Wansey of Salisbury), informs me, that, in 1740, an estimate of the growth of wool, in England, was given in to the Lords of the Treasury, when it was stated at 738,000 packs. This is probably the same with Trowel's.

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weight of wool each, or 144,000,000 pounds in all, equal to 600,000 packs, and worth at the rate of L. 8 per pack, L. 4,800,000. If the value of the raw material is quadrupled by the labour that is bestowed upon it, the growth and labour will amount to L. 19,200,000; to which, if there is added the value of the wool imported from Spain, and the labour employed in it, *it will make a total of about Twenty Millions.*

Is it then to be wondered at, that this manufacture should be considered as, in a special manner, entitled to the public attention? But, great as it is, I have no hesitation in saying, that I wish to see it still greater in itself, and more useful to the country. I shall, therefore, now proceed to trouble you with some observations, tending to point out the advantages which the public at large, and the woollen manufacture in particular, may expect to derive from an Association, whose object is to bring the natural staple of these kingdoms to the greatest perfection of which it is susceptible.

There are certainly no means by which the situation and circumstances of any country can

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be so easily and so rapidly improved, as by the union of a number of individuals for the attainment of particular objects. If government engages in any scheme of national improvement, the money allotted for the purpose, is in general improvidently expended; the experiments necessary to be made, are either carelessly tried, or wholly omitted; and when the assistance of the public is withdrawn, the scheme perishes at once. Single individuals are equally incapable of carrying such plans into effect. Few people can afford the expence which these projects require, and there are still fewer who have knowledge, judgment, perseverance, and health sufficient to bring them to perfection. Whereas a body of men, united for any particular object, can raise such sums of money as may be necessary for the purpose, without any injury to their private fortunes; they can mutually assist each other in procuring all the lights and information that is requisite for attaining the object in view; they can prosecute the scheme, without encroaching on the time which ought to be dedicated to their own personal concerns; they can persevere in any system which it is proper to pursue, much longer than would be in the
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power of any individual; they can procure the assistance of other respectable bodies of men to aid them in their undertaking; and can apply, if necessary, with a rational prospect of success, for the support of the public, and the protection of their sovereign. These are advantages which associations possess, for the acquisition of various objects of great public importance; but, above all, they are well calculated for bringing to perfection a production natural to this country, and for which in former times it was deservedly famous. From various circumstances already hinted at, this production has unfortunately degenerated. To clear up the doubts respecting that degeneracy, which some intelligent and patriotic individuals may entertain, and to trace the nature and causes of it, would of itself be an important object of inquiry.

Many peculiar advantages may also be derived from this institution. Through the medium of the friends and connections of the members, who would naturally become interested in the success of the measure, by publishing their proceedings, a general knowledge on the subject of wool, and a spirit of enterprise and exertion, would be circulated

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culated over the whole kingdom. By means of the useful books published by the Society, the mode of managing sheep to the utmost advantage, and the best practices, both foreign and domestic, would soon become generally known. Under the patronage of such a Society, skilful individuals might be established in different parts of the kingdom, where the practice of stapling is unknown, by whose directions, the wool we have, might be greatly improved in value, merely by sorting the fleece according to the various qualities of which it is possessed. There are many intelligent and enterprising farmers, who, were they appointed corresponding members of such a Society, might easily be prevailed on to try many useful experiments, and to make the result of them public; by means of which it might be proved, that fineness of wool was by no means incompatible with the other excellencies by which particular breeds of sheep are distinguished. The premiums distributed by the Society must have the happy effect of rousing a spirit of emulation and rivalry among those who may be benefited by them. Nor ought it to be omitted, that when such a Society has succeeded in one point, they

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they may gradually extend their views to others of perhaps equal public importance; and that, when once the benefits of industry and exertion are clearly exemplified by the success of any number of individuals in a particular line, it is a circumstance which has a very important influence on the views and on the conduct of the rest of the community.

On the whole, this is an enterprise which cannot be in any respect prejudicial; which can have no object in view but public good, and no possible consequence but public benefit; and which, if it is properly supported by patriotic individuals, and by respectable bodies of men, must prove the source of successful industry, and of infinite wealth to ourselves and to our posterity.

APPEN.

APPENDIX.

AS the reader will naturally be desirous of being made acquainted with the steps taken in consequence of the preceding Discourse, a copy of the proceedings of the Meeting, to which it was addressed, is annexed.

At a meeting of several Noblemen and Gentlemen, to consider the propriety of establishing a Society for the Improvement of BRITISH WOOL, held at Edinburgh on Monday the 31st of January 1791,

Sir John Sinclair of Ulbster, Bart. was called to the chair,—and opened the meeting with a speech of considerable length, pointing out the objects of the proposed institution, the means by which they were the most likely to be attained, and the material advantages that would result from it.

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The Earl of Hopeton next rose, and entered very warmly into the national importance of the objects in view. And, after several other Gentlemen had delivered their sentiments in favour of the proposed institution, the Meeting

RESOLVED,

I. That the establishment of a Society for the Improvement of British Wool, is one of the most likely means of promoting the commercial interests, and permanent prosperity, of these kingdoms.

II. That the Meeting here assembled, and those for whom they are empowered to act, together with such other persons, whether in Great Britain and Ireland, or the Colonies, as are willing to co-operate with them, will constitute a Society for that sole purpose; either to act separately, or in conjunction with other Societies of a similar nature, as may be thought most advisable.

III. That the important objects of the Institution be respectfully laid before his Majesty by the Chairman, in name of the Society, in full confidence

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confidence that a Sovereign, whose attention to the welfare and happiness of his subjects is so well known, will be graciously pleased to take this Society under his Royal protection.

IV. That application be made to his Royal Highness the Prince of Wales, that he will honour this Institution, by accepting the office of being Patron of the Society; and that the Chairman be also requested to make that application to his Royal Highness in their name.

V. That the affairs of the Society be conducted by a Board of Directors, consisting of a Chairman, Deputy Chairman, and Fourteen Directors, to be annually chosen on the last Monday of January, (this Anniversary), by the signed lists of a majority of the Members present at such meetings; any five of the said Directors to be a quorum; with power to elect a Chairman for the time, in absence of the Chairman, and Deputy Chairman; and that a Treasurer and Secretary shall be annually elected at the same time, and in the same manner.

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VI. That the said Board of Directors shall hold four stated meetings in each year, viz. on the last Monday of January, the last Monday of May, the last Monday of June, and the last Monday of November, with power of adjournment; and that there shall be also four General Meetings of the whole Society held on the same days.

VII. That, upon requisition made by three Directors to the Chairman, or Deputy Chairman, or, in absence of both, to the Secretary, Extraordinary Meetings of the Court of Directors shall be called; and that Extraordinary General Meetings of the Society shall be also called, on application as above, by any nine of the Members: Eight days previous notice of such Extraordinary Meetings of the Directors, and fourteen days previous notice of such Extraordinary General Meetings of the Society, being always given in the Edinburgh newspapers.

VIII. That the Directors, and other office-bearers, shall, for the ensuing year, consist of the following Noblemen and Gentlemen, viz.

Sir

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Sir John Sinclair, Bart. Chairman.
Sir Alexander Ramsay, Bart. Deputy Chairman.

D I R E C T O R S .

His Grace the Duke of Argyle.
Right Hon. the Earl of Dumfries.
Right Hon. the Earl of Hopeton.
Right Hon. Lord Sheffield.
Right Hon. James Montgomery, Lord Chief Baron.
Right Hon. the Lord Provost of Edinburgh.
Sir John Edward Swinburne, Bart.
Sir Joseph Banks, Bart. President of the Royal Society.
Sir James Foulis of Collintoun, Bart.
John Erskine, Esq; of Marr.
Robert Oliphant of Rossie, Esq;
Robert Belsches of Greenyards, Esq;
George Ramsay, Esq; younger of Barnton.
Gilbert Hamilton, Esq; of Glasgow.
Sir William Forbes, Bart. Treasurer.
James Horne, Writer to the Signet, Secretary.

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IX. That the subscription of each Member shall be One Guinea *per annum*, or Ten Guineas at admission; the Society being desirous of having as many persons as possible connected with it, and confiding in the farther support of patriotic individuals, and of public spirited bodies of men, in the prosecution of the great national objects they have in view.

X. That the Chairman, Deputy Chairman, and Directors, do, betwixt this and the last Monday of June next, draw up such Laws and Regulations as may appear proper for the future government of the Society, to be laid before the General Meeting to be then held; and that they be, in the mean time, empowered to take such steps as may seem proper to them for promoting the views and interests of the Society.

XI. That the thanks of the Meeting be given to Sir John Sinclair, for his patriotic assiduity in instituting this Society; and that he be requested to permit the able Speech he has this day delivered to be published, as tending to excite attention to the great objects in view, by diffusing

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a knowledge of their importance and practicability.

XII. That the thanks of the Meeting be also given to the Earl of Hopeton, for his warm and patriotic zeal in promoting the success of this establishment, and the information his Lordship has now communicated on that subject.

XIII. That these Resolutions be published in the London, Edinburgh, and other newspapers, for the information of all Persons who may be inclined to become Members of the Society.

Extracted from the Minutes of the Meeting
by

JAMES HORNE, Sec.

Subscriptions are received at Edinburgh, by
Messrs Mansfield, Ramsay, and Co.
Sir William Forbes and Co.
Mr Creech, Bookseller, Cross. And by
Mr Horne, the Secretary.

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At London, by

Messrs Coutts and Co. Strand.

Sir Robert Herries and Co. St James's Street.

Sir Herbert Mackworth and Co. No. 68. New
Bond Street.

Messrs Moffat and Co. No. 20. Lombard Street.

And by

Messrs Smith, Payne, and Smith, George Street,
Mansion House.

[Any observations on the preceding Paper, or
information respecting Sheep or Wool, may
be sent to Sir John Sinclair, Bart. M. P. the
Chairman; to Mr Cadell, Bookseller, Strand,
London; or to Mr Horne, the Secretary, at
Edinburgh.]

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