Uk soil types and the farming system environmental sciences essay

Environment, Ecology

To understand how of import the dirt is in finding the agriculture system, this study is based in the county of Shropshire, United Kingdom and will place the chief dirt types and the agriculture system and how it plays an of import function in Britishagribusiness.

It will besides place the patterns which contribute to being a sustainable system of production.

The country 's sustainability will besides be reported and how it compares to the remainder of the UK.

Soil types will besides be reviewed and the relationships between the dirt type and the agriculture patterns will be described.

Agribusiness in Shropshire is an of import function as it is the prevailing usage of land in the chosen country. The study will oppugn why Shropshire plays an of import portion in agribusiness in the UK, how it does this, and whether its sustainability is efficient in comparing to other countries in the UK.

2 County of survey

2. 1 location

Shropshire is located in the West Midlands of England and boundary lines Wales to the West. The county of Shropshire is one of England 's most rural counties and has an estimated population of 291, 800 in 2009 and an country of 319, 736 hectares. (Shropshire Council, 2010)

Shropshire

Figure 1: Location of Shropshire (Mole Be Gone, non dated)

2. 1 History of Shropshire 's Agribusiness

Since the eighteenth century, Shropshire has chiefly been an agricultural county. The first pattern of agribusiness was in Neotholic times and of all time since, the population had been preponderantly rural.

British agribusiness was promoted by consecutive authoritiess after the Second World War. After 1973, the United Kingdom became a member of the European Economic Community (EEC) , doing husbandmans supported and pushed to maximize their end products.

Quotas were introduced by the EEC which set bounds on milk production in1984, ensuing in 11 million liters less milk being sold in Shropshire in 1 twelvemonth.

Winter Wheat became a dependable and profitable harvest de to the high outputs of the new strain of wheat.

In 1988, the 'Set-a-Side ' Scheme was introduces to cut down cultivable harvest excesss. This gave husbandmans a fee of up to ? 200 per hectare if they took at least 20 % of their cultivable land into production. These fees were turn outing to be excessively low as husbandmans were non taking their land out of production.

In the mid 80 's, agricultural land value fell and husbandmans had increased force per unit area as environmental policies began such as harvest spraying holding tight ordinances as chemicals caused concern.

At present times, agribusiness in Shropshire Idaho flourishing and come oning greatly. (Cox et al, 1989)

2. 1. 1 Farming Facts-Agriculture in Shropshire

`` 2. 2 % of work force is straight

employed in agribusiness ''

Agribusiness supports 22. 5 % of the

county 's work force ''

`` In 2001, there was 5, 330 actively

farmed agricultural retentions ''

`` Average farm size in Shropshire is

54 hectares ''

`` It utilises 82 per cent of the county 's

land country ''

`` The portion of little farms has

increased while medium sized farms

have decreased ''

Beginning: Shropshire Farming Study, (2002)

Figure 2: The autumn in agricultural Employment. P. 7 (Shropshire Farming Study, 2002)

Figure 2 shows that the figure of agricultural employment has fallen from 14, 295 to 12, 205 doing a lessening of 2090. This could be due to there being better farming engineering so less agricultural workers are needed.

Figure 3: The Change in Farm size Structure. P. 6 (Shropshire Farming Study, 2002)

Figure 3 shows that the figure of little farms from 1981 to 2001 has rose 20 % and the figure of medium sized farms has decreased by 17 % .

Location Landscape, Geology and Landscape

Shropshire 's geology is really diverse with big sums of lead, coal and Fe. Figure 4 shows the different types of stone around Shropshire. The North of Shropshire has a more level land which is really fertile. This portion of Shropshire is more mostly populated. The North 's agriculture is chiefly cultivable.

The South of Shropshire is a more rural country with fewer colonies. Its landscape is full of hills, rivers and forests. Farming in this portion of Shropshire is chiefly pastoral. Shropshire 's clime is moderate and gets really

cold in the hilly countries when in thewinter season. (Wikipedia, 2010)

Figure 5 shows the clime norms.

Figure 4: Shropshire Geology (Wikipedia, 2000)

Figure 5: Shawbury Climate Averages (Met Office, 2007)

2. 2 Soil Type (Main)

In Shropshire, illustrations of all types of dirt can be found from sandy to loamy dirts. This is due to glaciation taking topographic point around the country.

Shropshire 's prevailing dirt type is flaxen dirts such as the underlying ruddy sandstone stone which is found in North Shropshire. This is the most widely distributed dirt type and is chocolate-brown in coloring material and to red in dirt deepness.

This type of dirt is formed from weather-beaten stones such as limestone, vitreous silica, granite, and shale. In Shropshire it is chiefly harsh sand. This can ensue in murphies holding a hapless skin coating impacting the agriculture system. It is besides prone to over-draining and summer desiccation, and in moisture weather it can hold jobs retaining wet and foods. (EAIS, 2010) This dirt is of course acidic and needs regular liming. It is besides low in potassium hydroxide and Mg. (Jefferson, 2010) Manganese lacks are incurring here. This can impact the agriculture system as it caused slow works growing so husbandmans will be less productive. Littorals are

prone to weave eroding, H2O eroding and leaching. Its harvest suitableness is chiefly for barley, murphies and malting.

Coarse sand has a atom size of 0. 2-2mm and has a really farinaceous texture. It can be similar to builder 's sand. The single atoms can be seen easy. (Jefferson, 2010b)

With flaxen dirts the malleability is low and is non cohesive doing low stableness. Due to seedbeds being loose, deep boring can happen doing unneeded works loss. Excessive cultivations under wet conditions can do dirt sums to prostration. This consequences in a compacted bed when dried out doing harvest growing difficult. Due to there being quite a batch of infinite between atoms, the sandy dirts can be really free run outing intending it does non keep H2O and indispensable foods good. As the dirt moves down the H2O table easy it can make a high H2O tabular array doing a groundwater drainage job due to the dirt being permeable. The flaxen dirts dry out really easy so a batch of irrigation is needed.

The alimentary position of sandy dirts is of course low particularly in potassium hydroxide. Due to the dirt being chiefly acidic it has a low PH.

The organic affair of sand dirts is of course low besides of approximately 1-2 % . The organic affair is of import to keep as iy aid adhere dirt atoms together to keep foods. It besides helps dirt to keep wet, which can be a job for sandy dirts.

The organic affair can assist supply birthrate to the dirt as a beginning of N assisting the agriculture system.

Dirts with better organic affairs and alimentary positions will bring forth a better harvest. (Jefferson, 2010c)

Farming Enterprises

`` Sustainable agribusiness can be defined as the production of alimentary and wholesome nutrient with well-being and wellness of future coevalss in head duerespectto environmental impact preservation of agricultural resources '' (Jefferson, 2010)

The current agricultural policy can specify sustainable agribusiness through its point of policy including:

`` Guaranting the go oning handiness to the consumer of equal supplies of, wholesome, varied and moderately priced nutrient, produced within conformity with by and large accepted environmental and societal criterions ''

`` Keeping a flexible and competitory industry which contributes to an economically feasible rural society ''

`` Ensuring effectual protection of theenvironmentand prudent usage of natural resources ''

`` Conserving and heightening the landscape, wildlife, cultural and archeological value of agricultural land ''

`` Respecting a high degree of animate being public assistance ''

Beginning: ECIFM (non dated)

A agriculture system is a system made up of inputs, procedures and end products.

It is the different types of agriculture and methods used in agribusiness such as cultivable or grassland farming which can include dairy agriculture or the raising of farm animal.

Due to the dirt type being sandy the harvests that are grown in the country are barley, murphies and malting. The 2001 nose count informations showed that 5 % of the national dairy herd are in Shropshire and that Shropshire grows 5 % of all murphies grown in England doing it a chief agriculture system for the country. (Shropshire Farming Study. P5. 2002)

Crop rotary motion is used to assist the sustainability of the agriculture. `` A well-arranged rotary motion enables the work of the farm to be good distributed over the twelvemonth, and provides steady employment for a whole-time staff. '' (White, 1937)

The advantages of harvest rotary motions:

aˆ? Provides care of good dirt construction and organic affair

aˆ? Crontrols certain dirt and straw residue borne plague and diseases

aˆ? Ensures the agriculture pattern is sustainable

aˆ? Gives the best profitable border

Beginning: Jefferson (2010)

Arable

Winter wheat

Shropshire grows root and combinational harvests with a high value giving. An illustration of this is Winter Wheat which is traditionally grown after a interruption harvest foremost. 2nd Winter Wheat is at hazard of trash borne dieseases. An illustration of a root disease found is Take-all. This is common in 2nd wheats as the fungus builds up in the roots and dirt. Compaction of harvests which can diminish the growing of root will increase wil increase the degrees of Take-All. This causes high hazard of output loss. (Jefferson, 2010)

`` Take-all is arguably the most of import disease of wheat in the UK, partially because it is non easy controlled chemically or by varietal opposition and relies on rotational schemes for control. '' (Cereal Disease Encyclopaedia, non dated)

By obtaining a good harvest rotary motion the disease can normally be treated and prevented. Having 50 % of more land in cereals with a twelvemonth interruption on occasion can diminish the jobs and may handle it. (Jefferson, 2010)

Oil Seed Rape

Oil Seed Rape is a valuable hard currency harvest and has helped to replace sugar Beta vulgaris in Shropshire which two old ages ago was dropped due to the mill shutting. Oil Seed Rape that has been grown intensively is under menace from club root. Club Root causes roots to swell and hence harvests will non turn successfully. To obtain sustainability Oil Seed Rape should non be grown more than on in four or five old ages. As the harvest has good competitory ability it therefore enables it 's agriculturists to utilize less weedkiller in the rotary motion.

An illustration of harvest rotary motion for sustainable production is Winter Oil Seed Rape, Winter Wheat, Winter Oats, Winter Beans, Winter Wheat and Winter Barley.

Potatos

Potatos are valuable in Shropshire and are grown mostly. They are nevertheless at hazard of dirt borne plagues such as Potato Cyst Nematode. This is the most of import plague of murphies in the UK. This can do weak workss with dull looking leaf with inclination to wilt. It besides causes little cysts attached to roots. (Potato Council, 2008)

A good harvest rotary motion is used to supply a sustainable harvest. An illustration of good pattern that is used is Potatoes, Winter Wheat, Winter Barley, Sugar Beet, Spring Wheat and Winter Barley. Some husbandmans use the bare minimal good practicing which is 1 in 4. E. g. Sugar Beet, Winter Wheat, Potatoes and Winter Wheat.

Grassland

In Shropshire, there are big sum of dairy agriculture and is good known for its good beginning of milk production as they have a batch of pastoral agriculture. This is why there are many dairy mills located around Shropshire. (Shropshire Farming Study. P5. 2002)

Dairy farming relies on high quality grass or other eatages such as corn to guarantee of the best quality milk.

An illustration of high quality grass is Perennial Rye Grass. This is the chief type of grass used. Farmer mix this with trefoil which fixes N significance they have to utilize less N in farming assisting the sustainability of the agriculture and assisting the environment. This is an illustration of renewing agriculture.

Within corn there are beginnings of energy which is utilised by organic manure therefore doing the farm animal direction of import besides to assist obtain good grass quality. (Jefferson, 2010)

To assist maintain the grassland sustainable, when the grass has dried up some husbandmans grow other harvests such as adding a wheat to the land which can

4. 0 Environmental Practices