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The Sheep Industry on San Juan Island

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Sheep have been an important part of the economy of San Juan Island since 1853. At that time, by order of Governor Douglas of Vancouver, the steamer, Beaver, landed 1300 sheep on Cattle Point. These animals were supplied by Dr. John McLoughlin of Hudson's Bay Company. It was hoped by the British that the establishment of a ranch would be an influence in the settlement of the U.S.-Canadian border. U.S. Customs requested duty payment on the sheep, and when met with refusal, seized 30 sheep. This incident may be considered as a direct antecedent of the famous Pig War. This singularly un-sanguine contest took place with the establishment of British and American military camps on the island, thus assuring the basis for a future tourist attraction. The sheep, meanwhile, became the basis of livestock industry. (1) Their population expanded rapidly until about 10 years after the start of the 20th Century, when the decline became noticeable.(2) (See Table A)

(Table A) Livestock in San Juan County

SHEEP	1889 - 6,377	1899 - 12, 871	1920 - 7,932
	1919 - 8,444	1909 - 9, 855	

(NOTE: These are county figures, not San Juan Island)
(Source: Ibid.- N.S. Hayner)

Water transport was the mainstay of pioneer activities on the West Coast. Under this condition, the islands were naturally very accessible and were utilized as settlements and provisioning places. Moreover, the open grasslands on the islands made them susceptible to development. Isolation may have been an advantage

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1. American Sheep trails, E. N. Wentworth Iowa State Coll. Press, Ames Iowa, 1948
2. N. S. Hayner, Ecological Succession in the S. J. Islands, Ames. Sociological Soc Vol 23, 1929

at that time, too. Predatory animals were unlikely to be present. (This was definitely a reason for establishing livestock on islands off the New England coast.) Agriculture, therefore, received a great impetus in the islands.

The land was particularly adaptable to livestock. Rainfall is somewhat less in the San Juans than in other areas of the West Coast Marine climate, and more sunshine is advanced to plant growth. Also, there is less leaching of the gray-brown podzolic-type soil even though this means that there is also less weathering to develop it into a mature soil. But an important point is that much of the climax vegetation was prarie grass, thus eliminating the labor of clearing the forest.

Since sheep have been so important and still are important in the economy of San Juan Island, a descriptive study of the industry is worthwhile for purposes of collation, clarification, comparison, and evaluation. It would be possible to assemble the necessary data in mathematical form and then analyse this statistically and mathematically. This has not been done, primarily because no previous work had been done on such a subject, and time limitations, required a preliminary survey type of paper which would define the existing situation in a generalized fashion. This thought is carried through by describing the sheep population, some of the technology involved in their maintenance, and briefly noting a few of the associated problems such as pasture, markets, etc.

Sampling was limited to 12 farms; this is approximately 1/3 of the total farms on the island which run sheep. These 12 were picked by arbitrary randomization in order to get a good geographic spread, contact those people who were reputed to have more insight into the industry, and to get an even stratification

in terms of size of operation on each farm. Considering the small universe involved, this approach to the sampling was justifiable.

Data was gathered by the device of interview questionaires. Answered preliminary or "lead" sheets covered about 2/3 of the rural farm owners under the guidance of 8 field course students who interviewed as they were making map overlays. The results of this sheet, which was the source of data for 5-6 separate projects, were disappointing. Questions were too lengthy, and were not pointed enough - partly due to lack of direction and preliminary knowledge of the project subjects. In the case of this sheep project, for example, all that was really necessary was to ask each farmer how many ewes he had in his flock, other than yearlings and market lambs. This would have given a clear answer, and then the follow-up detailed interview could have been made without puzzling over the different interpertations that each of the 8 students had given to the livestock questions.

It was also attempted on this lead sheet to obtain information on hay, grain, pasture, etc. This was even more unnecessary, for the above reason, and also because there are too many qualatative variables involved including rotation, temporary pasturage, etc. An interesting study would be the evaluation of land variables and systems of use on the island in relation to capabilities of supporting animal units; but this was beyond the scope of the present paper.

A detailed data sheet (attached) was used in interviewing on the 12 selected farms. It was designed to yield as complete a picture of the physical and technical aspects of sheep ranching as was possible in a normal interview period. It became obvious

immediately after the first interview, that the whole sheet could be better organized spatially and sequentially, in order to obtain chronological information and a more free-flowing interview. The content was fairly satisfactory, although some questions were ambiguous. Drawing up a new questionaire was not a consideration because of the small number of interviews involved.

Interview reception forced no new problems. Only one of the 12 refused cooperation (due to nothing else but eccentricity), but in his case the information was obtained from a relative on the farm. 3 out of the 12 answered in such a direct manner that the whole sheet was filled out in 15 minutes. In most cases, the technique consisted simply of firing questions at the interviewee, pausing for clarification or discussion every few points to re-establish rapport. In the few instances where this procedure was not followed, no data sheet was filled out during the interview because it was felt that the situation might be delicate enough to warrant complete attention to the conversation.

There are about 3000 sheep on San Juan Island. This figure has not varied greatly in the last 20 years according to the Census of Agriculture. The most outstanding characteristic of the industry in all its aspects as pertains to the island, is the diversity it has achieved. The easiest and perhaps the clearest way to present the collected data in its generalized state is to enumerate each item and comment on it. These items do not follow the order of the data sheet precisely, as an attempt was made to reorganize this sequence here as criticized earlier in the paper.

1./The breeds on the island are mainly grades of Suffolk, Romneys, Hampshires, and Oxfords with a sprinkling of Rambouillet, Columbias and Shropshires. In general, the white-faced breeds are larger and produce a better grade of wool, while the black faces are smaller and are bred more for lambs and mutton. Romney and Rambouillet are in the former group, while Suffolk is in the latter. The Columbia is an attempt to get both characteristics.

2./About ½ of those interviewed belong to the Portland Wool Grower's Association, but one of the farmers on the island has been buying up wool for a rival association and is able to offer 10c more per lb. (55¢) . This is a recent development; In 1953 he bought about 200 bags of wool locally, with 30 fleece in each bag and 7 lbs. to a fleece on the average. The shearing is done in Mid-May, mostly by a man from Yakima although there are several local men who do a little. Worming is usually done at the same time.

3./ There is diversity in breeding practices; some farmers keep their breeding ewes until the last possible lamb is obtained at the age of 9-10 years, but most prefer to sell them for mutton just past their prime at about 6 years, so they get a fair price.

4./ Great care is taken in selecting rams. Many are bought on the mainland, even at State College. The majority of these pure-bred rams are Suffolks which are then bred to grades of wool producing ewes.

5./ The ewes are generally replacements from the farmer's own flock, brought up from the yearling lamb crop after culling. They are generally 2 years of age at the first breeding, but several have tried breeding yearlings with some success, in terms of lamb survival.

6./ In the mild climate, it is possible to leave the animals on the

pasture most or all of the year. It is surprising that in a primarily market lamb industry, so many of the flocks receive as little care as they do. Some receive very little assistance at lambing time in February or March, little or no graining, no tagging, etc. Of course, such complete neglect is not the average, but one such farmer received only $9 per lamb at the beginning of August, 1954 even though the price was still around 18¢ a lb. for good lambs. This means that either the lamb weighed about 40 lbs. (unlikely) or it was a very poor lamb. A well-raised lamb should weigh about 80-90 lbs. by market time.

7./ But even the flocks on cultivable pasture generally are given more attention than those on the natural praries such as Cattle Point. Ewes are not usually brought into sheds even at lambing time. (Some have tried it and have had higher losses.) Barnyard organisms may be a greater hazard than the open range.

8./Few,if any, farmers keep breeding records, or wool clip records.

9./ Washington state has an average lamb crop of 110% (since there are some twins), but the average on the island seems to be less than 100%, and several are around 80%.

10./About ½ of those interviewed do not dip their sheep at all, while the other ½ may do it 2-3 times a year.

11./Worming is not universal either. One man feels that they lose too much weight over the years from this practice.

12./ There is little evidence to indicate anything unusual in the way of diseases.

13./ Theft is a problem, and the cause of much bad feeling against off-island rabbit hunters.

14./ Eagles have been known on occasions to carry off young lambs.

This was a report not only from the rocky west side area, but also in the middle of the San Juan Valley.

15./ Dogs sometimes destroy sheep - a fact mentioned by several of those farmers interviewed, including one who feels that he lost 30 sheep in one year from a neighbor's dogs until he shot 2 of them.

16./ Poison plants are sometimes hard on younger sheep, and larkspur is in particular, the worst offender on San Juan.

17./ Crows were mentioned once as being a menace to weak lambs.

18./ Sheep are bred in November, and the latter part of October. The gestation cycle is usually about 145 days. No one of the interviewees tags sheep before breeding for easier access in breeding. Neither is any method, or record, utilized to determine which ewes have been bred by a particular ram. Also, while textbooks consider that a good ram can service 50 ewes, the island ratio of rams to ewes is from 1:35 to 1:65. One or two farmers keep at least one ram in reserve.

19./ Usually a flock with several rams will have a variety of breeds. For example, one man has 3 Suffolks, 1 Romney, and 2 Columbias and hopes to aquire more Suffolks.

20./ The practice of grain feeding prior to breeding and during pregnancy has few adherents, although some is done right at lambing time and shortly thereafter. Oats mixed with a little barley is the principal home-grown feed, and yields vary from about 3/4 tons to an acre to 1½. Although a few of those interviewed did not grow any grain at all (one purchased 2 tons at $50 each for his flock of 70 ewes), only one of those who did grow it purchased any extra. One of the larger operators had 35 acres of barley with a 1 ton yield, but fed none to his sheep, because pastureage was very good.

One of the largest operators on the island had 18 acres of oats planted and fed 8 tons to his 300 ewes; another with a flock of 185 had 9 acres in grain with a 3/4 ton yield.

21./ Lambing time comes in February and March, which means market maturity after July 1 when prices have started on the downgrade in the Seattle market. (below 20¢ at present seasons)

22./ Certain breeds of sheep will breed out of season, thereby capturing the best market prices, but this requires a hot-house, feeder type of operation instead of range-pasture. One man on the island does approach a feeder set-up in that he buys weak lambs locally and fattens them, but only in the summer season.

23./Twinning is a desireable characteristic in breeding for lambs, and culling should take place annually with this in mind. One or two fair-sized operators have as high as ½ of their flock twinning, while others have almost none.

24./ Several of the farmers practice grafting of lambs who cannot for one reason or another suckle their mother ewe, to other milking ewes by scenting the orphans with the skin of the milking ewe's dead lamb, or some other means of scenting.

25./ Lambs for market are wethered (castrated) at 4 days to one month, and usually are docked at the same time. (The earlier this is done, the less painful and bloody, but some put it off too long.) Elastic bands have become almost the universal method of performing these necessary operations and have reduced much of the unpleasantness: Atrphy and disassociation occur within a few weeks. One or two of the old timers believed that docking permits parasites to enter the sheeps body too easily, and therefore will not cut the tail even though it means a loss in market prices. (The Boston market requires that tails

be left on.) Apparently it is more convenient and aesthetic to slaughter docked lambs, and indeed, a No-tail sheep breed has been developed in S. Dakota to aid this tradition. Similarly, castration is said to reduce male characteristics and thereby add more fat.

26./ Grain and hay fields are often used as temporary pasture after the crop is cut. This is an aid in rotating the animal's use of the different pastures. (Recommended textbook practice is to graze down to 2-3 inches in permanent pastures and then let grass recover.)

27./ There is a large variation in the conservation of pasture. Some sheep men are using theirs entirely too heavily, do little to conserve good moisture-retaining cover for the dry summer months, and do little in the way of plowing and reseeding pasture. On the other hand, many are putting in new alfalfa and clover.

28./ It is a peculiarity of the dry summers, that otherwise very marshy and peaty pastures, can be grazed at this season without affecting the hooves or health of the animals.

29./ Salt blocks are used almost exclusively rather than free-choice. Where farms border on the coast, sheep sometimes eat beach seaweed, and salt from salt-flat grass. Areas of unconsolidated lime shell fragments help to enrich these areas in the north part of the island.

30./ Marketing is difficult because of the transportation problem, aside from the aspects of the late lambing season, and competition with other areas. One island man holds the freighting franchise. Each of his trucks will hold about 40 lambs, necessitating many trips. The ferrying costs plus the 80 mile distance to Seattle markets, may or may not be a large factor; this point was not examined thoroughly. (Most of the market years ago was in Vancouver.)

31./ However, most of the farmers do not ship over this freight route to the Seattle free market; there is one buyer that comes around the

islands who has an uncontested monopoly. People feel that they may as well sell to him as pay the freight rates to Seattle - they will come out the same financially. The total island lamb production is not large enough to warrant attentions from mainland buyers and only occasionally does one show up. There is a strong tendency to maintain this status quo, and yet no one is particularly happy about it.

32./ None of the sheep men are full time farmers.

33./ There is definitely room for improvement in many aspects of raising sheep on San Juan Island.

The author fully realizes the limitations of this paper in that it is merely a reconnaissance survey. To do a complete paper would require more time than was available. The other alternative was to take a single aspect of the industry and analyse that, but this was considered impractical without a general background knowledge of sheep and pasture. This second alternative should have been selected perhaps in light of the fact that this survey, while valuable as a jumping-off place for more intensive study, will not be utilized by any other field course student since it will not be available to them. However, the background, approach and methods may be used at some future date in some other area than the San Juans. A more intense study would take into account: the physical basis for sheep raising, existing cultural and land use patterns, aspects of conservation and animal husbandry, and market-transportation factors - particularly in relation to the better (or worse) suitability of other areas to supplying these markets. Lastly, the relation of sheep to the total economy is important.

CCMorrison, U. of Washington, 8/18/5

SHEEP: San Juan Island

Owner_____ # acres _____ Location_____
% income from sheep _____ Other source income _____
Sheepmen's organizations belonged to _____

Total # ewes now:_____ # rams_____ # lambs _____ Other stock _____
Breeds grade ewes: Breeds of rams:
1. 3. 1. 3.
2. 4. 2. 4.

Length of service: Ewes _____ Rams _____ Breeding records kept? _____
Special attempts made at upbreeding: _____
_____
# of ewes replaced this year ____ Source of replacements _____
Source of breeding rams _____ # replaced this year _____
Tagging before breeding? Rams _____ Ewes _____
Rams painted to determine which ewes bred? _____ # ewes serviced/ram ____
Flushing prior to breeding?_____ Ration_____ #lbs _____
Avg lbs grain used a year on each ewe & offspring _____
Feeding practice in pregnancy: Ration _____ #lbs _____
Lambs lost at less than: 1 week _____ 6 weeks _____# lost before market ___
Avg. lambing date _____ # ewes twinning _____% ewes lambing _____
Age of ewes at lambing _____ # of lambs born out of season _____
# of losses this year due to: Abortion: _____ no milk _____ Bighead _____
pregnancy disease _____ Other _____
_____
_____
Method of castration preferred: Knife ___ Teeth ___ Clamp ___ Elastic ____
Method of docking preferred:Knife ___ Clamps ____ Hot iron ____ Elastic ____
Age of lambs at: docking _____ castration _____

Orphan lambs grafted to other ewes? ____ Method _____

Parasite control: Ticks _____ Lice _____Fluke _____
Tapeworm _____ Roundworm _____ Other _____

Specialized disease control: _____
_____
Regular dipping dates _____ Types of dip _____
losses due to: Dogs _____ Poison plants_____ Eagles _____Crows____
Foot rot _____ Ulcers _____ Sore Mouth _____Theft _____ Other ____

Average lamb marketing date _____ Average weight ____# marketed _____

Avg, shearing dates _____ Avg. weight fleece _____ Blood grade avg.____
Shearing records per animal kept? ____ Other shearing data: _____
_____

Source of stock water: _____
Acres of grain planted this year_____ Types _____ Yield _____
Amount other grains purchased _____ Types _____
Salt & other minerals: Block _____Free choice _____ Other _____

acres permanent pasture _____ # acres of cultivatable land _____
acres hay this year _____ Type _____ Yield _____ Quality _
Temporary pasture on hay? _____ Grain? _____
System of pasture rotation: _____
_____
_____