# ECONOMIC DEVELOPMENT OF THE YAKIMA 

INDIAN RESERVATION, 1880 -- 1889

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Throughout the history of the united States, thee Indian -white man relationship has been one in which the former civilization was considered inferior. The Indian was illeterate, lacked stable, codified government, and practiced a crude religion; in general the Indian was considered to live in a highly barbaric society. During the white mans' contact with h 1 m , the Indian was constantly encouraged and forced to drop his orude mannerisms and become"civilized," that is, Caucasianized. This phenomena was especially strong during the 19th century expansionistic movement in the United States, which brought more white men into contact with Indians more often. Usually the Indians controlled or claimed lands Noccufuel which white men strongly desired for various enterprises. Thus, with the pretext that they could become more olvilized elsewhere, these Indians were moved to reservations, defined areas of land which the Indians could not legally leave without permission. In this way white men occupied vast areas of former Indian lands without interference.

But what happenned to the Indians on the reservations? They lost vast areas of land which had formerly provided much of their subsistence. Fisiing and hunting grounds and regions rioh in wild fruits were no longer theirs. Unable to continue their seasonal migrations, the oritical problem of how to maintain the Indians on the reservations soon developed. Again, under the auspices of civilizing them, the Indians were
taught the white mans' agricultural practices to produce the food they needed. Other trades were to be developed as well, and in this way the Indian "civilization" was to be bettered. Thus, the economic development of the vailious tribes came to symbolize the general level of Indian society. Those Indians aotively participating in and benefitting from agricultural and "civilized" pursuites were considered to be socially above their barbaric brothers who still relled on nature to provide their food and clothing.

Many problems were inherent in this system of controling and improving the Indians' lot. For one thing, it is difficult for any society to undergo a complete change in its. mode of living. Too many Indians could not comprehend the white mans' methods. To many the time and energy necessary to successfully cultivate the various crops that the Indian agents encouraged them to grow was too long and tedious, and unnatural to keep their interest. There was often an insufficiency of supplies provided to ald the Indians in their attempts at agriculture. Some tribes were successful for periods of time, but many Indian families, after harvesting a good crop or accumulating a few head of stock would leave or quit working until they forced to begin again out of necessity. One of the most successful reservations was located in central Washington; this was the Yakama Indian Reservation. This reservation was relatively large, 800,000 acres, and contained 240,000 acres of arable land, although in no way can it be claimed that this reservation was typical, for it
is larger than most in Washington, and its' natural resources differ greatly from the others in the Pacific Northwest, but the Yakamas had many of the general problems of the "reservation system."

ECONOMIC DEVELOPMENT OF THE YAKIMA INDIAN RESERVATION, 1880 -- 1889

The Yakima (formerly Yakama) Indians signed the treaty which had as one of 1 ts parts the removal of that nation of Indians to a specific reservation in 1859. Located in central Washington, the Yakamas were particularly fortunate in the location and size of their reservation. Over 800,000 acres in all, the reservation provided more than 240,000 arable acres of land; ${ }^{1}$ thus over $30 \%$ of the land was cultivatable. According to the Pacific Northwest Atlas, the reservation's "Generalized Land Capability Classes" could be broken down as follows:

Central Northwest: Rank $3-$." "Fairly well suited for grazing or forestry."

Extreme Northwest: "Not suited for grazing or forestry."
Southwestern: Rank 2 -- "Moderately well suited for grazing or forestry."

Central: "Small portions of rank 2, good cultivatable land. Also small portions of rank 4, occassional cultivation."

Central and East: "Large amount of rank 3 -- moderately good cultivatable land."
Predominently rank 3 , not cultivatable, some rank $1 .{ }^{2}$ The atlas also describes the soil as:

West: H1gh mountain areas
M1d-West: H111s with dark acid so1ls and with dense forests

Central: Greenlands or desert shrubs, moderately dark, neutral to alkaline solls

East: Grassland or desert shrub, light alkaline so11s ${ }^{3}$ It should be noted that the forests found only in the Western portion of the reservation, consisted primarily of "old growth sawtimber of commercial value." 4 The types to be found there are True firs (spruce or true fir hemlock), Ponderosa Pine, and Larch (Douglas-Fir type). The first is of little use; the latter two are very valuable, and Ponderosa Pine is the predominent type in the region. 5

Mineral wealth is conspicuously missing in the region, which would seriously hamper any metal craft work which the reservation Indians might attempt. ${ }^{6}$

The range land in the reservation is also relatively poor. The east and north east have no good range land and the western portion is only good for sheep, some cattle, and big game. Only in the central region is there conifer grass which is good for cattle and sheep grazing. Even the central region, however, is better suited for wheat raising than 1t is for grazing. 7

Another deficiency of nature is the quantity of surface water, with only the Yakima, on the Northeast border, the K1tt1tas, and several small streams providing water for the 800,000 acre reservation. ${ }^{8}$ The lack of surface water is further complicated by a light average yearly rainfall and relatively high temperatures throughout the year (see Appendix I-A). Temperatures during the summer are very high, and modern farming in the Northeast is irrigated while the rest of the
region remains uncultivated probably due in large part to the lack of sufficient water. 9

The lack of water is reflected in the types of farming In the area. The Northeast, the only area with a large quantity of surface water, produces fruit and mixed fruit. The mid-Eastern region is used for livestock and special crops such ss sugar beets, onions, grapes, seed crops, etc. which must be irrigated. The Southeast is used basically for livestock grazing on a seasonal basis. ${ }^{10}$ (For a general breakdown of the modern agricultural tendencies of the region, see Appendix I-B.)

Thus, according to modern statistics, the area which became the Yakime. Indian Reservation contained very diversified lands. The region was well suited for agricultural pursuits such as wheat and general grain farming, and livestock could be well taken care of on the huge ranges. There was a climate suitable for berry fruit crops as well and these and other crops only needed irrigation to really flourish in the Valley. Finally, the abundance of available forests would potentially provide more than enough wood for the small band of Indians residing on the reservation.

This modern description of the region is substantiated by reports of the Indian agents. Typical of the agents reaction to the natural benefits of the reservation is wht Agent Milroy's comment: "Considering all its natural advantages, this reservation is probably the most valuable body of land of like slze in the territory."ll However, as
modern temperature trends show, agents noted a serious handicap, to successful crop production due to a lack of molsture. According to agent Thomas Priestly, unusually dry seasons would seriousiy handicap production and the Indians would weie be "compelled to resort to other means of abtaining food upon which to subsist during the winter."12

The agents also recognized the crop potentials of the region. In 1884 Milroy noted that when properly cultivated, "wheat, oats, barley and rye grow luxuriantly;" fruit crops of apples, pears, plums, cherries and small fruits were abundant, and wild grasses suitable for grazing were in great abundance. 13 Thus, the Yakima reservation had a certain number of problems, but it also had many advantages from whioh the Indians could easily find sustenance.

How did the Yakamas react to the white mans" "reservation system" and agricultural practices? Throughout the $1880^{\prime} \mathrm{s}$ the Indian population of the reservation remained relatively stable (see App. II). Although there $1 / s^{\text {ath }}$ a decreasing population tendency in the first years, this can be attributed more to innaccurate records (characteristic of most Indian censuses) than to migration or death. It is also probable that a similar ratio of pesident to non-resident Indians existed before the breakdown shown for 1886. Noting the "Number of families engaged in agriculture," which ifsile also relatively stable, it is probable that almost everyone I1sted as living on the reservation was a member of a family in some way engaged in agriculture. But the number of Indians
in this category represented only $1 / 2$ of the Yakama nation, for many were not willing to settle down and abandon their old customs and economy. It should be noted that in taking the average number of families in agriculture as 400 and the amount of arable land as 240,000 acres, each family would have 600 acrea, almost one square mile, with which to cultivate all the agricultural goods that the family required. However, surveying had not been properly completed so that such allotments could not be made, nor were the Indians willing or able to cultivate this much land. Milroy reports that less than $1 / 10$ of the arable land was belng cultivated. 14

The agents reaction to the Indians attitude towards agriculture afe often contradictory. Agent wilbur, who attacked the Yakamas for over twenty years, wrote in 1880 that they were acquisitive and eager to cultivate, 15 while four years later Milroy claimed that $1 / 3$ to $1 / 2$ still 1ived off the reservation, relying on salmon for sustenance. 16 In general, it seems the agents did not understand the Indians attitude towards agriculture, for they continued to rely on less than $1 / 2$ of the population (those living on) as exemplary for the entire population.

Many Indians, however, did participate in agrioultural pursuits. The extent of their cultivation was substantially less than that available to them though (see Appendix III). It's likely that an average of 9,000 acres were cultivated each year, for the acreage figures for 1886 through 1890 could not possibly bear the production figures given for the
same period (See Appendix IV). Furthermore, wheat production usually averaged 15 to 18 bushels per acre, a flgure too low to allow 800 ,acres int 1886 to produce 16,000 bushels of wheat and the other crops. ${ }^{17}$ It should be noted that each year the Indians openned new lands for cultivation. These figures may be purely a figment of the agent's 1magination, but, if not, the figures represent a constant though gradual advance in agriculture by the Indians.

As shown by Appendix IV, the Yakamas produced large quantities of grains, particularly wheat and oats. For the Indians who participated in agriculture, grain products must have made up a large portion of their diet. There are no figures to show what portion of the grain they sold, but it's probable that little was so used. The large quantities of oats, barley, rye, and hay were baslcally used to feed horses and livestock, the sale of which the Indians participated in greatily. ${ }^{18}$ For example, in 1883 11,000 bushels of oats and barley were reportedly produced (see Appendix IV) while the agent reported 8,000 bushels of oats and 3,000 bushels produced for cattle and horse feed. 19 Vegetables and corn crops were produced basically for subsistence as well. Corn was grown in small quantities because the Yakima Reservation was not considered to be a good corn growing region. 20 No figures are atailable to describe the extent of popularity of this agricultural pursuit, but probably fruit was grown when wild fruit was not available,
and then only enough for table use. The cultivation by the Yakamas was greatly enhanced by their supply of farm machinery. For example, in 1880 there were 100 plows and harnesses, four combined mowers and reapers, and four mowing machines. ${ }^{21}$ In 1885, 11ve new mowing machines were purchased, to bring the total number of machines to twenty-two. ${ }^{22}$

Thus the Yakamas who became permanent residents of the reservation enfoyed a highly productive agricultural economy. Throughout the 1880's the tribe was relatively self-sufficient (see Appendix V), except for 1886 when an absurd report was made with regards to their subsistence. Probably 1886 would approximate either 1885 or 1887 for the production figures show no drastic decline for 1886.

An important complement to the Yakamas' orop production was their involvement with livestock (see Appendix VI). Traditionally the horse was considered to be an important item of ownership for the Indian. The Yakamas seemed to hold this to be true, for the number of horses surpasses the total of all other livestock owned. As mentioned earlier, the horse was a constant source of income through sale of the animal, but apparently many were tindersized Indian ponies of little commercial value.

Cattle was the second most popular animal held by the Yakamas. They provided meat through the winter and milk year around. In 1888 the agency apparently began to disperse the government stock, so that in that year, 1,717 cattle were 1ssued to the Indians. 23 The purpose for this dispersal was
to increase the Indians self-reliance, for apparently they cared little for the stock while they could turn to the government stock.

The method of dispersal was probably exemplary of the general issue of government stock throughout the period. Heads of familles with children in school recelved a cow and a calf, and one helfer for each chlld in school. Every family with fenced land or able to care for them received a cow and calf. This didn't complete the 1ssue, so the farmers were given an additional cow and calf or one helfer, as were young men starting out in farming. 24

Other domestic animals had obvious uses in the Yakamas economy. Swine and sheep provided ilmited amounts of food, and sheep also provided some clothing. Domestic fowl would provide eggs and meat also. Yules were used as work animals, probably puliing plows, mowing machines, and wagons.

Wagoneering and transportation was an interesting part of the Yakames economy. As shown in Appendix VII large quantities of freight were handled but very few dollars were actually earned in this manner. This implies that most of the work was done for payment in kind, and possibly that much much was internal in nature; that is, not for anyone outside the reservation.

Transportation was only one of the non-agricultural enterprises taken up by the Yakamas. As Appendix VII shows, the abundant resources of trees in the western portion of the reservation was greatiy used. The great quantities of lumber
cut were probably used for Internal improvements, for there were no references to sales of lumber. These improvements could include fences, homes for Indians, farms and various buildings for the agency. 25 The agency was particularly active in the building industry;in 1885 thirteen new structures were constructed, ranging from a new agency office to three "convenient privies."26 The lumber industry came to an abrupt halt in late 1885, however, with the destruction of the sawmill by fire. ${ }^{27}$ The result of the fire was strongly felt, for it disrupted much needed repairs on agency buildings, limited the construction of new Indian homes and hurt Indian agricultural activity by 1imiting the supply of lumber for fences. 28

Equally important to the Indians' Industrial ilfe was the grist mall. Although badiy worn, the mill ground much of the Indians' harvest, though in summer upper Valley Indians took their wheat to Yakima to "citizen mills."29

Various shops rounded out the industrial portion of the Yakamas' economic ilfe. These included the carpenter, wagon, harness and shoe, and blacksmith shops. The basic employment of these shops was to repair reservation equipment, which apparently was very professional in quality. One important aspect of these shops was their employment practices. The harness and shoe shop was run entirely by Indians, a master and his apprentices. The carpenter shop hired two Indian apprentices and the blacksmith shop had Indian apprentices as well. 30 Thus the industrial aspect not only served to
provide needed services; many Indians gained experience and skills through work in these shops.

Other training was gained by Indian boys and girls from the agency's industrial schools. Here girls learned to sew, cook, wash, 1 ron, and do general house work. The boys were taught blacksmithing, wagon making, carpentering, harness, boot, and shoe making and general and specific farm work. 31 The children were also productive. The boys maintained a small farm while the girls produced household 1 tems such as aprons, curtains, dresses, towels, and many other items. 32 The yakama Indians, it seems, enjoyed a relatively strong economy. As shown, they were almost completely self-sufficient, and they had a well rounded economy more than capable of supporting those Indians living on the reservation. Many still took advantage of their fishing rights on the Columbia River, for they were used to fish as their basic sustenance. 33 They also resisted other changes such as surveyors and land titles, but many, according to egents, were moveing for these changes. 34

Other changes were evident as well. The Indians now hy therfflos had a distinct internal police force and judiciary, both of which were said to have done an effective job. 35 The Yakamas wereaalso being constantly encouraged by their agents-1n-charge. Whenever possible, the Yakama agents would do their best to proviae jobs. Although not of high responsibility, these jobs showed a willingness on the part of both parties to work together to better the Indians' existence. Thus the social
aspect of the reservation was relatively stable due to police and other internal improvements. This in turn meant stability forthe economy. Once the Indians were settled, they could work on new economic improvements. $<$

For example, to make full use of their land; the Yakamas had to begin irrigation work. The agents recognized and reported this need. 37 K In general the Yakamas were well off, but during the $1880^{\prime}$ s they showed 11 ttle improvement. In fact, a look at agriculture and IIvestock production figures in Appendices IV and VI shows a degree of decilne during the decade. However, it is probable that the decilne in production was a result of many things. Firstly, agricultural production is susceptible to climatic changes and could be affected by drought, frost, etc. Secondly, the figures for the first half of the decade may be inflated, though this may not be true. Finaliy, a slight reorientation in the Yakamas' economy towards industrial pursuits would cause a short run decline in agricultural production. Thus, though the Yakamas! economy was not dramatically growing, nnor might it be competing favorably with the white mans economy similarly located, (which at present is incalcuable), the Yakamas were enjoying a. strong reservation economy which may be described as developing $-\rho^{1 t}$ was becoming increasingly industrially
oriented.

## FOOTNOTES

lu. S., Department of the Interior, Report of the Commissioner of Indian Affairs, 1884-1885. (Washington, D.C.: Government Printing office, 1885), (s. 2287), p. 215. Hereafter refered to as CIA.

2Atlas of the Pacific Northwest, 3rd edition, 1962, Plate 22, p. 50, 51. Hereafter refered ta as Atlas.

3Atlas, Plate 20, p. 44, 45.
4Atlas, Plate 24, p. 58.
5Atlas, Plate 23, p. 54, 55.
6Atlas, Plate 60-63, p. 100-104.
7Atlas, Plate 25, p. 62, 63.
8Atlas, Plate 19, p. 40, 41.
9tlas, Plate 26, p. 68, 69.
10 Atlas, Plate 29, p. 75.
11 ${ }_{\text {GIA, }} 1883$, (s. 2191), p. 210.
${ }^{12} \underline{\mathrm{CIIA}}$, 1887, (s. 2542), p. 302.
13cIA, 1884, (s. 2287), p. 215.
${ }^{14}$ CIA, 1884 , (s. 2287), p. 217.
15cIA, 1880, (s. 1959), p. 289.
$16 \mathrm{CIA}, 1884,(\mathrm{s}. \mathrm{2287)}, \mathrm{p} 216.$.
17 CIA, 1880, (s. 1959), p. 290.
18CIA, 1889, (s. 2725), p. 291.
${ }^{19}$ CIA, 1883, (s. 2191), p. 214.
${ }^{20}$ CIA, 1883, (s. 2191), p. 214.
${ }^{21}$ CIA, 1880 , (S. 1959), p. 289.
${ }^{22}$ CIA, 1885, (s. 2379), p. 429.
${ }^{23}$ CIA, 1888, (S. 2637), p. 231.

## FOOTNOTES (cont.)

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\begin{aligned}
& \text { 24gIA, 1888, (s. 2637), p. } 231 . \\
& \text { 25GIA, 1886, (S. 2467), p. } 466 . \\
& \text { 26GIA, 1885, (8. 2379), p. } 423 . \\
& { }^{27} \text { gIA, 1886, (S. 2467), p. } 466 . \\
& \text { 28GIA, 1887, (S. 2542), p. } 304 . \\
& { }^{29} \mathrm{gIA}, 1882 \text {, (S. s100), p. } 229 . \\
& \text { 30 CIA, 1888, (s. 2637), p. } 233 . \\
& \text { 31 GIA, 1887, (s. 2542), p. 907-909. } \\
& \text { 32 gIA, 1889, (s. 2725), p. } 294 . \\
& \text { 33gIA, 1884, (s. 2287), p. } 219 . \\
& 34 \text { gIA, 1886, (s. 2467), p. } 465 . \\
& 35 \mathrm{cIA}, 1883 \text {, (s. 2191), p. 212-214. } \\
& 36 \text { gIA, 1882, (s. 2100), p. } 231 . \\
& 37 \text { CIA, 1884, (s. 2287), p. } 215 .
\end{aligned}
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# Appenaix I-A <br> Temperature and Precipitation <br> Averages <br> Yaklma Weather Station <br> 1,06I ft. elevation 

| Yeor | 梼的, | Feb. | Nax. | Apr. | Mey | Jun. | JuL. | tug. | Sept. | Oot. | Nov. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51.6 | 28.3 | 35.6 | 44.3 | 52.4 | 60.1 | 66. 2 | 73.5 | 71.4 | 63, 1 | 52.3 | 39.2 |
| 7.3 | 1.1 | . 8 | . 5 | . 4 | . 5 | -7 | .1 | . 2 | . 4 | . 5 | 1.0 |


| Crop | Heavy | Avorage | Heht | None |
| :---: | :---: | :---: | :---: | :---: |
| Penres | X | - - |  |  |
| Plums \& |  |  |  |  |
| Prunes |  | X |  |  |
| Chorrlee |  | X |  |  |
| Peaches | X |  |  |  |
| Borrian \& Small Yrutta |  |  |  | $\chi$ |
| Grajes | X |  |  |  |
| Filberts \& Walnuts |  |  |  | X |
| Vegetables For sale |  | X |  |  |
| Potrtoes |  |  | X |  |
| Sugar Boota |  | * |  |  |
| Hops |  | $X$ |  |  |
| Mint for oil |  | X |  |  |
| Cattle | X |  |  |  |
| Shoep | X |  |  |  |

## Appendix I-B (cont.)

| Crop | Heavy | Average | Light | None |
| :---: | :---: | :---: | :---: | :---: |
| Swine |  |  | x |  |
| M1Lk Cows |  |  | X |  |
| Chickens | z |  |  |  |
| Turkey | X |  |  |  |
| Wheet |  | X |  |  |
| Cats |  |  |  | (negligible) |
| Barloy |  | X |  |  |
| Field Com | X |  |  |  |
| Hay Crop |  | X |  |  |
| Gruse \& Cover Graps |  | X |  |  |
| Dry FYeld \& Soed Peos |  | - |  | x |
|  <br> Seed Beans |  |  |  | x |
| Apples | X |  |  |  |

Compiled from Atlas of the Pacific Northwest, Plates $30-56,76-90$.

Appendix II
General Statistice
Yakama Reservations

|  | Population | No. of families Engaged in Agri. | No. of Indiam Apprentices | No. of Indian housea Buill durfine year |
| :---: | :---: | :---: | :---: | :---: |
| 80-1 | 3,930 | 400 | 25 | 37 |
| 81-2 | 3,420 | 407 | 30. | 1 |
| 82-3 | 3,420 | 305 | 30 | 6 |
| $83-4$ | 3,120 | 356 | 15 | 6 |
| 84-5 | 3,120 | 400 | 8 | 0 |
| 85-6 | 1,272* | 308 | 8 | 50 |
| 86-7 | 1,290 | 308 | 10 | 6 |
| 87-8 | 1,74, | 356 | 10 | 5 |
| 88-9 | 1,765 | 350 | 0 | 0 |
| 89-90 | 1,875 | 400 | 0 | 0 |

Tre, 85-90 estimated 2,000 off resorvation.

Appendix III
Tand and cultivation

| $*$ | - |  |  | Sores broken <br> During yx. (Ind) |
| :---: | :---: | :---: | :---: | :---: |
|  | Acrea In Reserve | M1lable Acres | Acres cult. by Indians |  |
| 80-1 | 800,000 | 130,000 | 8,000 | 300 |
| $81-2$ | 800,000 | 130,000 | 8,150 | 150 |
| 82-3 | 800,000 | 130,000 | 8,300 | 200 |
| $83-4$ | 800,000 | 130,000 | 9,000 | 150 |
| $84-5$ | 890,000 | 130,000 | 10,000 | 250 |
| $85-6$ | ---4.-- | 250,000 | 11,800 | 200 |
| 86-7 | ---3-men- | 250,000 | 800 | 300 |
| $87-8$ | 800,000 | 240,800 | 1,760 | 200 |
| 88-9 | 800,000 | 240,800 | 2,400 | 300 |
| 89-90 | 800,000 | 240,000* | 2,700 | 400 |



Appendix IV
Yakama Reservation Crop Production, 1880-1889 IN BUSTHELS

|  | Wheat | Corn | Oota and Barloy | Vegotables | Tons of Hay Cut |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 80-1 | 35,000 | 150 | 3,200 | 5,150 | 1,000 |
| $81-2$ | 42,000 | 500 | 8,500 | 6,700 | 2,000 |
| 82-3 | 28,300 | 750 | 7,000 | 12,300 | 1,800 |
| 83-4 | 35,000 | 500 | 11,000 | 14,600 | 11* |
| 64-5 | 15,000 | 1,000 | 21,500 | 25,000 | 3,000 |
| 85-6 | 35,000 | 1,000 | 15,000 Oatz** | 14,250 | 2,950 |
| 85-7 | 16,000 | 500 | 8,000 osts*** | 9,211 | 3,400 |
| 87-8 | 20,000 | 500 | 10,000 Oate**** | 6,900 | 3,000 |
| $88-9$ | 20,000 | 600 | 20,600 | 6,525 | 3,500 |
| 89-90 | 10,000 | 100 | 5,500 | 2,270 | 4 |
| - (froa last report) <br> **(5000 Barley \& Fye) |  |  |  |  |  |
| **(3000 Barley \& Ryo) |  |  |  |  |  |
| ***(4000 Barley \& Rye) |  |  |  |  |  |

Apyendix $V$
Subolstonce of Takamas

Indian Labor in Clivilized Pureuits Fishing, Hunting, Etc, Iseue of Govt, Rations
80-1 76*

81-2 80
82-3 84***
$83-4 \quad 80$
84-5 90
85-6 90
86-7 -..
87-8 80
88-9 --
89-90 --

- $1 \%$ Plute \& Bannacke
** All Plute \& Bennacke
*** Except Pluten who recelve $40 \%$ govt. aid.
--
--
10
--
--
50 (estimated)

Appendix VI
Livestock Owned By Yakomas

|  | Horses | Nules | Cattle | Swine | Sheep | Domestic Fowl |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $80-1$ | 17,000 | 100 | 5,000 | 200 | 150 | -- |
| $81-2$ | 8,500 | 60 | 2,000 | 150 | 100 | - |
| $82-3$ | 9,000 | 60 | 2,500 | 250 | 150 | 1,000 |
| $83-4$ | 8,000 | 50 | 3,000 | 50 | 1,001 | 800 |
| $84-5$ | 8,000 | 50 | 3,000 | 50 | 300 | 2,400 |
| $85-6$ | 9,000 | 50 | 4,000 | 50 | 300 | 3,000 |
| $86-7$ | 9,000 | 20 | 4,500 | 500 | 1,000 | 100 |
| $87-8$ | 10,000 | 25 | 3,500 | 400 | 800 | 1,000 |
| $88-9$ | 10,020 |  | 5,000 | 250 | 400 | 1,000 |
| $89-90$ | 10,020 |  | 150 | 250 | 1,000 |  |

Some Industrial production

- Of Yakowas


Appendix II through Append4x VII compiled from the Report of the Comisaioner of Indion Affatre, 1880-1889.

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