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The Indians and the Agriculture of Crow Creek Indian Reservation

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THE INDIANS AND
THE AGRICULTURE OF CROW CREEK RESERVATION, C
S. DAK.

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1919.

THE INDIANS AND
THE AGRICULTURE OF CROW CREEK
INDIAN RESERVATION
S. DAK.

By Thos. J. Jackson,
Farmer.

Location.

The Crow Creek Indian Reservation is located in South Dakota, bordering the east side of the Missouri River, about forty miles below Pierre, the Capital. In fact, a part of Hughes County lies in the Big Bend District of the Reservation, and the south end of Hyde County and the west end of Buffalo County make up the rest of it - in all 313,304.23 acres or 489.5 square miles - about 13.5 townships. Parallel 44° North Latitude cuts the southern part of the Reservation, while meridian 99° West Longitude is just east of it. The nearest rail road point is Chamberlain on the Chicago, Milwaukee and St. Paul R.R., which is about twenty five miles down the river, same being about one hundred and eighty miles north west of Sioux City.

Historical Sketch.

The Crow Creek Reservation, in common with the one hundred and twenty five Superintendencies of the Indian Service, is governed by Federal Authorities, being at this time under Superintendent W. F. Haygood, who has a force of ^{thirty six} ~~twenty four~~ employees, ~~not counting the Indian Police - in all about thirty,~~ one half of whom are white people, the others being Indians belonging to this and other tribes, all drawing salaries, ranging from \$240 to \$1800 per annum, from the Government.

In the early history of the Reservation, U.S. Army Officers had charge of the affairs, and now it is most interesting to read those old reports which have a personal touch instead of page after page of figures as now-a-days.

As agriculture and people cannot be separated with good advantage to either, we shall consider the people first, beginning with quotations from Captain Dougherty's report in 1879:

"The Agency was originally a military post, stockaded and flanked by bastions, and was turned over by the War Department to the Department of the Interior in 1871. The Reservation comprises in extent about 625,000 acres, all on the left bank of the river. Medicine Knoll Creek on the west, and American Creek on the south, mark the extreme limits. Crow Creek is the only considerable stream that divides the tract from east to west, and enters the Missouri 18 miles above the southern boundary. The valley of this stream is very fertile and contains a good supply of hardwood. There is a fringe of wood along the Missouri on the bottom lands, but the valuable timber has nearly all been cut off."

The Tribe

"The number of Lower Yanktonais Sioux belonging to this agency is about 900. On the fifth of July last 834 people drew supplies here; 24 were absent at the Sun Dance at Rosebud, making in all 858 persons accounted for; about 50 belonging to Drifting Goos's band, which was brought in from James river last fall and is still unsettled, were absent without leave at Sisseton and Devil's Lake. One hundred and sixty-nine families of this tribe separated from the main body about fifteen years ago, and in 1865 came to the river and settled at Grand River Agency (Now Standing Rock) and have not rejoined since."

"The tribe maintains that it has always been friendly with the Government under a treaty made in 1825 with General Atkinson and Major O'Fallon. The duplicate of this instrument is still kept in the tribe and is in a good state of preservation. A treaty was subsequently made with the tribe at old Fort Sully in October, 1865, at which time this reservation was occupied. I cannot say that military supervision is quite unnecessary, though these people have ceased to regard the troops in the vicinity otherwise than as a security to their advantage."

It will be remembered by students of Indian History that about the time U.S. Grant was President there arose a discussion as to what should be done with the Indians; a considerable number of the white people wishing to put them under military rule, for the Indians were a force to be reckoned with. Below is a quotation from the Seventh Annual Report Board of Indian Commissioners - 1875:

"It should be remembered that the Indians once owned this broad continent from the Atlantic to the Pacific Ocean, and that our ancestors and ourselves have acknowledged their original ownership, and have purchased and acquired by treaty and by force all the lands we now possess. On the discovery of this continent it is estimated that it was occupied by about three millions of Indians. Now there are less than two hundred and eighty thousand remaining within the

limits of the United States. We have removed them by treaties and otherwise before the tide of white population . . . Now the conscience of the very large majority of our fellow-citizens insist that we shall be both just and generous with them, as they are rapidly dwindling away under ~~many many~~ the adverse influences to which they are greatly exposed by vicious and greedy white men, with whom they are surrounded. The only hope of saving this remnant of a noble race lies in their education, civilization and Christianization."

"In addition to this, it is worthy of consideration that military rule is everywhere, and in the nature of the case, must be arbitrary. Under its supremacy, force will be brought to bear upon the Indians; this will beget resistance and war; and war will, of course, though white men are slain, destroy the Indian". Page 14-15.

To be both "just and generous" is the sentiment prevailing which has caused this great Christian heart of the United States to beat in sympathy with the Red Man. We destroyed his hunting grounds so we had to feed him. This brings up the question of paternalism for which the United States has been so severely criticised; critics claiming that the lack of effort/on the part of the Indians is directly due to this method of ~~treatment~~ ^{at self support} dealing with them. I've heard the remark: "What shall we all become when that fatherly wing is extended over the rest of us?"

of

Quoting from the Report/Major Anderson, 1887, we note that

farming early received the attention of the management for Indians:

"The farming operations of the Indians for the past year have on the whole been successful. Notwithstanding the severe drought for several years past, discouraging alike the whites and the Indians, they went to work in earnest again, and very materially increased their acreage under cultivation on their farms. Heavy snows during the winter, and favorable rains in Spring and Summer, have supplied sufficient moisture to produce quite a good yield of grain and vegetables. Many potato patches were, however, destroyed by bugs. The sunflower . . . is becoming a great pest. . . Stock raising is becoming quite a feature with these Indians, and I encourage the idea, always."

"During the Spring and early Summer 54 brood mares and 30 yoke of cattle (One half for Crow Creek and one half for Lower Brule) were furnished for issue. The good result of placing the oxen is already seen by the amount of sod that has been turned"

"The birth-rate and death-rate have kept about even pace for the past twelve months. There are 292 males over 18 and 379 females over 14 and 432 children making a total population of 1103. The consumption, from which most of them die, seems traceable in some

respects from their change from the skin and cloth tent or "tipi" to houses"

Improvement

"The improvements made by the Government since my last report have been of a very substantial nature, consisting of 17 comfortable frame houses (dwellings) for Indians on the Crow Creek Reservation who have taken up lands in severalty and gone to farming on same; one grain warehouse for both Indian and Agency use; one warehouse for supplies . . . one steam grist mill now in process of erection, which is destined to play a conspicuous part in the advancement of these people; 9 miles of wire fence across the mouth of that portion of the reservation known as "Big Bend" thus inclosing a pasture of probably 75,000 acres. In addition to all this the Indians themselves have erected about twelve log houses by themselves but quite a number have been assisted with shingle roofs and floors."

Crimes and Offenses

"This Agency has been particularly free from crimes. The guard house was brought into requisition to punish a man for adultery with another man's wife and once to punish a woman for stabbing a man from jealousy. But there has been no stealing nor whiskey drinking come to my knowledge."

Some of the earlier Indian Agents had the view of a prophet and some of their reports prove today that it is something to be a diagnost. Back as far as 1884 John G. Casmann, U.S. Indian Agent, in connection with his report, gives a little character sketch, which helps to an understanding of our problem.

In his characteristic way he says: "There are but 46 half breeds on the reservation . . . Six squaw men . . . One school - av. attend. for year 30.33 - with a population of 489 males and 609 females".

Farming

"It is no longer necessary to argue the benefits of farming . . . The great difficulty with the Indian is, he seems unable to form habits of regular and persistent labor. He will work well for a time - plow, plant and sow the seed - but the long patient care of the crop, requiring months of hard work - in this he often fails. His old migratory habits, too, are hard to overcome and are great hinderances to his success as a farmer. At the very time his fields require the greatest attention, perhaps, some demon of unrest takes possession of him and he must go - go to see a dying friend or relative perfectly well at the very time; perhaps to get a pony or dig some (wild) turnips - any excuse to get away from home and have a little change. This spirit of unrest is very damaging to their farming interests and will continue until the home and farm interests shall be so great as to compel them to remain at home. As long as the Indians are without domestic animals - cattle, hogs, sheep and domestic fowls - they will feel free to stay away for a week or two and think it no loss, if they can only get a worthless pony, though in their absence their fields have been destroyed by cattle and horses

or their crops choked to death with weeds. These are some of the hinderances to contend with in trying to induce Indians to become farmers. They are serious and hard to overcome and yet, year by year we see a little progress. Individual cases exist here and there that are examples of what can be accomplished by regular and persistent labor."

About the time of this report there grew up a desire on the part of the Indians to receive their allotments. They got their lands in severalty and houses on them and the stock, too, yet what do you think of this story, witnessed by the writer? ^{Fall of 1915} TP The Government got an oil pull engine to break up land for the Indians here and in the Spring of 1915 a crew of men was hired to go about and break up 10 acre strips for the various Indians. Crops were good but threshing was delayed in the Fall, owing to rains, poor equipment etc. A crew of white men went about, as before, threshing for the Indians but owing to a mistake, one Indian did not get the threshers at the time he expected, so he had to be served when the rig came back through that neighborhood.

This was sport for the Indian neighbors. They guyed him until he wished wild wishes, no doubt. They told him the reason the machine did not thresh for him was that they were afraid the weeds were too big and would break the machine so the rest of the people would not get their crops threshed. The machine crew got "wind" of the matter, so on returning to the neighborhood in question, I drove over to this party to notify him that the machine would thrash for him today and for him to get his neighbors to help haul in the bundles. I found him at home but at a white heat, almost ready to explode. "No," he said, "NO, I am not going to do a thing . . . You can thrash that or you can go on past again . . . I'm not going near the machine" I insisted that possibly his neighbors would do the work, as he had helped them before, if they knew about when to appear with wagons and teams, but it was of no use . . . I argued that he would lose

money if he did not get his grain threshed. "Of course I'll lose money and lots of it but you fellows" I explained that he should be broad minded enough to overlook unavoidable mistakes, that our intentions were good and now we were to do his work if we could get the bundles to the machine. There was no reason, as I could see, why he ^{showed he} was willing to suffer such loss as it meant to him to have the machine pass him by - I was amused, too, at his attitude and vehement expressions, for he could use English fluently and it flowed some that day. My whole purpose was to save him his years labor, so I asked what it was that caused him to disregard his property thus. "Well," he said, "I killed my chickens for the hands before, now I have no more for them". It occurred to me that these Indian neighbors were vying with one another as to the dinners they offered other neighbors when they came to help thresh, it being the custom to change work. Plead as I might, this man was determined - He had delivered his ultimatum, for I found that, in the event the machine stopped to thresh his oats, another Indian would look after the job, so I took the trouble to notify enough men who owed this party work to come, and we threshed out 373 bu. of oats, sacked it and left it piled up there in his field for him, while he "sulked in his tent"

That the Indians are a proud race needs no argument. Their total disregard for ownership of property is refreshing in contrast with our commercialism in which every Yankee is branded all over with dollar marks. The little story makes us realize that there are other things in the world besides ownership of property, or that which gives evidence of that sort of thing. I for one am glad that Indian character is so resisting for it means something when the Indian himself comes into his own - or in other words, "finds himself".

Passing over a number of years, I quote from 1894 Reports of Commissioner of Indian Affairs, at which time Fred Treon was U.S. Indian agent for Crow Creek Reservation. The physician's report is also getting interesting and I quote from that of Dr. T.M. Bridges, who was Agency Physician at that time.

Major Treon says in part: "The Indians have certainly worked hard on their allotments this year, their principal occupation being farming, stock-raising, and freighting. . . . But seldom has any country experienced a more general drought than has prevailed in this section for the past six months, with frequent hot winds which have devastated crops to such an extent as to discourage men of more determination and energy than the average Indian possesses."

Judges

"The judges of the courts of Indian offenses have executed well their duties. Their decisions have, as a rule, been satisfactory. They are a great help to an agent, relieving him of many small annoyances."

Education

"Very few children have been out of school, and none should be who are physically able to attend. The effects of the school on this reservation are almost marvelous. It is not an uncommon thing to find school boys now out haying. . . . Some are grown and married and show decided advantage over those who have not attended school. . . . As schools grow in size, however, they become more unwieldy. . . . In my opinion smaller schools do the most thorough work."

Irrigation

"The subject of irrigating this reservation becomes of more importance each year. The droughts growing more severe each year have made irrigation a necessity. The best . . . way this can be afforded is by means of artesian wells, and at least two of these should be put down."

Rations

"Nothing could be more demoralizing than the system of issuing rations to Indians; and while the time of issuing has been extended to every two weeks at this agency, instead of every week, yet I realize that entirely too much time is consumed in traveling to and from the Agency for their supplies, besides a "prop" is afforded the Indians to lean upon. They will never become self supporting so long as they know they can get their rations from the Government It is too bad to see able-bodied men coming every issue day and drawing rations instead of earning their own support."

Dancing

"When I took charge of this Agency over a year ago, I found the people were holding a dance every week, on Monday nights, and, as they came for their rations on Friday, but little time was left for them to attend to their stock and farms. I ordered these dances to be held not oftener than twice a month, and on Friday evenings. . . . I have required them to do away with exciting speeches of bravery; and the custom of throwing away property in the dance has been stopped."

Issue of Stock and Agricultural
Implements.

"From April 25, 1894 to June 5, under Sioux Treaty of 1889, the following property was issued to the Crow Creek Indians:

Milch cows with calves	972
Breeding cows	686
Bulls	30
Oxen	28
Plows	486
Harrows	486
Wagons	486
Axes handled	486
Forks	486
Ox yokes with chains	28
Mares (50% have colts).	944
Sets double harness	472

Per Capita Payment

"The \$10 per capita payment interest on Sioux fund paid in February last did much toward helping the Indians, and I am pleased to note that many of them made judicious investments with the money."

Religion

"There are three religious denominations on the reservation: The Protestant Episcopal Church, with three buildings, one located at Grace Mission School, one 7 miles north west from this point, and one at the Agency under the direction of Rev. H. Burt and four native assistants. The Roman Catholic Church has a chapel in their school at Stephen under the excellent management of Rev. Father Pius Boehm. The Presbyterians have one church building 14 miles south east from the Agency under the charge of a Native clergyman, Rev. Daniel Renville."

Physician Report

Quoting from Dr. Bridges, he says in part: "Twenty two cases of tuberculosis died during the year with a death toll of forty nine". He recommends against sending children away to large schools, and says that "An important and totally unlearned lesson is ventilation"

Table

1887'1888'1889'1890'1891'1892'1893' Total '1894

	1887	1888	1889	1890	1891	1892	1893	Total	'1894
Births -	44	45	40	31	33	58	43	294	49
Deaths -	31	48	32	73	35	42	53	314	49

Population for the year 1894 is given at 1,054 with 90 mixed bloods.

This was a big year for the Sioux, the Lower Yanktonais receiving 1,716 head of cattle, 1,416 head of horses and 2,930 pieces of farm equipment, besides their regular annuity payment of \$10 per capita, which in ordinary families amounted to \$40 or \$60. The question naturally arises, what has become of this generous issue of property?

What has 21 years of possession brought to the tribe?

We now leap over some eight years and quote from Major Chamberland's report to The Commissioner of Indian Affairs.

September 1, 1902.

Health, Dancing and Painting

"These Indians are very much afflicted with consumption and kindred diseases. During the past year the birth have been in excess of the deaths by about ten in number, the result being, I believe, from less exposure brought about by extending the issue of rations from twice per month to once a month, which was adopted just prior to the winter months; also from the fact that there was no vacation granted at the schools during the winter months, the children all being required to remain at the school instead of going out upon the reservation to visit their parents, living in tepees, and becoming exposed to severe weather, which would have no doubt caused many deaths among them had they been allowed to have done so. Heretofore these Indians have been decreasing each year.

"When I assumed charge of this Agency it was customary for these Indians to hold dances every two weeks, traveling, some of them, 40 miles or more to attend, and at these dances would give away to visiting Indians horses, wagons, shawls etc. From June 10, 1901 to June 30, 1902 there were held on this reservation by Indians four dances only, and very little property given away at each time. . . These Indians scarcely ever paint, except when dancing; consequently they have saved their paint this year.

Agriculture

"As has been stated in previous reports this reservation is not adapted to agriculture; however, this year has been an exceptional one, having had very much more rainfall than usual. We are going to produce a considerable amount of corn and potatoes. The late frost of June 20 did a great amount of damage, especially to early planted corn and garden vegetables.

New Policy

"A large majority of these Indians are taking to the new policy very kindly, feeling, I think, much more independent by earning their own support. On June 1, 1902, I cut off from the ration roll all of those who were under 50 years of age, and being able bodied, amounting to 150 heads of families, or a total of about 500 with their families. Nearly all of those went to work under the new policy, building and repairing roads, fences, and doing such other work as could be furnished them by the Government in making improvements upon this reservation.

"There are some who oppose the new policy, claiming that they are being paid for their labor with their own money. This feeling and statement originates and comes from the more educated ones - those who have returned from Carlisle and Hampton institutes - graduates.

Leases

"There have been and will be made as soon as the clerks find time to complete them, leases covering about 20,000 acres of land for grazing purposes, the money in payment of said leases having been deposited with me and now in my hands, which will be paid to the lessors according to instructions received from your office upon the approval of said leases. . . . None of said lands have been leased for less than 10¢ per acre.

Hay Crop

"There was a fair crop of hay last year on this reservation, but nothing compared with the present crop. There were cut and put up by the Indians over 2,000 tons of hay. . . . Some was sold to whites

Offenses

"There have been three convictions in U.S. Court this year and x in Indian court.

Churches

A. Mattingly reporting for Father Pius Bouehm of Roman Catholic faith says in part: "There are about 200 baptised Indians of the Catholic faith on the Crow Creek Reservation, of whom about 150 are communicants. . . Contributions from various sources to the amount of \$5,262.53 have been expended for the education of the Indian children. In furtherance of missionary effort we have expended \$400."

Rev. Burt reporting for Protestant Episcopal Church says in part: We have on this reservation 5 churches and 3 mission residences. There are working under me four native helpers. The number of baptised Indians connected with our mission is 400; communicants 145; contributions of the people during the past year for church and other purposes, \$441.25; marriages 6.

Passing over another period of ten years, which was characterized by this "new policy" idea, we come upon the beginning of the Hon. Sells's administration. It has been said by high authority that the Indian Work has never before experienced energetic activity such as from its fountain-head source/Commissioner Sells has brought to, especially along the line of farming and stock raising.

Indian Work has become nationalized to such an extent that particular localities are behind or ahead as they measure up with the great averages set forth by these statistical reports we have now. June 30, 1913, the Indian population of the United States, exclusive of Alaska, is given at 330,639, and South Dakota at 20,555 or over 6% of the whole, being exceeded by only three other states, viz. Arizona, New Mexico, and Oklahoma with her 117,274 - over 35% of all.

Physician's Report of Death Curves,

Crow Creek Reservation - 1902 - '15

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	15
Deaths	54	40	31	30	26	48	51	39	47	39	41	44	29	33
Deaths	42	48	32	57	15	53	61	44	37	54	46	49	40	35

From the time that these reports of the regular physicians came reasonably accurate (which, of course, was not possible at first) we have divided them up into eight year periods to ascertain, if possible, the ratio of decrease, with following results:

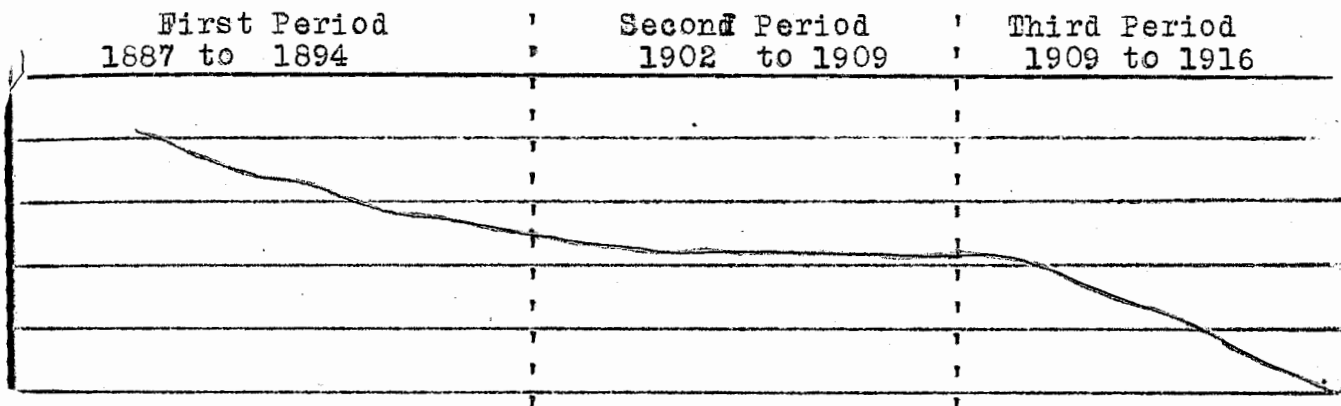
Deaths exceed by	First Period	Second Period	Third Period (6 yrs. Only)
	- 20	-	- 23

The regular annual census gives the following:

	1884	1894	1904	1915
Population	1098	1054	1006	963
Decrease in 10 yrs.	44	48	43	

This report shows an average decrease per year of 4.5, which is a close check on the physician's report which shows 4.6 for the last period, however a sort of geometric ratio is revealed by the birth and death report, which, if reliable, is alarming.

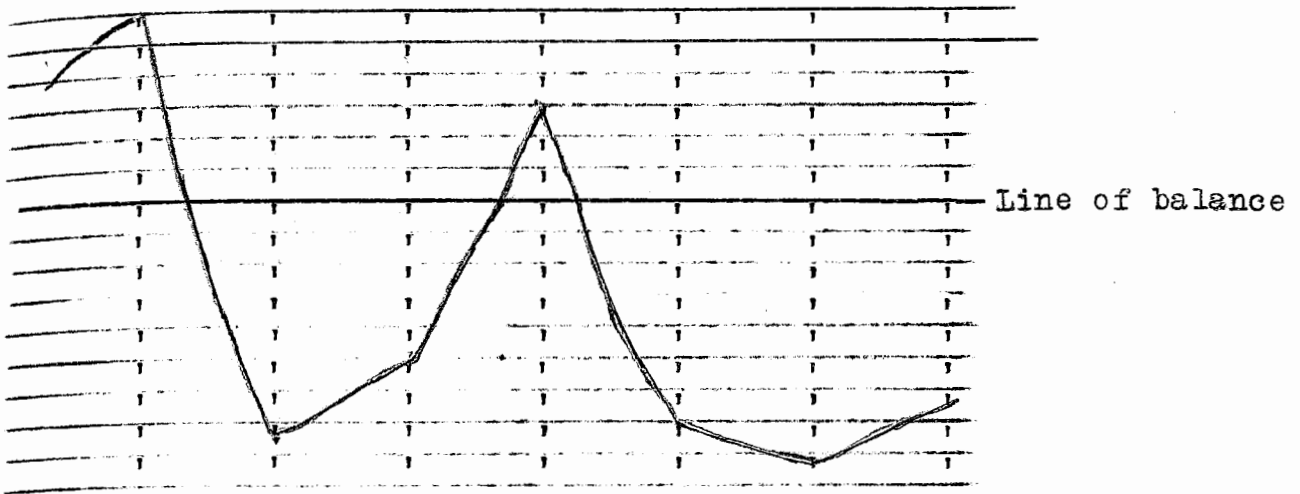
Applying biometry and constructing curves, we have a graphic illustration of something near the truth relative to the decrease in the population of this band of Sioux Indians.



With the heavy top line representing equality, i.e. the construction curve were birth and death records equal, and each space below, one average ^{excess} death for the given period, then the death curve takes the line of direction marked, assuming that some time back of the first period the death curve crossed the line representing equality, or balance in the birth and death record.

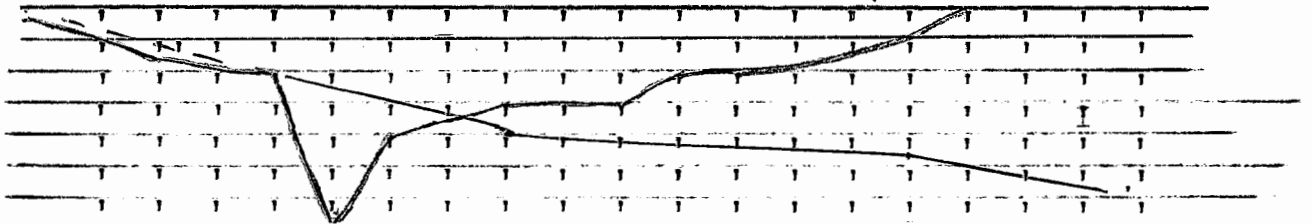
By dividing the same birth and death record into periods of three years each, and running the construction curve on averages, we get the following:

1st ' 2nd ' 3rd ' 4th ' 5th ' 6th ' 7th '
 period'Period'Period'Period'Period'Period'Period'



The records of 1894 contain Dr.Bridge's statement: "A totally unlearned lesson is that of ventilation." From the reports the tight house building curve may be constructed, though some of it is based on estimation as reports are not complete. It shows as

follows: ' First Period' Second Period ' Third Period
 1880'82'84'86'88'90'92'94'96'98'00'02'04'06'08'10'12'14'16'



This curve represents in all about 225 houses, or a house for practically each head of a family, as each line counts five tight houses. Now if we allow the same spaces to count five ^{excess} deaths each, or placing the first curve over this one, the red line shows the relation, assuming that back of the 80's there was little to worry about. The direction ^{of the death line} is downward after tight houses are brought into use, with an alarming down pitch through the last six years.

#13

Should we become alarmed about facts? If a man is to die, should he get scared about it? We know that the Indians are a determined, self respecting race for they have proven it to us over and over again. They repeatedly disdained the white people, refusing to mingle with them, preferring instead to yield territory and go west, west; nor did they fail to repel invasion by force of arms to the last ditch as any other brave people would do - But now tribal power is a thing of the past (from the military point of view) the old time chief and the medicine man have gone, and each descendant stands a free man, practically alone among men of all races to battle for existence with nature, whose laws are unmistakable - She says, "the fittest shall survive." But science is turning a new light upon the scene. Disease once regarded as an evil omen among men is gradually being understood by those who give their time, their lives that others might live - the doctors, the scientists.

We dread consumption. We make tables after tables of statistics to show what man has to fight to live. I turn to ^{a recent} ~~the last~~ Report of the Commissioner of Indian Affairs-1914, Page 120-21 to find Crow Creek Indians - Vital statistics, and read: Population 963, deaths 44, 14 under three years of age, 12 due to tuberculosis, 800 Indians examined for disease, 53 tubercular, 65 suspected of it, 140 trachoma, 250 suspected of it, etc. Of those examined 6.74% are tubercular, while for the United States as a whole, 67,895 cases were examined and 8,245 were found tubercular, or 12.14%. According to that these Indians are considerably better off than the rest of the Indians, but we are not to measure ourselves by some one else for each one has a problem of his own to solve. The great fact with refernce to tuberculosis is that it is an indoor disease.

#14

Cattle, chickens, people, in fact animals that have to spend much of their time indoors, are liable to attacks of the tubercular germ. Then what is the common sense method of living down tuberculosis? A ten year old child would say, and be logical in its reasoning, too, "Live out side, if tuberculosis is an indoor disease." Yes, that will kill out the last trace of the dangerous little parasite if persisted in long enough, for it will develop such ~~a~~ hardihood that body powers of resistance become multiplied many times.

The question of hardihood in both animals and plants is an important one as desirable qualities are lost by the time nature gets hardihood developed in her organic structure, e.g. One of the old time Texas cows could raise a calf out on the range and not half try, but let one of the pure bred holstein cows try such a stunt, or a pure bred ^{mare} Shire right from England. Why, the big awkward, dumpy colts can't keep from getting down on its back in some ditch some place, or it gets the distemper or something else until the owner wonders why pure bred stuff requires such great care. Man has learned that he can select and breed for certain unit characters with success but it also appears certain that hardihood is sacrificed in the process, e.g. Dr. Hopkins' corn breeding proves that certain limitations are prescribed - the higher he got the protein content the less became the yield. To live in tight houses requires adequate knowledge, so rather than throw ourselves upon nature to develop hardihood, we look more to sanitation.

The Psychic Law - Indian Character
"As a man thinketh, so he is" was observed ages ago, so we are

now giving much of our time to get to thinking right. Science proper disregards psychic phenomena for the reason that information of reliable sort is so extremely difficult to get a line on.

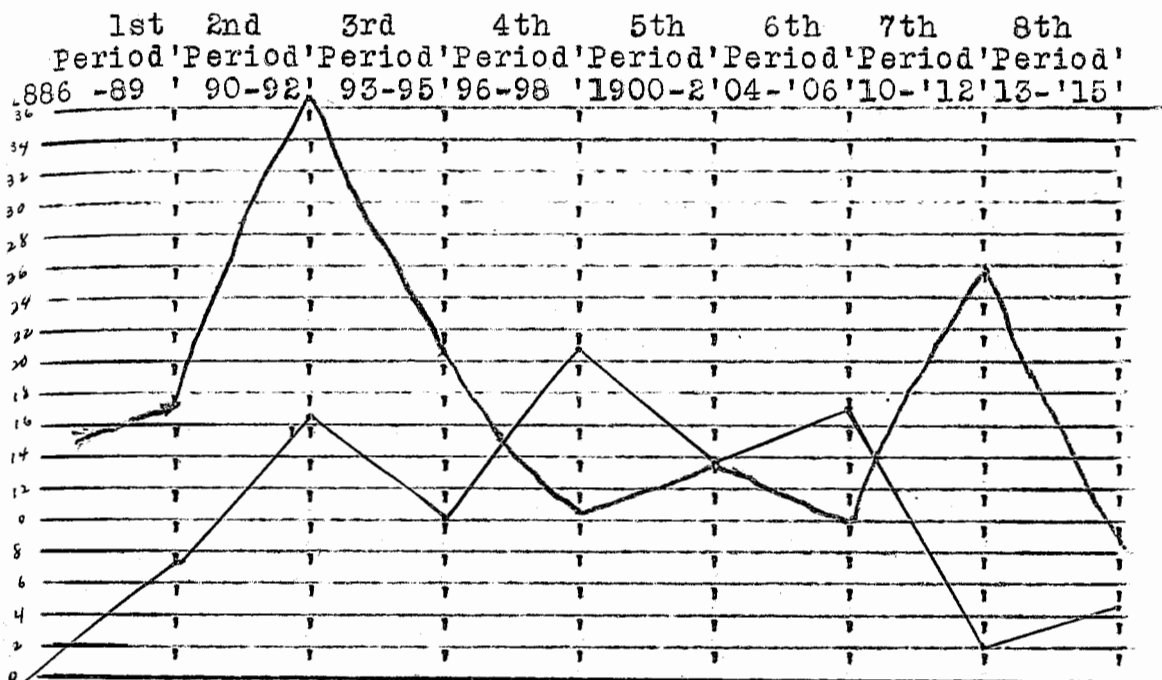
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Since the Indian is so very susceptible to that which tends toward mysticism, it seems proper to discuss The Psychic Law of Breeding (though scientists do not recognize such a thing) lest we fail to give an adequate understanding of our problem in its peculiar setting. I think it safe to say that the psychic realm furnishes facts which we must classify. If present day scientists will not consider the soul of man, beyond a mere brain cell activity, then the world, to progress further, must produce scientists who will.

The real fact with reference to our problem is that the Indian has not yet entered the agricultural field of activity at all. He has been driven and batted into it from the outside but time has proven him most resistant to this forced condition, therefore ours does become a psychic problem, and one of first moment; the one we must bring to the front before we can hope to handle Indians so as to develop the inner man.

A Hard old scientist is a sticker for the truth. He will undergo the fire and water ordeal to explode the pet theory of some other scientist; yet if he can not do it, and if his colleagues also fail, they all begin to build around the new discovery as truth. The religionist says: "Oh, I just feel the truth", but he is answered by the scientists - "Away with such petty, emotional child being for it is unworthy of men who seek the truth." So we have the agnostics - men who do not figure The Great Spirit in their calculations. They claim that psychic phenomena can not be explained within their scheme, therefore does not exist, only as we call brain cell activity psychic phenomena. Well, you old hard devils! Because you have not done work in this field, I am at a loss to go deeper to aid the Indians, who are sleeping geniuses, but science can not tell me what to do.

I suppose I shall be called pseudo-scientific because I present the following curves, which show the work of the foremost church on the reservation, ^{first} ~~largest~~ here and the strongest, and the red line of crime, or rather misdemeanors, committed by these Indians, then what a large percentage of the high producers in the agricultural line are communicants.



Each space above represents two misdemeanors, also two confirmed church members, both averaged through the periods. It is quite noticeable that, as the records became more reliable, the red line of crime goes up as the church line tends downward. With a restricted community and primitive people and such a showing, how are we sensibly to eliminate the guiding hand of Providence when the best that mankind enjoys on earth today came up through the subconscious into the conscious mind, then was realized in flesh and blood in the person of Christ? Man was born to progress, was he? Yes, but that is accomplished by reason of his ideals, the faintest thing in active work often changing the course of an

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entire life, as with Abraham who also bound subsequent generations in his belief, each virgin looking, expecting, hoping, praying to be the mother of the Messiah, which, in the course of forty two generations, resulted in the dawn of the Christian Era. Can the hard old scientist sneer at that when the whole depends directly upon psychic ^{selective} the/law of ~~maximize~~ breeding? Then can we develop another Christ? Yes, if the onward march of progress feels the need of a deliverer as the Jews felt it, and there is something like circumcision to hold to selective breeding for a period long enough to roll up accumulative force in the cells. Friends, it is the Great Spirit who shapes the destinies of men? Are you ashamed to acknowledge it? I am not and it is right thinking, right living, martyrdom in the last analysis, that ~~is~~ ^{constitutes} the eternal force making for good in this world. This shaping of destiny takes ^{place} ~~shape~~ only in accordance with natural law, otherwise God would be guilty of lying to man. Scientists, are you ashamed to trace out and state psychic laws in certain, definite terms to guide your fellow man? You have succeeded so admirably in the physical world, but don't, don't say that all or the march of human progress is destined to leave you in the rear. Methinks I see the downfall of Germany because she represents that feeling of self-sufficient force in the powers of men. Right thinking makes this old world glide along so nicely, but if we take the Jewish(money) standard, how the heavy grind crushes the poor unfortunates beneath, yet our economic system forces us to rate the Indians. The encouraging note that bears repeating is that as agriculturalists, our Indians may maintain respectability among mankind by being producers of wealth, and not parasites on production; then the church ~~lightens~~ makes

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lighter the heavy burden of supporting the parasites, which our economic system forces upon producers. Here is the proof, ^{least} or something at

The 1915 crop report in the aggregate was 30,832 Bu. of grain and 2,665 Tons of hay. 90% of the grain was raised by 30 men out of the 127 reported in, and over 93% of the high producers are church members of good standing, whereas the non-members amount to 11.82% of all those reported in. One of the latter was once a member, also a high producer this year. Omitting his name from the non-member list and the rest of them produced but a little over 2% of the grain raised. With him they produced 3.32% of it, whereas they should have produced 11.82%. Here is a sort of negative credit of 8.5% to that intangible something that lightens burden. Mr. Scientist, is there not some ascertainable unit of measure of what I am trying to get at so this psychic force may be standardized? I bring you a problem.

By pitting Indian resistance against the force of Government for his betterment, new light is thrown upon Indian character. The Sioux is a stoic; he is resistant and cunning and proud to the gray point, i.e. making black white in his own defense if it will go. Many of us are born with a sense, so like the Indian, of the unjustness we are forced to look upon; yet, unlike him, we call ourselves a part of what we see. We are forced to the conclusion that, if the established order is not to our liking, we must "get in the game" to better it; so we try, we suffer, and in extreme cases, we become martyrs to a cause we regard as good. We gain that knowing forbearance which defines limits for us and we sit in judgment of our fellow man - race dissolves into individuals. Can you imagine a proud, tense person, quick to see yet forever exempting himself from blame, who rarely regards individuals but always thinks of a race so recently a foe that lingering resentment colors the purest motives? That is the average Indian of the reservation.

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You observe that I have given considerable time and space, with ample footlight illumination, to get an adequate setting for the Agriculture of Crow Creek Indian Reservation. Whether I have succeeded or not, the reader must judge, however I know that I am much alone in some of the views I hold, and rather than lose force and power in the end, I take chances on being criticised for digression - now the

Present Population.

Consulting the Report of The Commissioner of Indian Affairs for 1915, I find the U.S. Indians number 333,010, South Dakota has 21,082, and Crow Creek Reservation 955 with 457 males, 498 females, Minors 367, adults 588 - Full bloods 702, one half or more - 210, with 43 less than half blood. Since 1884 the mixed bloods have increased from 4.1% to 26.5% of the Indian population. John G. Gasman, U.S. Indian Agent at that early date said: "I have but 6 squaw men on the reservation"- It appears that they must have been prolific, else the pretty Indian maids have indulged in "Natural Selection" more than their proud race would be willing to admit.

Conditions.

At the present time there are 96 fee simple patents issued to members of this tribe of Indians as against 40 given in the last, 1915, Report. Since the last official report went in to Washington, the activity in this branch of the work has jumped up over 100%, which, if it continues to the end of the fiscal year at same rate, will reach 200% by June.

These fee simple patents in the Indian Service speak competency for those receiving them, so it appears that we are getting rid of our wards pretty fast just at this time. Following is an accurate

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statement of the actual condition of affairs in three counties, viz. Brule, Buffalo and Hughes of the reservation: 72 fee simple patents were reported to the officials of the above named counties; 28 were returned as not recorded, and 44 recorded (actually 47 since some were subdivided) 29 of which were sold, 11 mortgaged and 7 retained by original owners. The 24 from Hyde County, not reported in, may or may not change the following percentages for the reservation, which show 90.9% of fee simple titles recorded as either sold or mortgaged, or less than 10% of those receiving patents in fee retaining their property in lands. The 28 not recorded were received in late December/ or early January, 1916, therefore had not sufficient time to be transferred or mortgaged and results recorded, though such business moves right along. Of the 44 cases above mentioned the lands sold amount to 5020 acres, while that mortgaged is ^{1,680} ~~6,700~~ acres; or 6,700 acres have slipped, or are slipping away from the Indians at the rate mentioned before; 3,120 acres of ^{these fee simple titles} ~~which~~ have gone to one man, a ^{pseudo-} post trader on the reservation, which represent but a fractional part of his present holdings in reservation lands.

It may be wise to cut the Indians loose but the above figures make a poor showing if we are to ^{benefit} through our Indian citizenship by reason of their being owners of the lands they work, ^{central idea and} the bulwork of our most stable forms of government. No form of government can be stable with an overwhelming floating population to be ruled by the parasites ^{who} ~~while they~~ suck the new blood of production.

It is encouraging that so large a part of the population are regarded as non-competents, when we regard the economic side in view of what the future would bring them if cut loose now. Though there are 150 of these Indians regarded as entirely self supporting

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and 225 reported as able bodied, 165 receive rations to the extent of \$5,384, about 2% of which was partially returned in labor. As the women and children are ~~all~~ land owners, it will be some time yet before they are all dispossessed, even under the quick, swift movements we observe now and it is hoped that the spoilers will be cut short in time to save our Indian citizenship in its strongest, and most beneficial ~~form~~ state.

Fifty Years of Supervision.

G. Stanley Hall says that we are moving too fast. That if the Indians were not as resistant as they are we would have had them despoiled long ago. He ~~says~~ ^{that} we have ~~tried~~ to do in a few years as much as should have been done in six hundred years. Taking this view of it, the Indian is a phenomenal being. It is most evident that he has not been "Yankeeized" very fast or there would now be millionaires among them considering the excellent start in stock and lands given them by the government about the time our cattle kings and sheep barons were beginning business along side the western reservations. To say the least we have failed officially to get an adequate understanding of Indian character - we have missed. Can we blame the Indian? I have to say not very much for he has strong blood coursing through his veins. The Lower Yanktonais are not exceptions and it certainly is up to the ruling race to present essentials to the understanding of those receiving instruction.

Forecast

What will fifty years hence bring to this reservation and its occupants? Who will own the lands then and what will be the condition of the rural homes?

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I see a cloud "the size of man's hand" on the distant horizon, which is destined, I believe, to spread over a money mad people, as the yankees are growing to be, and purge them. The thing rising to power is ruled by the great heart of the farming people. Our cities have yielded corruption while our farms have retained the righ, pure blood of a stalwart, honest people. They have felt too free to even yield themselves to organization for their own betterment but this freedom has at last been drained away and the proud old farmer, having grown wealthy off the virgin soils of our free states, begin to realize what has befallen them during their years of prosperity. It is now they begin to look like Indians to me, and surely there is war to be waged but not against the Red Man, on the plains of the frontier
Oh no! These two elements/are soon to be welded into one common force to resist the encroachments of money-mad monsters in what we see is upon us. In this coming struggle I hail with pride the stout resistance of Indian character. Let the Indian know in common with ^{his} ~~their~~ white brother, the farmer on and about his own ~~home~~ reservation ~~home~~, that they have a common foe in the money grabbers and the war whoop will echo again, but this time in the defense of his common fireside, and beloved country. ^{The United States} The Indians are the last to yield up control while there is a fighting chance. Brothers, it is time to turn and face our common foe, the centralizing power of wealth, lest we all be made tenants and slaves in the end. I am not afraid to lean on the support of our Indians, if only they can understand, for it is now we need them fighting shoulder to shoulder with their white brothers in defense of common heritage - freedom. I predict for this people a hearty participation in the struggle which is coming to us on a high gallop.

Climate, Industry, Soils, Crops

Passing from discussions of the first limb of agriculture, the people, we now take up climate, industry, soils, crops etc.

The climate of the Dakotas is rigorous and these parts are no exception. Our altitude is not so high, about 1,380 ft. at Crow Creek, rising to heights of 1700 and 1800 feet as we go away from the river, but we are exposed to the cold winds which sweep over the prairies from the north west mostly, while the mercury drops down to 20, 30, 40 degrees below zero. Killing frosts is June and September cut the growing seasons short. From 90 to 100 or 120 days at most is the time in which spring sown crops must mature.

The Weather Bureau has the following remarks on Eastern South Dakota: "All that portion of the State lying east of the 100th meridian may be considered only with relation to its principal valleys as it is practically all arable and fertile prairie land suitable to successful agricultural pursuits, fairly well provided with living streams, and having an average elevation of about 1500 ft. . . The average annual temperature is about 44.5 degrees . . . July is the warmest month in point of mean temperature and January is the coldest. Steady winter weather does not as a rule set in until far in November. . . The highest temperature recorded is 114 degrees and the lowest 46 degrees below zero."

"It would seem that on account of the more thorough cultivation of the soil and the steady extension of the area being put under cultivation, the condition known as "hot winds" are not so injurious as formerly . . . the cultivated land readily absorbs the rain fall and melting snow and conserves it for vegetation to draw upon in case of need."

"The average annual precipitation is about 22.3 inches, about 83% of which is received from March 1st, to September 30th. The greatest monthly amounts may be expected in May, June and July. There have been winters when the snow fall was heavy and the accumulated depth on the ground reached decided proportions, but generally the winter precipitation is comparatively light. During the summer months the rains, which are frequently copious and in places very heavy, are usually of short duration and closely followed by clear weather. They are also more local in character than the precipitation of spring or autumn, and are sometimes accompanied by hail and severe lightning. . . . Snowstorms with high wind and low temperature commonly known as "blizzards" are liable to occur but ^{are} ~~is~~ much less frequent visitors than is generally supposed by non-residents. The mean A.M. relative humidity ranges from 80 to 82 per cent. P.M. humidity averages 20% less. Southerly winds predominate from May to September, and northwesterly during the remaining months."

Precipitation

To be more specific the mean precipitation over a period of 12 years at Chamberlain, S. Dak., 1893 - 1908, by months beginning with Jan. 0.35, 0.34, 1.08, 1.98, 2.82, 3.17, 2.62, 2.59, 1.22, 1.27, 0.36, 0.43 - ^{gives a} yearly average ^{of} 18.05 inches. In Lyman County, just across the river west from Crow Creek, over a period of seventeen years, by months as before, we have - Jan. 0.36, 0.31, 0.89, 2.10, 2.25, 3.29, 2.19, 1.93, 0.84, 1.02, 0.36, 0.35 - yearly average 15.89 inches. At Highmore over a period of 22 years by months we have the following mean precipitation - Jan. 0.34, 0.23, 1.20, 1.81, 2.28, 3.66, 2.67, 2.37, 1.38, 1.17, 0.45, 0.36. - Yearly average is 17.92 inches. These places on three sides of the Crow Creek Indian Reservation give an average of 17.28 inches up to 1908 as mentioned, or through those dry years complained of in back reports before quoted.

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From 1908 to 1915 there have been but two or three dry years, as may be noted from weather reports for those years: 1909 gave 23.69, 1910 - 15.49, 1911 - 19.18, 1912 - 18.50, 1913-17.98, 1914 - 21.57 inches. This is 2.12 inches over the averages mentioned giving 19.40 inches of water on an average through the past six years with 1915 a very wet year, bringing the average up to about 20 inches. Dry farming has been defined as agriculture carried on in a country with less than 20 inches of rain fall.

Industry

The extractive industries as farming, stock raising, Hunting and fishing, mining, lumbering etc. are the primitive sort. There has been quite a lot of lumber sawed out on the reservation but the supply of timber is practically exhausted at this time. Hunting and fishing furnish a little diversion but the people do not rely on this means of subsisting any more, but farming and stock raising are the chief means of ^{support} ~~livelihood~~.

There are 225 farmers and 217 stockmen, according to last report submitted to Washington, which evidently means that some Indians are both farmers and stockmen and not heavy weights at that. The reports of results are quite flattering, but it is to be remembered that heretofore estimates have been used quite extensively, and we know that a little pile of hay or grain looks big to the Indian who produced it.

The entire earnings or incomes of the Indians for the fiscal year ending June 30, 1915, are placed at \$125,719. Crops raised \$49,781, stock sold \$32,000, basket weaving \$1,080, wages earned \$9,833, rations and miscellaneous issues \$5,428, from leases \$5725 interest on trust fund \$6,727, Treaty obligation \$14,420, Indian moneys \$725.

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Agricultural Lands.

The report shows that 3,610 acres have been allotted, that 3,500 acres are cultivated by Indians and 110 acres leased. With the exception of a few, none have more than ten acres under plow, while the great majority have from a half to two acres, so the phrase "cultivated by Indians" is misleading. Steps have been taken to get accurate measurements of acres under plow.

Grazing Lands

286,012 acres of lands classified as "grazing" have been allotted and the report shows that 247,262 acres are being grazed by Indians' stock with 36,517 acres leased for \$5,478 - about 15¢ per acre. The value of the stock is \$328,339 - numbering as follows: Horses and mules 975, mares 1,367, stallions 38, cows and heifers 1,175, steers 750, bulls 36. Purchased during the year are the following: Horses and mules 54, stallions and jacks 6, cows and heifers 67, bulls 15.

Profits

Applying the figures to the above, we find that the grazing lands are paying 11¢ per acre under present management or a return of 1% on the capital invested - lands figured at \$10 per acre. The agricultural lands (though it is thought estimates are too high) paid last year \$14.22 per acre or a return of 5.5% on capital invested - these lands figured at \$25 per acre. This year's crop figuring same lands at same values, machinery etc. without depreciation, shows but 1.7% return on the investment for grain alone (the actual weights were kept of the threshed grain and corn measured where possible, all figured sold at 50¢ per bu.

Industry of Second Degree.

Mills and factories, creameries, merchandising etc. are one step removed from the fundamental occupations of men. Outside of local hauling there is practically nothing of this sort on the

Crow Creek Indian Reservation except two store at the Agency, ^{and one in Big Bend} each of which is conducted by a post trader. They furnish quite a lot of freighting for the Indians, also Government supplies have to come up from the rail road. During the time the river is open to navigation all supplies come up by boat. The Indians do the hauling at other times except what comes in by daily stage from Chamberlain.

Industry of Third Degree.

Teaching, doctoring, governing etc. provide occupations two steps removed from the fundamental, or extractive industries.

Again there is little doing in these lines except what is supplied by the Government through the Civil Service. Teachers, physicians, and other employees including the governing force are under pay of the United States Government, except in certain liquor suppression work the State bears the expense. Fortunately there is but little of the latter to bother anybody.

The Social Side.

The churches furnish centers for gathering the people together. Each farming district, of which there are three, has its work in this line, ^{more or less} separate from the rest. Churches and schools, though scattered, supply the needs of the people.

There are a number of "dance houses", old custom affairs, which accommodate the old timers who meet there from time to time to ^{dance} discuss ~~events~~ ^{events} and have feasts. These meetings take place at various times and places on the reservation and are termed "councils", ^{if no dancing takes place} though each district minimizes the others, calling itself the main one - the only real one, in fact.

Soils and Crops

(See next sheet)

Geological Aspect
Quaternary

To get a breif line on glaciation, I quote from LaConte:

"The quarternary or recent age has been divided into two epochs, viz. Glacial and Champlain. The former was characterized by a general raising of land surfaces from 1000 to 3000 feet above their present height, the latter by a downward motion of the same lands until the sea stood 500 to 1000 feet above its present level. Large portions of the continent of North America during the glacial period was covered with sheets of ice as Greenland is today and, being much higher than at present, the sheets of ice moved southward especially during the Champlain epoch, advancing and subsiding alternately until five drift sheets are recorded in the glaciated area. These are as follows: "

Alberton, Sub-Aftonian
Kansan
Illinoian
Iowan
Wisconsin

Drift

"Strewn all over the northern part of North America, over hill and dale, over mountain and plain, covering alike nearly all the country rock - Archean, Palaeozoic, Mesozoic and Tertiary to a depth of 30 to 300 feet and thus largely concealing them from view, is found a peculiar surface soil or deposit. It consists of a heterogeneous mixture of clay, sand, gravel, pebbles, subangular stones of all sizes, unsorted, unstratified, unfossiliferous - of all sorts of material on all sorts of bedrock, wholly unrelated to the underlying rock and therefore universally shifted. Lying on the surface of this drift-soil are found many boulders of all sizes, often of huge dimensions - 100 tons or more. The depth of this material is greatest in valleys and least on hills and mountains."

Moraines

"The morainal drift left by the continental glaciers of America and in Europe are mostly in the form of extensive terminal moraines. During the ice retreat some lobes of the glacier front may have extended down valleys so as to stimulate stream glaciers and lateral moraines should be searched for on both sides of strong north and south valleys. Morains are typically composed of till but in places where glacial drainage was concentrated the material may be mostly sand and gravel."

Moraines of the Missouri Coteau (From Bulletin of J.E. Todd - No. 144)

Describing the lobes or loops of outer moraine the author gives detailed descriptions of the Long Lake Loop, The Blue Lake Loop, The Blue Blanket Loop, The Ree Valley Loop, The Boxelder Loop etc. The last two named are closely connected with our problem for which reason we quote as follows:

"East of Medicine Creek, north of Blunt, hills somewhat higher than the general level begin. Further south, more particularly on Section 28, T 111 N R 74 W, there begins a very high bouldery ridge, which extends south 3 or 4 miles. The character of this ridge toward the south is some

what problematical. Its even height and connection with the river suggest the edge of a high bowldery terrace, and it is not easily interpreted to be a portion of the moraine."

The Ree Hills

"Two interesting peculiarities may be noted of the Ree Hills. The first, which is the most striking, is the fact that the ice seems to have broken through the ridge at its eastern end so as to reach the main internal drainage channel, which extends toward the south making the subglacial plain continuous with the high terraces along Box Elder Creek. The other is the elaborate drainage system found at the east end of the hills . . . The Ree Hills are probably composed of Cretaceous Clays in situ. South of the western half of the moraine the country was examined to the Great Bend of the Missouri River and found to present erosive topography, but with a fine veneering of drift, in which bowlders were abundant in places."

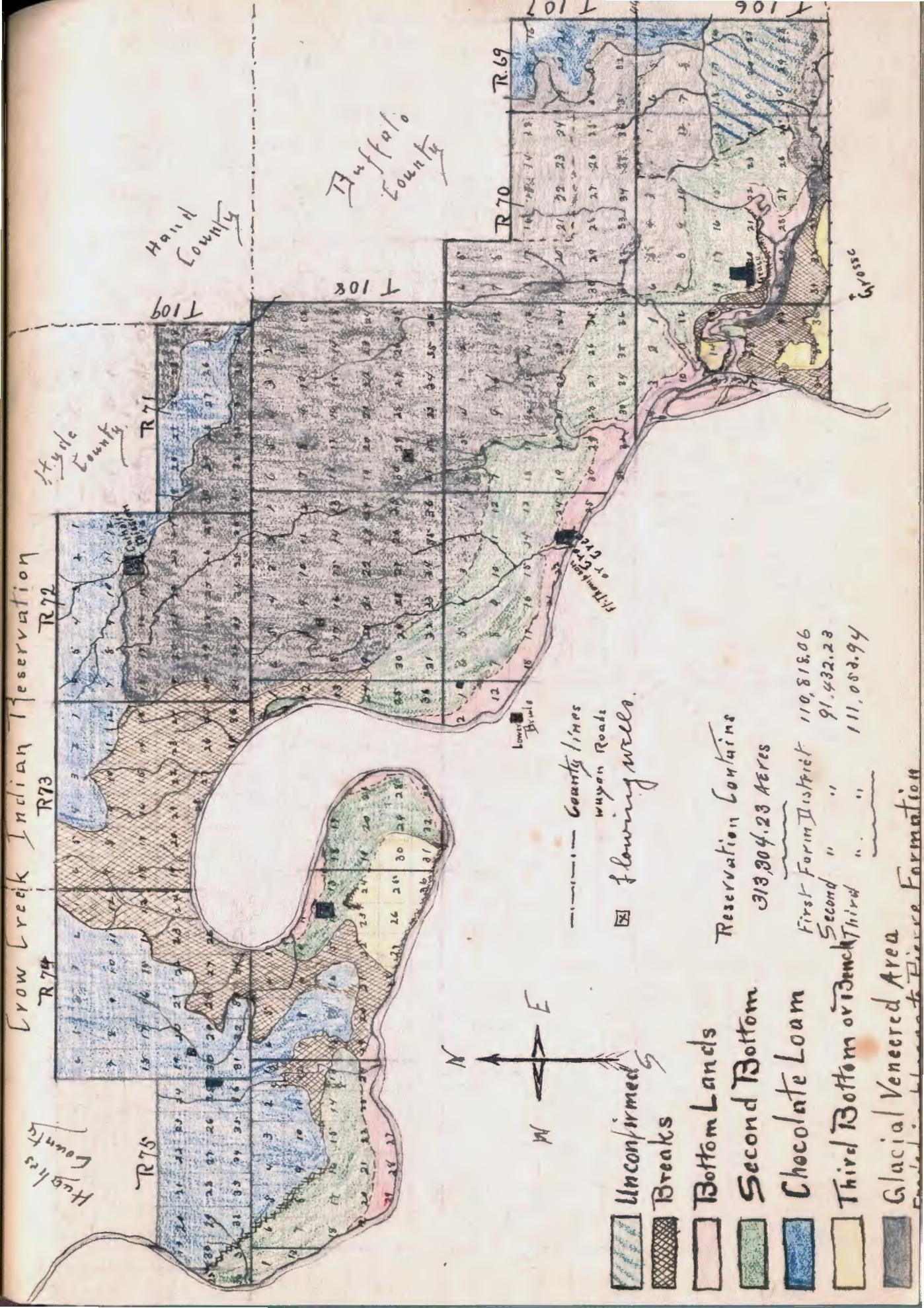
Box Elder Loop.

This is in some respects the most perplexing and least satisfactorily explained portion of the moraine. The position of the moranic hills may be described as follows: South of a gap about three miles in width near Ree Heights, moranic hills begin on the east side of Boxelder Creek, near the south line of T. 110 N R 70 W in the south west corner of Hand County and continue in a southerly and southeasterly direction along the eastern side of the valley of that stream, forming the water shed between it and the next branch of Crow Creek to the east. A slight reentrant angle heading toward the north east is formed in the northern part of T 107 N R 69 W. With this irregularity it continues directly to Crow Creek, near the eastern line of Buffalo County, south of Gannvalley, thence eastward, where it is much less distinctly developed, consisting mainly of scattered knoll ridges, rarely over 15 feet in height, nearly 12 miles, when it turns northward and soon joins a high irregularly triangular area covering the most of T 108 N R 66 W. From the eastern side of the same triangular area the moranic hills extend southward in a very scattered, imperfect manner, and again upon the western side of Turtle Ridge a few points, suggesting a moraine, lie along the side of ~~it~~ to the west of its drainage channel."

"With reference to the altitude of these areas, we may state that the moraine along Boxelder Creek is about 1825 ft above sea level or about 100 feet above the plain inside, near the south line of Hand County, and diminished in altitude considerably toward the south."

Regions Outside the Moraine

"The third south of the Ree Valley Loop will be called the Crow Creek region, covered with drift, usually with a deposit resembling till. The region least covered with drift is that lying east of the Great Bend of the Missouri or in the Western part of Buffalo County. This is the summit of a broad divide and shows no drift except scattered bowlders, perhaps two or three to the square mile. There are many places in all of these regions where erosion has removed the drift, more particularly along the steep slopes of streams and on the sides of buttes or very steep hills. Sometimes a hill may be entirely free from drift when the cause of its absence seems clearly to be erosion. The topography of all these regions is almost purely erosive."



Crow Creek Indian Reservation

Healy County

Hays County

Buffalo County

Hays County

R72

R73

R74

R75

R71

R70

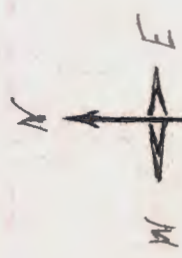
R69

T109

T108

T101

T101



County lines
wagon roads
flowing wells

- Unconfirmed
- Breaks
- Bottom Lands
- Second Bottom
- Chocolate Loam
- Third Bottom or Bench
- Glacial Veneered Area

Reservation Contains
313,204.23 Acres

First Form District	110,818.06
Second " "	91,432.23
Third " "	111,053.94

Glacial Veneered Area
Pierce Formation

"Of the Crow Creek Region mention has already been made in a previous report (This report seems never to have been published) and it is necessary to add only the fact that the northern portion of this region down to the latitude of the north end of the Great Bend seems considerably more covered with drift than south of that line."

Classification of Soils

No authentic soil survey has ever been made of Eastern South Dakota, hence there has been no classification of our soils made by the Bureau of Soils, for which reason the job of classifying the soils of the Reservation is not an easy one. The above quotations from Prof. Todd represent practically all that has been published concerning these soils, and that pertains to their origin; which, of course, is valuable to us. West of the Missouri River, however, the Bureau of Soils has surveyed and classified those soils and maps of that area may be obtained by those interested. A few samples were sent to the Bureau of Soils from the Crow Creek Reservation and some information received, which shall be given along with descriptions of samples analyzed in the soils laboratory of The South Dakota State College at Brookings in December.

A paper by H. H. Darton, No. 227 published by the U. S. Geological Survey on Geology and Underground Waters of South Dakota contains valuable information and we show some cross section sketches and quote from that paper, since the Reservation lies within the belt of artesian water supply, to get a line on underlying formations.

Sketch No. 1 starts north of Belle Fourche country and takes a line east through Cheyenne Agency, Gettysburg, Faulkton, Bradley and south of Bigstone Lake. Sketch No. 2 cuts the hills at Rapid City and goes east south-east through Vivian, Chamberlain, Mitchell and Sioux Falls. By boring wells data is secured and cross sections made.

These sketches show the various strata past through as they were laid down ~~in~~ during the geologic ages and are interesting to us because soil history is tracable thereby.

Natural agencies as wind, water, ice etc. have produced the soils as we have them today. Flowing streams have cut deep into the formations and erosion continues the process of leveling the land surfaces, carrying the soil particles on their journey to the ocean floor where future strata are now being laid for subsequent upheavels, whereupon future farmers may raise their crops, as we now utilize the present soils so laid down ages ago.

The thickness of the ~~stratum~~ which gives rise to the Pierre series of soils is observed to be about 1000 feet in places. As this formation underlies the reservation surface soils, it becomes of first importance to us since, by erosion, much of the glacial deposit has been removed and in places the Pierre series exposed become the surface soils, giving rise to what is commonly called gumbo, of which more will be said later.

The Pierre Series.

(From 11th Report Field Operations of Bureau of Soils)

"This series consists of dark-brown to yellow-brown surface soil underlain by heavy subsoils. The soils are derived from the Pierre and Graneros shales, principally the former, but some of those lighter in texture have probably been influenced by later deposits. The texture of this material varies from a loam through a silt loam and silty clay loam to a heavy clay."

Pierre Loams and Clay Loams.

"Under the term "Pierre loams and clay loams" are included soils differing considerably in both texture and color.

The most usual texture is that of a loam, rather high in silt, or a heavy silt loam, although this varies from a loose, friable loam through a silt loam to a silty clay loam, possessing some of the sticky nature of the Pierre clay or gumbo. A considerable amount of organic matter is usually present, giving the soil a brown or grayish-brown color, not unlike that of the Morton loams."

"At a depth ranging from 6 to 12 inches lighter colored, heavier and much more compact material is encountered, which breaks up into cubes resembling in this respect the western adobes. This sub-soil is a light grayish-brown, heavy silty clay loam to silty clay, which becomes lighter colored with depth and at 3 to 6 feet below the surface, grades into gray or slate colored shales.

Mechanical Analysis
Of Pierre Loams and Clay Loams.

Description	Fine Gravel	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay
Loam	1.5%	8.6%	7.4%	9.4%	9.8%	46.1%	17.0%
Sub soil	1.9%	12.3%	8.7%	11.1%	11.9%	28.3%	25.1%
Silt Loam	.0%	.3%	1.1%	4.5%	5.5%	63.3%	19.5%
Sub soil	.0%	.1%	.8%	3.9%	15.0%	63.0%	16.4%
Clay Loam	.2%	1.1%	4.0%	10.0%	9.3%	48.3%	27.0%
Sub soil	.3%	.9%	3.7%	11.2%	12.7%	47.5%	23.8%

This type is derived principally from the lighter, more sandy shales of the Pierre and Graneros formations, chiefly the former. It has doubtless been influenced, in many places at least, by later deposits and it is very probably that the surface soil represents a remnant of Tertiary or Quaternary overwash. The presence of scattering waterworn gravel over the surface and the terrace like

position of some areas furnish strong evidence of such action. The gravel on the higher divide is possibly of Tertiary age, representing the Chadron formation of the White River group. The terraces are probably Pleistocene and were formed during the damming of the eastern flowing stream of ice. These terraces have not been formed by the deposition of material, but rather by simply smoothing off the shales, only a very small amount of material being left in the process."

"Topography - Gently rolling plains, table lands and terraces with low swelling ridges dividing the shallow, narrow valleys, are the most characteristic surface features. In only a few places were areas found where the topography is so rough as to preclude cultivation. The "breaks" along the streams are most often the Pierre clay. Limestone lentils have caused the formation of knobs sometimes 50 feet high, while harder layers in the shales have resulted in steps

"Utilization - In general these soils are very desirable for farming, being among the best in western South Dakota. Only a very small percentage of the land has been placed in cultivation but they are retentive of moisture, and if this is properly conserved good crops can be secured in any except the most unfavorable seasons. Wheat, oats, and corn are the principal crops and give average yields of 12, 30 and 25 bu. respectively. This soil type supports a good growth of grass, much of which is cut for hay, while the rest is used for pasture."

Pierre Clays.

"The most distinguishing characteristic of the Pierre clays is their heavy, stick nature, which give them the local name - gumbo. The soil varies considerably in texture as well as in color, but this sticky nature is a constant feature. In texture the material

ranges from a silty clay loam through a silty clay to a heavy clay"

"The color is usually a yellowish-brown to a dark-brown, but varies from a decided yellow on the one extreme to a black on the other, the difference being sufficient to justify a separation in a detailed survey. Frequently a surface covering of ashy gray to a white is found. The subsoil, which is encountered at a depth of 6 to 10 inches is a silty clay of a gray to a yellowish-brown color. In some areas it is almost black. It is often mottled with white spots of lime making these areas quite calcareous. Soft shale is usually encountered at 3 to 6 feet below the surface and, on some of the badly eroded areas, comes to the surface."

"A very characteristic feature throughout the area of Pierre clays is the cracking of the soil upon drying. In general, the ~~heav~~ heavier the texture the larger the cracks which will be found. In some instances these extend to a depth of several feet. This tendency to crack or granulate causes the surface soil to become very loose and is a valuable property, as it enables the farmer to secure a proper seed bed much more readily than could be done otherwise. It also permits the rains to enter much more easily."

Mechanical Analysis
of Pierre Clays.

Description	Fine Gravel	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay
Pierre Clay	.1%	.8%	3.0%	8.9%	6.4%	44.8%	35.8%
Sub soil	.1%	.9%	3.3%	8.6%	7.7%	42.6%	36.7%

" Origin - The Pierre clays are derived by the weathering and the addition of organic matter from the Pierre and Graneros shales, principally the latter. Some small areas are derived from the heavier shales of the Carlilr formation. To the difference in the character

of these shales are due the principal varieties of the character of the soil."

"Topography - The surface of the Pierre clays is gently rolling to very hilly and broken, in some cases, as along the Missouri and lower Cheyenne rivers, even approaching the character of the Bad Lands. There are large stretches of almost level lands, yet the drainage channels usually cut out comparatively deep valleys with rounded ridges between."

"Location - The Pierre clays are the most extensively developed soils west of the Missouri river. Nearly all of Stanley and Lyman counties and large parts of others including the southern and eastern parts of Cheyenne Indian Reservation are occupied by these heavy types."

"Utilization - At present nearly all the Pierre clays are used for pasture and hay. The growth of grass is not generally so good as upon the loams, but varies in different sections both in quality and in species, depending very largely upon the texture of the soil. The predominating and characteristic grass upon the gumbo area is the western wheat grass (*Agropyron tenerum* - Vaseq.) This grass is practically the only species present, and the growth there is nearly always very sparse and in places bare spots are found. Where the soil becomes more silty in texture grama and buffalo grasses are found mixed with the wheat grass and the growth is dense and heavy, yielding hay from one fourth to one and one-half tons per acre."

"The Pierre clays are naturally stong soils but their sticky nature makes them less desirable than those of lighter texture. If plowed when too wet the soil bakes into hard clods which are dif-

difficult to pulverize. If allowed to get dry it becomes too hard to cultivate. The soil, however, is very retentive of moisture and if a mulch is provided after rains it can be conserved. Unless this is done the moisture is lost very rapidly and crops suffer during periods of insufficient rainfall."

no note "A careful and observant farmer will plow and cultivate when the soil has dried out just enough not to adhere to the implements, for under this condition the soil breaks up into small granules, thus allowing the formation of a good mulch. When tilled properly the gumbo becomes surprisingly mellow, especially when a good supply of humus is present. A great deal of power is required for its cultivation but during good seasons wheat yield from 12 to 20 bu, oats 25 to 50 bu. corn 20 to 25 bu. and spelts from 20 to 40 bu. per acre.

Authorative Data on Reservation Soils

Regarding samples of soils sent from the reservation to the Chief of the Bureau of Soils at Washington, D.C. I quote as follows: "Sample No. 3, taken from Section 31, T 108 N. R. 71 W, is apparently representative of what was classified and mapped as Pierre clay". This sample No. 3 came from Comes Flying's place and is closely related to the large area shown on the colored map which includes the piece in question. "Samples No. 1 and No. 2 show a condition more favorable to the formation and maintenance of good tilth, being as they are heavy silt loams or light silty clay loams naturally rather mellow and friable." These samples came, No. 1 from the Agency field and No. 2 from the School farm. "We are unable to identify any of these soils positively but it is thought that they are somewhat similar to those of the Orman series represented in the Reconnaissance Soil Survey of Western South Dakota by the Orman clay".

The quotations above cover all the information we have from the Bureau of Soils as to the classification of the Reservation soil which is scant, wherefore I shall give descriptions of the different types as mapped, leaving the classification to be completed by the Bureau.

Reservation Glaciation

Observing the map after J.E. Todd as to Glacial Phenomena of Crow Creek Indian Reservation and Vicinity, it is noticed that the extreme western margin of the drift lies across the river in Lyman county, extending on north through Presho county, hence all of the Crow Creek Reservation and a portion of Brule Reservation lies within the area of glaciation. Reading over Prof. Todd's descriptions of the moraines, one notes that he was puzzled at times to make out from present evidences just what took place back in the Quaternary Age, wherefore it seemed to be useless for me to try since he is by far a better geologist than I ever hope to be.

When we look at the matter carefully the conclusion is forced upon us that we are within the area of two distinct drift sheets, which were probably the Kansan and the Wisconsin, but who knows how much time between was lost to all records! Evidence here to be observed shows that the last period is by far younger than the other. LeConte shows a map upon which, as scientists understand the matter, the Wisconsin drift sheet proceeded south to a point about east of the Great Bend of the Missouri. Prof. Todd noted, in his description of regions outside the moraine, that ^{up to} the northern boundary of Buffalo County approximately ^{is} represents the ~~xxxxxx~~ "region least covered with drift" - Well, about four miles further north the soil changes.

Then as the moraines lie east of the reservation, as mapped, it is evident that but a comparatively small portion of the reservation lies within the Wisconsin glaciation, however the reservation as outlined was superimposed upon Prof. Todd's general map of "Moraines of the Missouri Coteau" and used thus, as his work did not consider any particular locality. While there are differences I find hard to harmonize, yet as a whole agreement is fairly close, and also tallies with the map presented in LeCont's work, which is quite general, however it shows that the region east of the Great Bend of the Missouri, which includes the central portion of the Crow Creek Indian Reservation, and the same soils extend further on south, belongs to the Kansan drift, a notch, as it were, which the Wisconsin drift failed to fill. The process of erosion has been going on all these ages since the Kansan and there is but a thin veneering of the old glacier left to us. In places it is entirely gone, leaving the Pierre clay exposed, however the old, old stones of huge size lie scattered over the prairie today in testimony of what took place ages ago. Hence by following Prof. Todd's map as copied a fairly accurate idea may be gained as to the glaciation of the reservation.

Description - Reservation Soils

By thinking back over what took place before, we are prepared to get a clearer notion of what we have at present. The different types of soils as mapped and shown in colors have been analyzed either by the Bureau of Soils or by myself at Brookings under Prof. Hutton of Dr. Hume's Department, State College of South Dakota.

Big Bend District

The soils north and west of the "breaks" T109 R 73, 74, 75 and

the north part of R 71 and 72 belonging to the reservation are closely related to a class of soils which have been mapped as The Marshall Series, which we find described ^{in part} by the Bureau of Soils as follows:

"Dark-brown to black loam 10 or 12 inches deep, resting on a lighter colored loam or heavy loam. The deep subsoil consists of clay, sand, gravel and boulders mingled together in a disorderly mass. It is derived from unstratified glacial drift. Glacial boulders are found here and there on the surface, in some areas so plentiful as to interfere with cultivation. These are frequently removed from the field by means of stone boats. The soil occupies gently undulating to rolling country and covers wide areas in the prairies of the North West. While extensive areas are well drained and well suited to farming, there are areas of obstructed drainage, resulting in bogs, ponds and swampy depressions, which are unfit for cultivation without artificial drainage - often a difficult problem. The soil is above the average for general farming purposes. Wheat, oats, corn, barley and flax are the principal crops. Wheat yields from 10 to 30 bu., oats from 20 to 80 bu. with average of 40 bu., corn from 25 to 45 bu., barley about 30 bu. and flax from 9 to 12 bu. per acre. Millet is grown to some extent for hay, yielding from 3 to 4 tons per acre."

Average Mechanical Analysis

Marshall Loam

Fine Gravel Fine Sand

Coarse Sand Very

Description 'Medium Sand' Fine Sand' Silt ' Clay

Marshall Loam	11%	30%	41%	17%
Sub soil	11%	28%	36%	24%

Around Brooking, S. Dak. there is mapped 135,808 acres of this soil, which sells as high as \$200 per acre.

It is **observed** that a large portion of the Big Bend District is marked off as "breaks", which means simply that the area so marked is too rough for farming, as a whole. Land will have to become far more valuable than at present before much of this area will be cultivated, for which reason a general soil survey of this kind need not consider the types in this area, which vary from weathered shale, concretions etc. to great bowldery bluffs overlooking the Missouri River.

The type of soil I have designated "first bottom lands", as a whole, are these alluvial deposits recently made by the river, though some are shown along Crow Creek. They vary from ~~silt~~ loam to silt silty clay loam, being rich agricultural lands well adapted to grow any of the common farm crops of this locality, as well as alfalfa.

Mechanical Analysis

Description	No. 1	No. 2	No. 3	No. 4	Soil Class
Averages of Crow Creek Red Alluvial Soil	2.74%	4.40%	53.92%	38.84%	Silty Clay Loam

Note, There are several different methods used to ascertain to what class a soil belongs. Ordinarily one accustomed to handling soils on surveys can judge the class readily, yet the sieve method is found to be quite a help and, if two soils cannot readily be distinguished between as to class by using the sieves, then a soil infusion is made and the clays "blown" off, then the silt, very fine sand, etc in succession and recovered as separates.

The Bureau of Soils uses the following names as applied to different groups of separates:

Fine Gravel	- - -	2.000	to	1.000	millimeters
Coarse Sand	- - -	1.000	"	0.500	"
Medium Sand	- - -	0.500	"	0.250	"
Fine Sand	- - -	0.250	"	0.100	"
Very Fine Sand	- - -	0.100	"	0.050	"
Silt	- - - -	0.050	"	0.005	"
Clay	- - - -	0.005	"	0.000	"

Gravel and stone mean particles larger than 2 millimeters in diameter.

In weighing samples for analysis grams are used instead of pounds - 453.6 grams to one pound. Fine gravel runs 252 particles to 1 gram, fine sand - 132,600 and clay - 45,500,000,000

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Soils belonging to the class, coarse sand, medium sand, fine sand, sandy loam etc. as determined by mechanical analyses run as follows:

	1	2	3	4	5	6	7
	Fine Gravel	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay
	More than 25% (1 and 2)					0-15	0-10
Coarse Sand	More than 50% of 1, 2 and 3					Less than 20% of 6 and 7	
	Less than 20% (1 and 2)					0-15	0-10
Medium Sand	More than 20% (1, 2, and 3)					Less than 20% (6 and 7)	
	Less than 20% (1, 2 and 3)					0-15	0-10
Fine Sand	More than 20% (1, 2 and 3)					Less than 20% (6 and 7)	
	More than 20% (1, 2 and 3)					10-35	5-15
Sandy Loam						More than 20% and less than 50% (6 and 7)	
	Less than 20% (1, 2 and 3)					10-35	5-15
Fine Sandy Loam						More than 20% and less than 50% (6 and 7)	
							15-25
Loam						Less than 55% (6)	
						More than 50% (6 and 7)	
Silt Loam						More than 55% (6)	Less than 25% (7)
						25-55	25-35
Clay Loam						More than 60% (6 and 7)	
						Less than 25% (6)	More than 20% (7)
Sandy Clay						Less than 60% of (6 and 7)	
						More than 55% (6)	25% to 35% (7)
Silty Clay							
							More than 35% (7)
Clay						More than 60% (6 and 7)	

The table above is used by the Bureau of Soils but commonly the analyses given fall under four heads, viz. Fine Gravel, Coarse Sand and Medium Sand are numbered 1, Fine Sand and Very Fine Sand are numbered 2, and Silt, 3 and Clay, 4. Sieves No. 20, 40 and 60 should be No. 1, 80 to 100 should be No. 2, 200 should be No. 3 and above 200 No. 4 but that is only approximately correct and is for rough classification. It is found under trial that very fine sand will get through the finest of an ordinary set of sieves. The whole scheme is more or less arbitrary but something of the kind is necessary, so we use the best that has been devised.

The type of soil designated "Second Bottom Lands" follow closely the area marked as "Bouldery Terraces and Channels" on Prof. Todd's map of Gracial Phenomina. It has an average elevation of about 50 ft above the water of the Missouri River. As a whole there appears to be about 3 ft. 6 in. of fine surface soil under which is sand and gravel. In places along the brow of the hill leading to the lower lying alluvial soils, deposits of gravel of good grade and sand suitable for cement or concrete work are found, while back toward the higher elevations near the foot of the rising hills there is found overwash of "gumbo" so called, but not as a regular thing. In the Big Bend District there is little "gumbo" indeed and this Second Bottom soil is practically free from it except where the "breaks" show the weathered shale, which washes forming "gumbo" flats below. In Township 108 and 109 R. 75 this "second bottom" seems to be especially fine and will, no doubt, prove of great agricultural value, though more liable to "dry out" than the area designated "chocolate loam" just north; also the area in the "pocket" of the Big Bend is liable to "dry out" being there is so much sand in the soil.

Mechanical Analysis
"Second Bottom"

Description	No. 1	No. 2	No. 3	No. 4	Soil Class
Mike's Flat	4.81%	34.04%	47.29%	14.86%	Fine Sandy Loam

The class of soil designated "Third Bottom or Bench" is not so different from the above except it lies higher - about 30 ft on an average. It is likewise a fine sandy loam and being free from stone is ~~an~~ loess soil. (For mechanical analysis, see Philbrick sample)

Agency District

In this district, which includes townships 107, 108 and 109 N. - except east ^{of} 107th R. 71 and 72nd ~~part~~ ~~of~~ ~~71~~, and some of R. 73 included, is found

the largest area of the so-called "gumbo" soil, here designated "Glacial-Veneered Area" because there remains yet much of the material which was transported here ages ago, doubtless by the Kansan Drift Sheet. The area is patchy, however, as a detailed survey will show, but for our purpose it will be considered as a whole. That it is largely Pierre clay is evident from the sticky nature of some areas when wet, also the concretions are present where erosion has been heavy; notwithstanding these facts there are large areas, practically all of township 108 - 71 and much of the three adjoining townships to west, north and north-west, which are fine/^{gently}rolling prairie with a growth of grass last year that would average about one and a half tons per acre. The grasses are western wheat, ~~gama~~, both tall and blue species, buffalo and, in swampy places, coarser cord grass etc. There are large stones lying scattered over the prairie and not a little of the "knob and kettle" topography, which is common to glaciated regions, which means also that gravel, coarse medium and fine sands, as well as some silt remain to lighten up the heavy clay beneath, for which reason this area should be regarded as superior to areas of Pierre clay found in abundance west of the Missouri River. I'm certain it will prove itself so when farmers take hold to develop this country.

Mechanical Analysis
"Glacial-Veneered Area"

Description	No. 1	No. 2	No. 3	No. 4	Soil Class
Catholic Mission	17.00%	12.48%	45.70%	24.82%	Clay Loam

The area to the north of this large, undeveloped body of land is the same ^{series} as the northern half of the Big Bend District, but there

will be a difference shown in a detail survey as there is a greater mixture of gravel, especially north of the Catholic Mission, than further west, due to peculiarities in glacial activity.

Mechanical Analysis
"Chocolate Loam"

Description	No. 1	No. 2	No. 3	No. 4	Soil Class
T 109 N, R. 72W	1.46%	17.10%	60.20%	21.24%	Silty Clay Loam

The "second bottom" area of the Agency District classifies the same as that ~~xxxx~~ of Big Bend with the exception that along the foot hills there are areas of heavier soils washed in from the Pierre formation. These are fine, valuable lands.

Mechanical Analysis
"Second Bottom"

Description	No. 1	No. 2	No. 3	No. 4	Soil Class
Tommy Tuttle's Sample	11.2%	46	25.2%	15.6%	Fine Sandy Loam

The "first bottom" area here is likewise the same as in Big Bend with the exception, some of it is island alluvial soil so new that little or no humus has been added, being classified by the Bureau of soils as "light silty clay loam".

Mechanical Analysis
"First Bottom"

Description	No. 1	No. 2	No. 3	No. 4	Soil Class
Government School Farm	.80%	24.40%	51.30%	23.50%	Light Silty Clay Loam

Grace Mission District lands

This part of the reservation includes all south and east of the

Agency District. This part of the reservation has long been considered the best agricultural section and there is by far more land broke out and in use in Grace Mission District than in either of the other two. Crow Creek, from which stem the reservation was named, flows west through this district and empties into the Missouri River through a bayou, which cuts off a strip of land known as Ear Island. The drainage of the country was evidently badly obstructed somewhere along here in bygone ages for there are great bluffs overlooking both the Missouri River and Crow Creek through which these streams have cut their ~~way~~ ^{channels} leaving many sections to erode away, becoming at this time "breaks" of a bad order. Box Elder Creek, flowing south, empties into Crow Creek near the section line between 8 and 9, T. 106 N. R 69 W. and the same soil, ^{series} designated "chocolate loam" is again found east of this latter stream, thus checking closely with Prof. Todd's map of Glacial Phenomena, in what he calls "The Box Elder Loop".

The "second bottom" lands of Grace Mission District are much the same as the same lands of the other two districts except in the eastern part there is quite a sprinkling of so called "gumbo" from some source. The topography is rolling prairie to the east, gradually becoming more flat toward the west. This particular area was surveyed hastily as winter was coming on and snow covered the ground at the time, therefore if the actual "second bottom" stops short, that lying to the east yet is still a better soil, however "terraces and channels," per Prof. Todd's map, occupy this area.

The "first bottom" lands along Crow Creek, especially, differ from the alluvial soil of the Missouri since the sediment carried by the stream has fewer soil types from which to draw; then the "breaks" to the south are of shaly formation, which, weathering, makes "gumbo" areas

in the valley below. Muskrat Island, as well as Bar Island just below are so new that willows constitute the principal growth, however there is a considerable amount of young cottonwood to be found on the islands, which the Indians visit to get wood.

Mechanical Analysis

"First Bottom"

of

Crow Creek Alluvium

Description	No. 1	No. 2	No. 3	No. 4	Soil Class
Rufus Day's Soil Sample	4.66%	10.90%	56.54%	27.90%	Silty Clay Loam

The soil designated "glacial-veneered area" is the same as the same class in the Agency District except erosion seems to be heavier in the Grace Mission District. There are comparatively more creeks and deeper cut channels, yet there are fine areas of this class of soil. In the analysis of these soils, the sieve method was found unsatisfactory, wherefore a sample was dissolved in distilled water and the clay determination run by "blowing" off the clay held in suspension. Careful work showed the following result:

Surface Soil	-	Clay	37.8%	on water free basis
Sub-Soil	-		55.16%	" " " "

therefore it is evident that there is a high percentage of the remaining soil separates, which were not ascertained as a former analysis of Pierre clay is given. It is only fair to state that the above work was on a sample of the worst "gumbo" patch to be found in the whole area.

The "chocolate loam" area east of Boxelder Creek is identical with soils north of the Catholic Mission, though this area is rather more hilly, barring ~~perhaps~~ one sandy, gravelly ridge in T 109-72, which ~~perhaps~~ ^{perhaps} is an esker (osar), as it takes the direction of drainage

"Third bottom" or the bench area of Grace Mission District lies on top of a high elevation of shale formation. It is a fine sandy loam, aeolian, perhaps, in origin. Erosion has denuded many square miles formerly covered by this loess material in this district, as it appears.

Mechanical Analysis
"Bench Area"

Description	No. 1	No. 2	No. 3	No. 4	Soil Class.
Philbrick Sample	.32%	.92%	80.70%	17.96%	Fine Sandy Loam

Note - Number 3 is evidently largely fine sand, having past through sieve No. 100, for which reason we call this "fine sandy loam!"

Surface wells have been dug on this "bench" area, and a deep well was put down ~~xxx~~ for the Philbrick place, though the flow never rose to the top. Mr. Grosse's surface well shows about 15 ft. of this loess material on top the shale. Down the hill ^{near} ~~along~~ the road leading to the Grace Mission Sub-Station, springs are found, the seepage finding its way along on top the shale to an outlet there.

Crops

We have quoted a length from Department Experts to avoid the responsibility of saying the same things - which quotations see.

Specifically, there is not much on which I can draw for information, since so little farming ^{is} done on the reservation. It may be stated with certainty, however, that alfalfa succeeds on the first "bottom lands". Both the Agency and the School farms have good fields of alfalfa which ~~has~~ ^{have} been cut six times in ~~three~~ ^{two} years, to my knowledge. Then others, J.Q. Anderson especially, have large areas growing alfalfa but still larger areas should be utilized in this way.

The "second bottom" and the "chocolate loam" areas will raise

any crop common to the country when seasons are favorable. The neighboring farmers grow regularly corn, wheat, oats, barley, rye, flax buckwheat etc. These crops mature in paying quantities per acre wherefore there seems to be no great necessity for planting what is termed the drought resisting crops, as kaffir corn and the various kinds of sorghums, except in the dry years possibly.

The "glacial-veheered-area" will do anything, in the way of producing farm crops, that the same soils are doing in other places west as the chemical analysis shows - which see.

As to the "bench" lands, the following is results accomplished by Louis Loudner, an Indian who lives near the Philbrick place, but just off the Reservation toward Chamberlain;

Figures on Intrinsic Land Values
Based on 1915 Crop.

80 acres to oats yielded	- - - - -	3,000 Bu.
90 " " corn	- - - - -	3,150 "
Sioux City Prices quoted Dec. 23		
	Oats closed at	42.5¢
	Corn " "	71.125¢
In oats 80 acres produced	- - - - -	\$1275.00
In Corn 90 " " "	- - - - -	2240.44

Figuring plant food elements consumed, and the labor out, also cost of transportation from farm to Sioux City

Oats net 9.8¢ per bu. or for the 80 acres	-	\$295.00
Corn " 7.2¢ " " " " " 90	- - -	650.18

If money is worth 5% then Mr. Loudner's lands would support an investment of \$73.67 per acre to raise oats and \$144.48 per acre to raise corn, if 1915 crops and prices are to be used as an average, which is all we can do in the absence of figures (based on ten year periods - the usual way) for a period of years.

Be it remembered that Mr. Loudner is above the average Indian farmer, that the total acres under plow on the reservation is approximately 2200 acres, running from 1 to 5 acres for class C farmers 5 to 10 acres for class B farmers and from 10 to 50 for class A farmers

Erosion, Irrigation and Drainage.

Erosion is the eternal hand of waste. It is the force which is destined to level the whole world in the end. But of course we have a force competent to counterbalance that while the earth is young, viz. folding of the crust in upheavels, as in case of the Black Hills but erosion, including wind action also, is man's eternal enemy, yet but partially so, for while one area is being denuded another is building up. It is when we take a long look right into the face of eternity, so to speak, then we see in the trickling particles of soil making their way through the gutter and on to the ocean floor, that force which no man's hand can stay, viz. the leveling of the land surfaces. Each generation will have its problems to overcome and this is the one that mocks the wails of want. All the wealth of the world lies in the few inches of surface soil - mines and metals are mere expediencies. Then is it possible for me to put the issue before ~~the~~ ^{you} farmers more strongly to save what soil you can to your fields? If the wash is bad, away goes your humus first, then your clay and silt, then your sand. With the humus, goes your bacteria, without which inadequate amounts of plant food elements are released for your growing crops. When your clays and silts are diminished your soil changes its character and sand ultimately predominates - Do you like to farm a sand pile?

How can we save the soils? If you have a hill or slope too steep to farm right, then seed it to grass and use it for pasture. Flow and cultivate the usable slopes so as not to form little rills down the hill side after rains, and constantly add humus to knolls and other places subject to much wash. Mulches help to keep you soil and rows of trees should be on every farm. Terraces are sometimes built and soil thus saved for a while for man's use.

As to irrigation, we have fine prospects for something along that lie here but nothing has been done further than to use some of the flowing wells to irrigate the school farm. The artesian water is so charged with salts of various kinds that there is danger in using it for irrigation purposes lest there becomes too great concentration within the root area of plants and cause plasmolysis.

The ideal water for irrigation is the melted snows from the Rockies which come to us by means of the Missouri River. We have hundreds of acres of the first bottom lands which could be irrigated by means of a pumping station mounted on a scow, as I heard Mr. Pringle saying, and it could ^{be} operated up and down the river for miles, furnishing adequate water supply to all these lands within the reservation. For the "second bottom lands" a pumping station could be put in some where on section 24 or 25, T 108 N. R. 73 W and the water carried across two or three townships, irrigating about 22400 acres. The Big Bend District could likewise have another pumping station and irrigate as much more. Both stations could be run with power generated at a power plant located in the neck of the Great Bend, where but 1 and 1/2 miles of ditch would gain the fall of 25 miles of the Missouri River, thus the first cost would be practically the only cost to turn these rich lands into blooming garden spots ^{for}, not only some seasons, but every season.

Some attempt was made a few years back to dam up some of the main drainage channels of the reservation, thus impound the ordinary wasteful wash, but the dams soon became washed out and have never been repaired, so practically no good has resulted from that expenditure of money. The best way to impound water in a country is to plow and cultivate the suitable areas. We know what Kansas used to be; we know what it is today. Is it not reasonable to suppose that adequate labor will do the same for our great State of South Dakota?

Farm Management

Economic Waste and Labor Limits.

Think of us recommending a riding plow to an Indian to farm one acre of land! Well, we have not done that bad yet but that is something along the line of economic waste that goes on among the Indians. One sees mowers, rakes, hay press, ~~maybe~~, most any kind of machinery scattered over the prairie where the Indians have been farming. They want to get the results without the labor, if possible - they are sure to want the maximum income from minimum labor and are willing to take chances with the weeds just to ride a disk and cut a bigger swath, going through the motions of the farmers, rather than turn a slow furrow at a time to plow. The lister is a great implement with ^{an} Indian farmer. He can wait until corn planting time, then ride that thing and put in a crop. Then, if the weeds get the better of the situation, he may even want to try a fall sown crop right in on top of that mess. You can imagine what a few years of such methods have done for the lands; but I once saw, with my own eyes up at an elevator in North Dakota, Cass County, if you please, a wagon load of stuff the owner was trying to sell for wheat. I stood and watched the elevator manager estimate the dockage for the great abundance of pigeon grass ~~he~~ ^{that farmer} had hauled to town. It could have been placed higher and been correct but out of conscience (if elevator men have such a thing) the manager docked that load 50% for pigeon grass, mostly, and other foul matter in the wheat, which was also a low grade. Well, having seen such as that, I still have hopes that the Indians will come out victorious trying to farm. Let the "boys" get to thinking right and they will farm just like they play ball - a formidable lot to go against when confidence and pride bear them up.

Farming is hard at best and to the end that better methods be used as their farmer, did recommend riding plows for Class A farmers.

#52 Labor Limits.

The writer has often wanted to know and has asked Dr. Warren, of Cornell, if it be possible to ascertain the labor units required to sustain the world population through a period of one year. If we had such figures, it would be an easy matter to rate the Indian population as to their real worth as assets to the community in which they live. We lose respectability, and rightly so, when we rely upon the parasitic method of getting a living. We should produce at least as much as we ourselves consume, and do that with the labor of our own hands, or aid rightly those who do. As the population of this old world thickens down to the maximum sustaining point of the lands, we shall see the laboring classes growing more and more restless at having to support the crushing load of parasites who suck the new blood of toil by advantage of unequal laws. What about our Indian? He is now a citizen, or near it, a man among men. Will he, too, choose the easy way, letting loose his hold on the strong moral fiber of his race to indulge his selfishness? Or will he exert the full power of a strong man to maintain his respectability among those who toil that the world might eat. Labor limits, in last analysis, mean ^{the} ~~ix~~ the unwillingness of people to toil - They scheme to get control of something others need and must have so they can exact tribute, thus be relieved of the necessity of toiling while they are able to suck some laborer's blood. Then they clique, form societies, brotherhoods, ^{are controlled often,} and Governments/ to extract the last measure of power for the maintenance of themselves WITHOUT WORK. Is it any wonder that a Christ was sent to this earth! and how quick he was gone again! Indians of Crow Creek Reservation, if you wish to maintain respectability among men, at least do enough work to maintain yourself^{ves} and family^{ies} with a little added for old age, so others will not have to keep you when you can't labor longer.

Government Farmers

If there were a buoyant willingness to labor, we have sufficient population to make the Reservation bloom with prosperity, but as a matter of fact we are scarce on labor. In fact many Indians really think Government farmers were placed here to perform their labors for them. Well, it is logical enough as we have taught the Indian to reason all these years. The Government presumes that the Indians are just anxious to work, if the farmers but show them what and how. Officials know that is not so but have to keep adding their wind to the dangerously inflated bubble to keep it going someplace.

There are three District Farmers on the Reservation, each free to work as the Superintendent sees fit. A district, per the divisions given in connection with the soils, is placed under the management of a farmer, who really becomes a Sub-Agent ^{either of} in ~~the~~ two Districts away from the Agency. The Agency Farmer has charge of the Agency District without any of the powers of Sub-Agent. The Superintendent of Stock has full charge of all the stock of the Reservation, even the farm animals, so the Agency Farmer has ^a rather restricted field of operation, as far as his dealings with the Indians go. There is a small experiment farm being conducted primarily, at this time, to try out the variety test on potatoes, also some work is ^{being} done on corn, which the Agency Farmer is doing for the whole reservation. A seed farm has been started ~~also~~ in the Agency District on which is being raised pure strains of seed for the Indians to use, same being obtained from the neighboring Experiment Stations to make sure that the very best varieties are provided - but the thought is ever recurring: "Have we not got the feed too high for the feeder?" There will not be the same care exercised to keep the seed pure as has been ~~made~~ ^{given} to obtain it and grow it under Reservation conditions for thoughtful improvement/

Farm ~~Management~~ Enterprises

The farmers' work must pay. It is an economic problem which must be solved by the farmers themselves, for who are interested in their successes besides themselves? Then the management of a farm is the first consideration after selection. The essential elements to make a farm pay consist of adequate understanding of environments, soils, suitable crops, nice adjustment of the various farm enterprises to time in order to produce maximum value and save it, and a cheerful heart. Some other things are necessary but they will follow as necessity presses activity. The ordinary Indian farmer is not strong on the first named essential - make the farm pay. He has not adjusted his life to the economic necessity hence the resistance he offers, which is supported by his inexperience in marketing his stuff. His conception of values is inadequate - or in short, he has not been "yankeeized." He is a heavy willed creature. How fast he would acquire all the essentials of success if only he willed it! As it is today in the Indian Service Farm Management falls heavily on the Government Farmers. These officials should correspond to the County Agents, whose numbers are multiplying, and will as soon as the Indians find themselves.

Farm management on Crow Creek Indian Reservation has in the past been very simple since home consumption has kept even pace with production, or nearly so.

Some of the Indians, possibly not more than 20 or 30, have gone into farming and stock raising to make it pay. They are after the dollars and their wants multiply with them; they work at a pressure all the time. They look carefully after their stock and plan their farm work to meet the needs. People must want a thing before they will strive for it.

Assuming that all the Indian Farmers want it, we plan a nice little rotation for 40 acres on the ^{first} bottom:

- 1st - 10 acres to alfalfa, if old land.
- 2nd - 10 " " corn (2 squaw, 8 dent) Sow winter rye between.
- 3rd - 10 " " oats (Sweedish select is good)
- 4th - 10 " " spelts, or wheat.

2nd year

- 3rd - Oats land to corn (winter rye as before)
- 2nd - Corn land to wheat or spelts or oats
- 4th - Spelts land to oats as nurse crop for alfalfa.

3rd year

- 2nd - To corn or potatoes (winter wheat or rye between rows)
- 3rd - To oats as nurse crop for alfalfa

4th year

- 2nd - Oats as nurse crop for alfalfa

Now we have all the lands to alfalfa which should be a thriving business here on the river if enough Indians go into it to sell to *or better, market in through sheep* down river markets. A forty acre field on ordinary years will yield from 3 to 4 tons per acre, or any where from 120 to 160 tons. Baled this should bring from \$1200 to \$1600. After the alfalfa fields are started more land could be handled in a manner similar to the above rotation, using clover if more alfalfa is not wanted.

How simple it is to get into this specialized business. There is not an Indian on the reservation who could not do it if he wanted to become an alfalfa grower. His lands grow richer in nitrogen by raising alfalfa, so when the fields are broken up huge crops of grain can be grown for a while then. We are not speaking of stock, for some people do not like stock, so I have shown you how to become independent and well to do without stock, i.e. range cattle or horses. You have but a single limitation on your business if you wish to expand it - that is labor. Solve the labor question for your hay harvests and acres become the limiting factor.

Some people prefer diversified farming rather than the specialized just set forth. In this country markets are the first consideration as soon as we have expanded enough to produce more than we consume at home, hence the limitation we have on production is in the line of distribution - Can we sell our stuff at a reasonable profit to ourselves? Thought at once sets upon the kind of crops, stock etc. we can afford to keep working with, to our own advantage. Most any of the Indian farmers diversify- i.e. they have several enterprises going, from which they derive a living, simple though they may be. If Indian^s had dairy herds and knew how to take proper care of them, then they could specialize in this line to good advantage- but- If they had a few good milch cows, chickens, pigs, turkeys etc in economic numbers, do a little farming to keep their stock going, then have range stock - as much as they could keep well through the winter, they would be engaged in ^a diversified-farming business, the success of which would be measured by the brains behind the enterprises. This is so the world over. It comes right back to WILL and management.

Then, to reiterate, some of the essentials to success are adequate knowledge of soils, economic crops, nice adjustment of the various farm enterprises to time, all driven by a powerful will-motor, which begets a cheerful heart. Nothing succeeds like success. "If at first you don't succeed, keep asuckin' till you do succeed."

Land Rentals

This is adverse to the principles of economics which our foremost men of today are advocating in order to get our government saved to the producers. Exploitation has been the rule and the money power predominates; they practically own us, so let us be the genuine men we are and WORK OUR OWN LANDS. Something to sell will take the other fellows money honorable, nothing to sell, he takes your money.

The fact that many Indians have holdings of lands in different parts of the reservation make it necessary to work out some system of land rentals adequate to provide a living from the various properties for the owners. It is abjectly wrong for the Indians to sell their lands, as many are doing, under pressure of the traders aided by some officials. Lands once out of the Indians' hands, and they are on sure road to pauperism. The State cannot afford it. A prominent lawyer of Chamberlain said recently that he believed, after having had some sorrowful experience trying to aid some Indian to get his rights, that the Indian Office in Washington, D.C. is maintained and used by powerful politicians as an aid to them in dispossessing the Indians. What a charge, if true! It has been my experience that the lawyer was right, excepting ~~xxxxxx~~ ^{administrations of} Commissioner Sells, and Ex-Commissioner Leupp. Then an adequate system of land rental is most imperative for support has to be forthcoming or the lands will pass from the ownership of the Indians, sooner or later.

A few stock men do rent grazing lands now, paying from 6¢ to 15¢ per acre for large tracts - from 5000 to 10000 acres - but the great need is to get farmers to work these farm lands which the Indians are unable to work themselves, for they do not know what value they have tied up in their lands. Mr. Anderson offers as high as \$5.00 per acre for those "chocolate laom" farms - ^{The best of which} lands worth \$200 per acre. We must get quite a few sections now and then for he has around 20000 acres of these best agricultural lands, some costing him as high as \$250 a quarter ^{section}. Why allow those conditions which enrich the few at the expense of the rest of us. But it is hard for an honest man to hold his job in the Indian Service. As for me, I tell them that it is my great pleasure to give my mind and my body to service but if my soul is condemned to hell, I want officials over me free from blame on my acco.

or in other words, I do not intend to allow any higher officials to force me to yield to wrong, God being my helper. It is along these lines that all good people should work, for it is no single fight.

If an adequate system of rentals were installed, the Indians could easily live comfortably with what they can produce by their own efforts - but, then, that would interfere with what the grafters want. . . . Their cattle would have to be taken care of or the damages they cause would have to be paid - Sleighing would not be so easy for the "lifters" as they know, hence "hard sledding" ahead for honest officials.

Transportation and Markets.

Natural facilities for a thriving community at Crow Creek are superb. Here is the great Missouri River running past and boats flying up and down. Producers could load here on the banks for any market in the world with but a single change - What a chance! No part of the Reservation is further than 12 miles from this great highway of commerce - The Missouri, yet we use it but little indeed. The railroads bring our supplies to ^{Highmore} ~~us~~ to Chamberlain and they haul away our produce. Why is this? Some more "hard sledding ahead".

Comparison of Freight Rates

Via C. & N.W. to St Paul		Per Cwt.	Via C.M. & St.P. to Sioux City		
			From Chamberlain	C.L.	I.C.L.
From Crow Creek	Horses and Mules	0.335	-	\$60.50	.58
Shipping Point	Steers, Cows, Calves	.50	-	22.00	.58
Highmore	Sheep, lambs	.35	-	25.50	.58
	Hogs	.35	-	25.00	.58
	Wheat	.19	-	19.00	.29
	Oats	.20	-	19.00	.29
	Rye	.19	-	19.00	.29
	Corn	.21	-	19.00	.29
	Barley	.19	-	19.00	.29
	Hay	-	-	19.00	.29
To Shipping Point for Crow Creek.	Flour	.20	To Chamberlain	\$3.50 per T. 19.00	.29
	Bacon, Hams	1.03	-	-	.29
	Beef Dressed	1.03	-	-	.58
	Agricultural Impl	.51	-	24.5	.30

Quoting from Mr. W. B. Wait & Co. regarding rates on the river to Sioux City, we have the following:

"Replying to your letters in regard to rates on merchandise to and from Sioux City wish to say for your information that it would be impossible to make rates except by boat loads as no boats are making that run except as special trips. If you have a boat load down and one back, or if we could make up a load including yours down and back I would be prepared to make you a rate. The distance is too great to make it possible to run, except with full loads. Under these conditions the rate on live stock and baled hay would be 45¢ per cwt. Threshing machine, engine and farm implements would have to take a special rate - Merchandise 40¢ per cwt.

Signed,

W. B. Wait.

On the river the distance from Crow Creek to Sioux City is approximately 250 miles, by rail about 200, but from the above it is hard to get a comparison, since no regular freight boats make the run besides so few articles are quoted by Mr. Wait. All the data we can get in parallel columns follows:

	Transportation via Boat		Transportation via Rail Road	
			Car load	Less than C.I.
Live stock	45¢ per cwt	- - -	\$22 to 60.50	58¢ per cwt.
Baled Hay	45¢ " "	- - -	\$3.50 per Ton	
Merchandise	40¢ " "	- - -	\$19.00	29¢ to 58¢ "

It is evident that Mr. Wait did not figure very closely since his rate on hay is nearly two and one half times as much as by rail, whereas water transportation should always be lower. The comparison does show, however, that the railroads have put the boats off the river—now, by what means? Is it possible for rail roads to build and operate their lines to haul freight along side a navigable stream at such low rates to the public that boats, driven by the same power, with no roads to build and no upkeep, and practically no capital invested, can't stay on the river? The owners can not surely want much for what capital they have invested in a few hulls, otherwise the rail roads would not buy them up. It looks like monopoly in restraint of trade. But it is up to producers to solve their own problems in distribution.

In following out a line of thought for the uplift of any community, we consider the producer, his means of distribution and the ultimate consumer. These three factors in our present system of economics are so interlaced and interdependent that they must all go hand in hand - What injures one injures all. We credit the average man with a reasonable degree of intelligence, wherefore it is not reasonable, even in the light of Christianity, to suppose people will do more than their share toward the general welfare unless their pay is reasonably sure for the "overtime". Now if men find it easier to clique and pool their powers against the less fortunate, so they can get their hooks in and suck his blood in a "respectable" sort of way, why, don't you think they will do it? Well, in short that is what has happened with the problem of distribution. The producers have left it to the middle men and they have combined in restraint of trade until 65¢ on the dollar hardly pays the bills for merely handling the stuff the farmers grow - easy money, yes! Does some unsophisticated devil think he can sell his stuff alone to good advantage these days? Well, let him try a car of extra fine, fat steers on the Chicago market. Or let him trail a car of wheat to Minneapolis and try to sell it himself to save the commission - Think those fellows have not looked after that? Why, "No" the millers will "SAY" to, "We buy from the members of the Chamber of Commerce" - Well, possibly the farmer could buy a seat there, if it is so necessary - Yes, maybe, if he is smart enough and will "dig up" his \$5000 - Oh, all that "velvet" has long since disappeared, Mr. Farmer! Your job is to get back on your mortgage paster and toil and toil to produce ^{farm crops} ~~xxxxx~~ for these "select few" to sell for you, returning 35¢ on the dollar, or what they feel like returning, measuring their powers of combine strength with the necessities of the case. "Go, therefore, back; your brown face looks green to us."

I suppose some of our progressive Indians are bigheaded enough to think they do not need the assistance of others in like occupations to help them get proper value for the stuff they produce. Under local conditions, the evils are not so rife, but generally, if you really know what your stuff is worth, you will be conscious of having to take less. For reasons stated it seems imperative that the Government of the United States work out a plan of marketing the surplus stuff produced, not only by the Indians, but by neighbors as well. It discourages any producer to have to go against such organizations, backed up by such keen, aggressive minds as find employment with middle men, that curse our system, or lack of it.

I object to paying 1/6 more for goods because of the excessive numbers of so called traveling salesmen. The Pathfinder, a publication coming weekly to us from ~~the~~ ^{the} National Capital, has among its many advantages a Bureau of Information which gave out the following in response to a question of mine: "We are informed by the Bureau of the Census that, for 1910, commercial travelers numbered 161,027 ^{men} and 2,592 women making a total of 163,629. No figures in regard to the average salary are available." No, I suppose - - That would not do. We know salesmen who get fancy salaries, around \$10,000 per year - Practically all of them get a fat salary plus expenses and we only have to go around these western town during a 'tieup' of trains to form a fair idea of expenses. \$2.00 per day for a room is modest indeed. During Feb. 1, 2, and 3 in Mitchell, at one hotel, there were 25 traveling salesmen, 15 at Chamberlain during same time and so on with the rest of the towns around. The average traveling salesman will "get by" with about \$6000 a year, salary, expenses etc. not counting ^{the} ~~the~~ extra women. Now for 1909 the total value of farm crops of U.S. was only \$5,487,161,000 and the traveling salesmen for 1910 must have added their 16 2/3% easy. *With great business expansion proportion has probably doubled in 7 years.*

Well, what have these facts to do with the Agriculture of Crow Creek? Just as a cog is a part of a machine, so Crow Creek is a part of the Whole United States and the agriculture, though not great, is subject to the same economic laws as the rest, also the people of Crow Creek bear, I think a little more than their share, because of the expensive method we employ to distribute the necessities of life.

What is strange to most of us is that the Government keeps such close tabs on the agricultural products, even giving out advanced knowledge in the form of crop estimates, yet fails to show up what is doing on the other wing, or leg, of industry viz. manufacturing and costs of distribution of these products.

To gain an adequate notion of our being a part of the great Whole United States with all its magnificent centers of population, industry and markets, we need to "hook up" with the rest of the world. As for the immediate future market, I suppose Crow Creek will have to depend on Sioux City, Iowa. We are essentially a meat producing country yet for which reason rates on live stock shipments are of first interest to us, however Uncle Sam should go along with our shipments.

Improvements

Now I take the bull by the horns. The whole paper is to be focused in these few remaining paragraphs, for to do good is my only excuse for being. Some call me a pessimist but they misjudge, for, in reality, I am an extreme optimist. I can see the rift in the heavy, overhanging clouds of economic wrongs that tells me the glorious sun will burst forth and shine with the power of Almighty God.

In my weak way, I have brought out and applied to Crow Creek conditions what science has discovered and applied to agriculture in general. I have shown by means of past records what the weather

conditions have been over a series of years; and taking five and ten year periods as criteria, we may reasonably expect future periods to duplicate the past, with the improvement we know tillage gives.

I have gone to some length in my study of soils and crops and produced work in this line that is ~~unique~~ - no where else to be found.

In the line of farm management, I merely touched a few high places, as reasons for doing so are obvious. Again with the problem of

distribution - transportation and markets, I've simply assailed the great evils that are crushing producers, for our problem is a part

of the whole. The following paper banner made by myself was exhibited to large farmer audiences in North Dakota and Minnesota

and at the Grain Growers Convention 1914, with the assertion that it should be defended in the United States Senate:

H E L P, H E L P!
PARASITES ARE DEVOURING PRODUCERS.

Among the Indian people we see the common wrongs take their worst form. Always some greedy, green-eyed monsters attach their 'hooks' to the reservations to deprive the poor Indians of the property and, what is worse yet, causing honest officials to sweat blood, we find higher Government Officials aiding that sort of thing, actually, to hold their jobs. Sorry, but truth must have a setting to make its own defense.

Lastly I come to the Indians themselves - How can they improve? The white people dealing with the Indians for their uplift apparently forget that Indians must get along with their own mental equipments, the same as other people. Here we wish to clinch what has gone before

A human mind is supreme within its own domain and, of course, will not take to its self what it does not feel the need of; esp-

pecially is this so with a Sioux Indian whose rough treatment at the hands of raw nature for a period of time out of the memory of man has caused him to depend upon his own powers for his very existence. Is it reasonable, then, for white people to think they can change such a sturdy-willed giant of nature in a twinkle of an eye? It seems to me that some of the methods advanced and used today upon the Indian are worthy to be branded asinine in the superlative.

If we would improve ourselves, or any human mind, we must get in touch with the understanding. Would it do for me, as Government Farmer sent here to help the Indians, to simply tell them in high sounding language what should be done to raise a crop, unless I first showed proper sympathy to pierce the hard, outer shell the Sioux has grown for his own protection, then presented the need to the understanding of the man within. If he wants to use what I thus bring to him, he can do so, or he can send me away for he is the chooser, not I. It is his own destiny he weighs against the necessity of the case. I might go further as a friend and furnish enough will power to carry my point, at a risk, however, as the uncertainties connected with agriculture are many. The Indians must improve by way of their own thoughts. It is not just to the White Race to judge all white people by a few desperate characters they (the Indians) came in contact with in early days. I mean this: The Indians should judge individuals as to whether they are good or bad from their own point of view - a white skin may cover a pure ^{beneath} heart, then it would be great injustice to call that person bad because he happened to be white.

To square ourselves as officials, to whom the Indians have a

right to look for aid, we must so present matter to the understanding that the Indians will not only see the advantage of but the necessity of acting in the line suggested. To illustrate my point: How utterly foolish it seems to take an Indian boy out of his home environment, away to some big Government school, provide for his every want without giving him so much as a "look in", as to his means of support, school him in this false environment, train him in a trade, (fodder eternally too high for the feeder) and finally graduate (!) him - then say to him, "Now go out and 'make good' "- The boy has never yet come upon the necessity of making a living, he does not know the value of a dollar, he can't judge values and the reason is obvious. Consequently, in his awkwardness, he tries, slips and falls many times and few, indeed, are the returned students who become independent after such training. So we give a "champagne appetite on a beer income". The Indian boy has grown to despise the commonplace things of his strange home environment after he is "educated", yet we like to match Indian boys with White boys in the race of life when the latter was probably hard pressed against the necessity of making a living from the very early and tender years of youth. We are ridiculously unfair with the Indian boy not to supply this want of economic training which is necessary to put him, at least, on a par with his white brother under present conditions. From the time a white boy is old enough to sell a paper or feed a pig he is right in the game to provide for his own wants.

I use the above to show what we have done for the Indians to criticise the method of instruction. Is it any wonder the Indians mistrust us? Is it any wonder they want to sell their lands when an easy living for a while through that means is so appealing?

#66

Is it any wonder some "wolf in sheep's clothing" can deceive them - "Yes, come and buy at my store, I'm your friend - (as long as you have a quarter of land) I'll treat you right, etc." And so it goes until the weight of debt is too heavy, then the poor Indian feels the wolfish fangs gnawing at his vitals and hears the menacing threat : "Pay me what you owe me or I'll sue you and take your property away from you".

One outstanding need on the Crow Creek Reservation, as else where, is to rate the Indians - using the Bradstreet principle - then keep run of every cent of income and hammer into each hard head the necessity of living within ones income. This will bring Indian pride to his deliverance, if officials are honest with him. The Indian children should be taught values through a school store kept by the pupils themselves, and the production end of the school should be brought up to the highest mark of efficiency through a system of labor checks based on the hour unit.

While I do not like our present economic system, it is upon us and we are a part of it, the Indian with us, so for the time being, we must teach values to the understanding of the Indian mind, looking forward to the time when all Indians are to become "yankeized" i.e. branded with dollar marks. It is all that will save him among a greedy, money-mad people.

Naturally the Indian is a socialist, and it appears that we are drifting that way, notwithstanding the fact that Nature herself speaks out for individualism. We love individual freedom, which force has polarized, but not until the earth's population has thickened down to a point near her maximum sustaining power will the inhabitants realize its cost in coins of today. Our larger need