

# The Red Road

## A Romance of Braddock's Defeat

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### THE STORY

**CHAPTER I**—Impoverished by the open-handed generosity of his father, Virginia gentleman, young Webster Brond is serving as a scout and spy for the army under General Braddock preparing for the advance on Fort Duquesne. He has just returned to Alexandria from a visit to the fort, where, posing as a Frenchman, he has secured valuable information. Braddock, bred to European warfare, fails to realize the importance of the news Brond is sent back to Fort Duquesne, also bearing a message to George Croghan, English emissary among the Indians.

**CHAPTER II**—Brond joins his friend and fellow scout, Round Paw, Indian chief, and they set out on the way to the fort. They are met by backwoodsman, Balsar Cromit, who joins them. The party encounters a young girl, Elsie Dinwood, whom they accuse of witchcraft. Brond saves her from them. The girl disappears.

**CHAPTER III**—Webster delivers his message to Croghan, who expresses uneasiness at the apathy of the Indians to the English. Young Brond, who is George Washington rescues Brond from bullying English soldiers. Brond is in a fight, and finds Elsie Dinwood. Brond is sent on a scouting expedition to Fort Duquesne, and leaves with Round Paw, Cromit joins them.

**CHAPTER IV**—They find a French scouting party besieging an Indian settlement. Brond and Cromit make their way to the cabin. The French officer, Brond, a French officer and an Indian chief, in the door. Cromit kills the Indian and Brond takes the French officer's rifle. Elsie escapes during the fight. Brond's captive is Lieutenant Beauvais. The scout sends him as a prisoner. Cromit, to Braddock's camp, again taking his way to Duquesne, and to seek Elsie.

**CHAPTER V**—Carrying out his plan to enter the fort, Brond and Cromit resolve to visit an Indian town which a woman sachem, Allaquippa, controls. She is friendly to the English. The scouts, as French, are plainly unwelcome to Allaquippa. Brond meets a French officer, Brond, who is known as Duquesne. Falest is there to win over Allaquippa to the French cause, but he fails. To his astonishment, Brond finds Elsie Dinwood, dressed as a French officer, under the protection. The girl tells him she has found the English chief, and is going to the French camp. Brond tells her of his mission to Duquesne, and she promises not to betray him. They find Beauvais has escaped from Cromit and is on his way to Duquesne. Brond realizes he must be stopped.

**CHAPTER VI**—Cromit comes to Brond while he is waiting to intercept Beauvais, and tells him he has killed the French officer who had escaped from him. Round Paw joins them, and the three return to Allaquippa's town. Cromit has brought disquieting news of the demoralization of Braddock's army. The French officers understand the woods fighting, and Braddock fiercely resenting advice of the French officer, Cromit, separated from his two friends, is welcomed by Allaquippa as an English officer. Brond and Round Paw come, Beauvais commander of the fort, believing him a loyal Frenchman. He learns Beauvais' death. Brond, having killed Falest, taking him for the other French officer. Brond realizes he is in a trap. He decides to get away at once, and tells Elsie, who has come to the fort with Beauvais, but it is too late.

**CHAPTER VII**—At a dinner given by Beauvais to his officers Brond is recognized and denounced by Beauvais as an English spy. Brond, Elsie and Round Paw escape by the river, Elsie having destroyed the canoes. Beauvais could reach to delay pursuit. Leaving the water, Brond sends Round Paw with a message to the army warning of danger of ambush if they take the Turtle Creek route. Elsie, with Round Paw, takes a different route to the army, in the hope that after Brond, Elsie, Cromit, or himself, will get through safely with the warning.

**CHAPTER VIII**—Brond realizes a trail. The girl, Elsie, has reached the limit of her endurance, has to be carried by Brond. They make for the cabin of a trader, Elsie, hoping with his help to stand off pursuers. Reaching the cabin, Elsie helps greatly in the defense of the place. They succeed in beating off the attacking Indians, and during a heavy rain, which saves them, escape. Elsie's bravery and quick wit make a deep impression on Brond. In the woods they meet a veteran Virginia forest fighter, Stephen Gist, returning from a scouting expedition.

**CHAPTER IX**—Gist repeats Cromit's tale of demoralization among the English regulars. Round Paw joins the party and they reach the army. Elsie refuses to seek safety in the rear, insisting on staying and sharing Brond's dangers. Braddock ignores Brond's warning of danger. Brond again meets Colonel Washington, who concedes the success of the expedition. Attacked in the forest by his misguiding allies, the English regulars are thrown into confusion. A disorderly retreat begins when Braddock has killed Washington and his Virginians hold back the enemy, preventing annihilation. Brond and Cromit are both killed. Round Paw and Elsie are badly wounded, Elsie is unable to find Elsie in the confusion.

**CHAPTER X**—The provinces are stunned by the news of the disaster. The English army is withdrawn to New York, leaving the provincials to drink with the victors. Brond recovers from his wounds and joins in the defense of the frontier. The situation is not relieved until General Forbes fights his way through to Duquesne. Then Brond continues his search for Elsie Dinwood, realizing he loves her, and believing his love returned. He finds Elsie in the arms of the man in whose charge he had left the girl. He tells Brond Elsie leaves for that city. There, he meets a boyhood friend, Josephine Hewitt. She has befriended Elsie and given her a home. Brond seeks her, and finds a happy domestic life. "Oh, mister, you've come back!"



"Our Brother Speaks With Wisdom, Although It Sounds Like the Cold Calculating Counsel of an Englishman."

But it is true, messieurs, that many of the Indians do not care whether the dog eats the wolf, or the wolf eats the dog. We cannot risk a split in our red ranks. If the Shawnees steal away to the Muskingum and Graves' creek, then we may expect to behold the lake tribes leaving for the north without lifting an ax. I am forced to believe it will be better to leave Allaquippa's town alone.

"If our Lady's intercession should give us a victory over Braddock, the task of pacifying the English Lenape will be easier if there be no bones of their warriors for France to cover. If it is fated that we lose, we shall have our hands full in withdrawing from this fort without having to fight a rear-guard engagement against infuriated neutrals. For I solemnly assure you, messieurs, that our own savages will be a problem should we have to retire.

"Monsieur Beland, I rejoice that you are here and have spoken as you have. I only wish that Monsieur Beauvais could join us and give his views. He is a cool thoughtful man, and, like yourself, would speak without prejudice."

It required several rounds of wine to restore us to a proper enthusiasm. I felt a coolness on the part of my two neighbors, although none at the table openly disagreed with Beauvais' decision. But de la Parade, who had drunk extermination to the village, was vastly more popular than I. Beauvais' mention of Beauvais made my back feel chilly, and my gaze wandered frequently toward the open door. And yet when I attempted to decide just what I should do, did he put in an appearance, my mind refused to work. It was as if my intelligence were paralyzed. I was keenly conscious of dreading his arrival but was incapable of planning a defense.

There was a wild wish in my heart that the Onondaga might discover the truth and manage in some fashion to intercept him. This, of course, was not based on reason. It did set me to thinking about the Onondaga and the Dinwood girl. I wondered if I had been observed when walking and talking with her and if, should I be apprehended, she would be held to account. My only consolation was that Beauvais was a gentleman, and that once she disclosed her sex, he would not permit her to be harmed.

Then remained the dangers of the retreat to Canada. Pontiac never lost an opportunity to advance himself! Once he saw that the French were whipped, I doubted his loyalty to the Lilies. Looking back to those hectic days in July, I am convinced I misjudged him. The events of the next few years were to establish his never-ending hostility to the English.

The dancers had quit the fire and war-pots and were now leaping gaily by the window, a swift shifting string of distorted and monstrously painted faces, and a bewildering flourishing of axes. Some of the axes were painted red the better to exemplify the welders' sanguinary ambitions. As the savages pressed closer to the building in passing in review, we saw them only from the neck up, and the effect was that of detached heads floating and bobbing by.

Then there came the sweetest strain of music I ever heard although it was produced by the guttural voice of a most hideously painted creature, who had concurred all suggestions of a human countenance by painting his face with a series of circles in black, red and white. His song was sweet in

my ears because he sang through the open window the simple refrain: "Ha-hum-weh. Ha-hum-weh." "I belong to the Wolf clan. I belong to the Wolf clan,"

Surely words were never more welcome. I felt the tightness in my chest give way; and I knew that Round Paw of the Onondagas was on the scene and ready to stand or fall with me. Beaujeu, too, caught the song, and remarked:

"That's not a northern voice, nor Shawnee, nor Lenape. It sounds like a Mingo, and get it is different."

"I was not giving much heed," said. "It sounded like an Iroquois, singing his Wolf song."

Next we had a view of a Potawatomi who brandished a war-club of birch. The club was painted red and black and was decorated with brass nails. The arm holding the club boasted of a badge of skunk-skin to show the man had seized a wounded enemy by the arm and held him. Three of the feathers in his hair were notched, evidencing he had killed and scalped as many foes, and there were other feathers unnotched, indicating he had scalped warriors slain by his companions. For after the northern fashion of counting coup four feathers could be worn for the death of each enemy slain—one by the man who made the kill, one by the man who took the scalp, and one by each of the two men who might assist in the scalping. This fellow remained before the window long enough to chant in a throaty voice:

"An eagle feather I see; a brave I have caught. A wolf I see; a wolf I have caught."

Beaujeu interpreted the song for me. I would have thought nothing about it had not the Onondaga soon passed the window again, proving he had not waited his turn, and proclaimed himself to be of the Wolf clan. And directly following him reappeared the Potawatomi with his boast of having caught a wolf. My nerves began lightening. There was, a sinister significance in the second appearance of the two men. It was plain that the Potawatomi was exerting himself to keep at the heels of my friend.

There was no time to worry over the coincidence, however. I was confident the Potawatomi, even if something had aroused his suspicions, would never catch Round Paw off his guard. The dancing suddenly ceased and we noted that the framework of the medicine-lodge was up, and that the wizards were rapidly covering it with medicine-ropes so as to shut off all view of the interior except as the small flap was pulled back and revealed a small, square opening facing our window.

Pontiac came through the doorway and spoke to Beaujeu. The commandant nodded, and explained to us: "He says one of the Potawatomi, Little Wolf, wishes to entertain us with some magic."

We settled back to enjoy the jugglery, but my nerves gave a jump when in Little Wolf I recognized the dancer who had said he had caught a wolf. He halted near the table and eyed us all steadily. I imagined his gaze rested a trifle longer on me than on the others, but set it down to my being a ranger.

Beaujeu rose and handed him a glass of wine and spoke first in the Ottawa tongue and then in French, saying:

"Little Wolf is a mighty wizard. When the medicine-lodge is ready he will call the ghosts to talk to us. They will tell us how to strike an ax into the English."

Little Wolf refused the wine and glanced about until he had located the brandy. He stretched out his hand for the stronger drink and Beaujeu threw out the wine and accommodated him. Tossing off the brandy, he placed his bow and arrow on a small side-table and turned his back on us and made much business of examining the contents of the bag. When he faced about, he had a long knife in his hand. This he proceeded to swallow up to the hilt. So far as I could observe the blade went down his throat.

From his belt the wizard next pulled a long arrow and apparently thrust it down his throat up to the feathers. I had accepted the knife-swallowing as being genuine, for I had seen a white man do it; but the barbed arrow I could not accept. Beaujeu whispered to me:

"Little Wolf is a cunning rogue. The red shaft is made of short sections which are driven together when he holds the barb between his teeth and presses down. But applaud him generously. Should he make the voice in the lodge tell the Indians not to fight against Braddock, we would find ourselves without a red force."

We clapped our hands and pressed them to our lips, and Little Wolf was much pleased. Picking up the bow and red-tipped arrow, he sang a song in which were repeated several times, "Scarlet is his head."

I became keenly interested when, after a slight pause he fiercely shouted: "It finds its way into a Wolf."

He held the arrow so those staring in at the window might look on it, and among the spectators was the circle-covered visage of Round Paw. The wizard had uttered a threat three times during the last hour, and a "wolf" was always the victim. The dead bear had been accepted as a symbol for Braddock's army.

enmity, and naturally I believed my friend had incurred suspicions. I dared not attempt a signal although I did glare into the Onondaga's eyes. Little Wolf gathered up his belongings to retire, but Beaujeu detained him by inquiring:

"Why does not the great wizard shoot the medicine-arrow into the wolf now?"

The Onondaga allowed two braves to crowd in from each side so only his head partly showed between theirs. "A ghost in the medicine-lodge will shoot it. It will find its way to the Wolf."

Those at the window were very quiet, their eyes glowing as they began to sense a dramatic climax.

"Onontio's sons wish to see the arrow when it finds its mark," insisted Beaujeu. He too had detected some significance in the fellow's mysterious talk.

"Onontio's sons cannot see the ghost. Only medicine-eyes can see that. Their eyes can see the arrow when it goes through the Wolf's neck. Their eyes can see that without their moving from their places."

We crowded closer together so that all might have a fair view of the lodge, and the savages at the window drew aside. A fire was lighted on each side of the lodge so as to illuminate brilliantly the front of the structure. Beaujeu whispered:

"Little Wolf is now inside. But name of the devil! What did he mean about his arrow finding a wolf? One can never tell how the red mind is working."

"He may have an enemy he wishes to kill and credit the killing to a ghost," I suggested.

Maybe, I hope not. If their minds start running away with them they'll outrun a wolf-pack in getting back to their northern villages. However, it can't be serious. Pontiac must know what he meant and approves; and Pontiac is one leader I will count on."

The drum thudded monotonously for two or three minutes, gradually increasing in volume, then abruptly ceasing. A weak voice, talking in the language of the Delaware, called out:

"What do my children want? Why do my children call me back to this lodge? I am the first of your grandfathers. You have called me over a long path."

There followed the shrill voice of a woman, but in a tongue I did not understand. Next the wizard's voice, husky and labored, entered the dialogue, and in Delaware he asked:

"O Grandfather of all the red people, tell us of the Englishman. Is he strong? Will he fight strong? Will your children be struck in the head?"

"The answer to that can easily spoil all my plans!" grunted Beaujeu.

The medicine-lodge rocked and swayed as if buffeted by a mighty wind. Discordant noises arose—evil forces striving to prevent the voice from answering. There sounded the barking of dogs and the scream of the panther and the piping wail of a child. A fearful visage showed for an instant at the small opening and was succeeded by another. Then with a single booming note from the medicine-drum silence returned to the lodge. After a few moments the weak voice of the first of all grandfathers spoke, saying:

"Little Wolf is a mighty wizard. He drives away the black spirit that wants to stop my mouth. I am the first of your grandfathers. I tell you this—the floor of the forest will be red with the blood of the English. The Manito is angry to see his red children losing their villages and land. Let the arrow find the false Wolf and then go into battle without fear."

Silence again, and Beaujeu wiped the sweat from his brows and muttered:

"Nom de Dieu! What devilry is he up to? It's some of Pontiac's work. He should have told me first. Getting a fight out of the Indians is conditional on their killing the 'false wolf.' Monsieur Beland, I fear you are right. Little Wolf has a rival. If so he must kill him, or else the flag of France must be lowered."

He became silent as from the lodge came the voice of Little Wolf. It sounded very weak and we had to strain our ears to catch his words. Panting for breath he called out:

"The voice is very far away. I can hear it, my brothers cannot. It rests but will come very soon—Wait. The little white dog is barking. He is leading the voice back."

"Another pause and then we heard the yelping and ki-yling of a puppy. Then came the voice, this time sounding much louder. It commanded:

"Have the warriors who danced the lodge four times, and let each ask himself if he is a true man."

"Ah! Now it develops. Soon there will be a killing," hissed St. Therese. There followed more shaking and swaying of the lodge. Pontiac's voice rang out, calling on the dancers to fall in line and begin circling the lodge and for men with straight tongues to fear nothing. Painted faces in profile began passing the window. Each savage kept his face averted from the lodge and each seemed to step in greater haste when abreast of the small opening. I sought the Onondaga in the long line, but failed to behold him. I took note of the first man to pass the window, and when he appeared for the second time there sounded a gurgling cry from the interior of the lodge, after which the sides flapped and fluttered violently and the long-drawn-out howl of a wolf took the place of the puppy's yapping. The savages quickened their pace until they were moving almost on a run. The barking of the little white

dog came back, followed by a deep voice chanting: "Ha-hum-weh!"

I held my breath and waited for the climax, whatever it might be. Beaujeu whispered:

"I think it is our friend, who stands at the door talking with the young Englishman with the French heart. The young man is timid. He will not come in unless strongly urged. Ah! Excellent. It is our friend, the good Beauvais. He presses the young man to enter. When this damnable marching and yowling stops I will call out for the stranger to join us and become better acquainted."

I turned my head slowly, my heart thumping like an Indian drum. Beauvais stood with his back to us. He was speaking very earnestly to the Dinwood girl, one hand resting on her slim shoulder. He was trying to induce her to enter and she was striving to detain him. I gathered my feet under me and made ready to leap over the table and to trust to luck in plunging through the window and into the red mob. Beauvais straightened and removed his hand from the girl's shoulder and started to turn about and enter the room. The girl seized his arm and frantically essayed to hold him back. He was motionless for a moment, as if amazed at her action; then shook off her grasp and stepped backward through the door.

The Onondaga's terrible war-whoop jerked my gaze to the window. The front of the lodge bulged far out, and the Frenchmen, as well as I, exclaimed in astonishment as a fluttering mass of something that looked to be neither beast nor human, emerged from the structure and dashed through the fire-light and came flying through the window.

A startled cry at the door caused my head to swing in that direction. Beauvais, now glaring at the table, was pointing a finger and yelling:

"Seize the Englishman! Braddock's spy!"

Several things were happening simultaneously which I can narrate only as separate incidents. My companions sat stupefied as Beauvais called out, for even as he was sounding the alarm the muffled figure from the lodge rushed toward him and with a swing of a blanket extinguished the candles on that side of the room.

"The English spy!" hoarsely called Beauvais, and then went down with a



"The English Spy."

crash as the muffled figure bowled him over and with a quick turn raked the candles from the wall behind me, leaving the illumination of the room confined to the light from the fires outside.

Beauvais' brain resumed working. "Treachery!" he screamed.

I heard his chair tip over as he sprang to his feet. But none at the table knew wherein lay the treachery as was proved by the failure of the company to lay hands on me. Or possibly all were so dumfounded they could not for the moment take intelligent action. Something crashed against my chair, and over went the table. I felt a muscular arm slip around my waist. A blanket fell over my head. The next moment we were tumbling through the window and into the midst of the pandemonium now reigning outside. I freed my face enough to see the Indians scattering and falling back from the lodge. Pontiac's voice was thundering:

"Surround the lodge!" But there was none among his followers who dared to draw close to the sacred structure.

My conductor pressed heavily on my shoulder and we went to our knees and crawled under a flap of the lodge, and the light from the fires in front briefly revealed the distorted face of Little Wolf. His red medicine-arrow was through his throat, the head and several inches of the shaft showing under his left ear.

"Ha-hum-weh!" chanted my rescuer.

The red arrow had been discharged in the medicine-lodge even as Little Wolf had prophesied, and it had found its way into a wolf, but not into the man of the Wolf clan as I had feared. We had no time to linger. From the apron outside, I assumed that the Indians were still bewildered and believing that the startling appearance of the muffled figure outside the lodge and its flight through the window was but the workings of the wizard's manito.

Even now, with the Frenchmen stumbling about in the commandant's house and calling for lights, with Beauvais madly shouting that there

was an English spy inside the stockade, and with Pontiac darting among the terrified red men and fiercely exhorting them to catch my friend the Onondaga, we yet had time to make advantage of the darkness that encroached up to the rear of the lodge. Round Paw pulled the blanket over my head and drew his own covering closer, and seizing my arm raised the rear wall and pushed me before him.

"Run fast!" he hissed. "To the water-gate!"

Pontiac's voice thundered a command. The Onondaga muttered: "The Ottawa chief tells his children to watch the gates and the stockade and kill anyone trying to get out."

Once outside the lodge and we were in darkness. Thirty yards away and we had lost ourselves in a wild crowd of savages. But as we pressed on, Pontiac's stentorian voice gradually reached an intelligence here and there; and from different points and in all the dialects of the northern and Ohio tribes, the word was passed to guard the stockades and gates.

"Take the man Beland alive!" roared a voice; and I knew that Beauvais at last had connected my identity up with my French name and that Beaujeu now understood all.

"Why this way?" I asked the Onondaga as we reached the stockade on the river front.

"Stand on my shoulders, white brother, and go over," he directed. "There's the witch-woman—"

"She's on the other side. Shall we join her, or face about and die like chiefs?"

I scrambled to his shoulders and went to the top of the timbers. I reached down a hand, but scoring all assistance Round Paw swarmed over the barrier. The two of us dropped to the ground within a few feet of the river.

It was very dark and I was completely bewildered. "This way, mister," called a low voice.

The Onondaga dragged me after him. My hand rested on a canoe. "Who's there?" I whispered. "Daughter of witches," was the half-laughing, half-sobbing reply. "But please don't stop to talk, mister."

It was time I scrambled into the canoe, for a chorus of yells was now raised on the other side of the stockade and only a few feet away. I tripped over a rifle as the Onondaga pushed the light craft into the current. I picked it up and found it familiar to my hands.

"Whose rifle is this?" I whispered. "Hush!" cautioned the girl. Then proudly "It's yours. I was at the door when the trouble began. I reached in and took it when Mr. Beauvais commenced calling you a spy."

"Talk will kill us," grunted the Onondaga as he pushed a paddle into my hands and began working desperately to reach the slack water along the opposite bank. His warning was timely for I could hear the plop, plop of heavy bodies dropping over the stockade. There came an explosion of mad rage that made my heart wince. The Onondaga proudly in formed us:

"They have found Little Wolf in the lodge. I crept under the wall and shot him with his own arrow. He made a choking noise. The Wolf man thought some of those outside would know the truth. There was Pontiac. He talks with ghosts and they tell him secrets. It was he who told Little Wolf to kill me. Pontiac saw me at Detroit and knew my heart was warm for the English. Little Wolf was to shoot me through the hole in the robes when I danced by. If my white brother had not been in danger, I should have shot Pontiac after telling him to march by with the others."

"They are over the wall; they will take canoes and follow us!" I warned. "Mister, I spoiled all the canoes I could find before going to the house where you was eating. They can't catch us with boats."

"You have done well, little woman. What does Round Paw do now?"

"We were at the opposite shore. We will go up the river instead of down," he answered. "They will think we went down to the Ohio. If the man Beauvais had not come we would have shown them some new magic."

"You knew about Beauvais!" I asked Round Paw.

"The witch-woman told me. She asked my help. She walked outside the house to stop Beauvais from seeing you. It was the witch-woman who said we would leave by water. She was to be outside the stockade by the water-gate. She has a very strong medicine."

"So it was you who saved me, little woman," I said to her.

"Lor's sake! Don't believe nothing that Injun tells you. He saved you; not me. And now I can't go to Canada."

"Wait until after the war. It will be a short war," I told her, little realizing my fallibility as a prophet.

"We must leave the river before the first light," spoke up the Onondaga. "Pontiac will spend the chase. He is a very great man. He knows we took to water. He will send men along both shores to find where our trail leaves the river. He will throw many men between us and Braddock. If the witch-woman takes to the air and flies like a bird, then Round Paw and his brother can walk slowly and laugh at the wild Ottawas."

He was disappointed when I told him the girl could not fly like a bird and that any plans we made must include her. I told him of my efforts to shield Allaquippa's village from attack and expressed my fear that Beauvais would now do the thing I had convinced him he should not do. This

furnished the Onondaga with a double errand to the Delaware village: he must warn the woman sachem and tell Cromit to carry my warning to the army that the Turtle Creek route, though rough, would be free from successful ambushes.

"You will take the same talk, but separate from the bonebreaker," I added. "The woman and I will leave you at the mouth of Turtle creek and follow it up for a bit and seek the army in that direction. Surely one of the three of us men will take the talk through to Braddock."

### CHAPTER VIII

#### Our Orendas Are Strong

Half a mile below the mouth of Turtle creek the Monongahela grew very shallow with scarcely more than a ripple of water in places. The three of us held a brief conference and decided that Round Paw should

CONTINUED NEXT WEEK

### Sunlight Not So Vital for Cows

#### Rays Have Remarkably Beneficial Effect on Chicks, Pigs and Goats.

With the development of knowledge that light plays an important part in the retention of minerals fed to animals, the question naturally arose, "Does exposure of dairy cows to summer sunshine enable them to obtain and utilize from the pasture grasses sufficient lime to keep them on a positive lime basis?"

**Effects of the Sun.**

To answer this very practical query Messrs. Hart and Steenbeck carried on careful experiments in June, when the protective properties of the sun are at a peak, using cows giving 45 or 60 pounds of milk daily. The cows were fed a grain mixture, silage, and 40 pounds daily of freshly cut green grass. This approximates what would be given cows of this character on better dairy farms. The results indicated that this ration was insufficient to keep the cows on a positive lime basis. In fact, there was only a slightly improved situation as concerns lime assimilation when these cows were placed in direct sunlight for six hours daily as compared to standing in a darkened barn. Apparently then, the rays of the sun have a remarkably beneficial effect on little chicks, pigs and goats, but with dairy cows no such positive benefits can be observed.

**Cows Again Studied.**

When these same cows were again studied in September, after their milk production had dropped to 25 or 30 pounds of milk daily, lime balance was maintained, even though the sunlight at this season was less potent. It seems apparent from these results that the feeding of extra lime to high producing dairy cows, while on summer pasture, is a very desirable procedure. It may very well be true that the commonly noted fall-off in milk production in midsummer, on the part of heavy milking dairy animals, may be due to a depletion of their lime reserves, just as much as to the more commonly attributed causes such as heat and flies.

It has been concluded that light plays no role in the utilization of lime by cows. Possibly this also explains why young calves grow better when kept in a barn, rather than out of doors, as contrasted to young chicks, little pigs, and other young animals which seem to demand sunlight as an essential for normal growth.—Wisconsin Agricultural Experiment Station.

### Contagious Abortion Is Most Dangerous Disease

Contagious abortion is a germ disease which, if it is not controlled, will go through an entire herd. The germs are usually carried from the fetus, or afterbirth, of a cow that has aborted, to the feed of other cows which in turn get the disease. The best way to control this disease is by cleanliness, isolation and disinfection.

As soon as a cow shows any signs of aborting she should be isolated from the herd and kept separate until all discharges have come away. The stall must be cleaned and disinfected as well as the hind quarters of the cow. The fetus and afterbirth must be burned or buried, the manure from the stall taken directly to a field to which cattle have no access. Care must be taken not to carry the germs of the disease from the stall where an infected cow stands to the feed of other cows. These germs are usually carried on the shoes of the attendant and on forks.

There is no known cure for this disease. All we can do is to control it by not carrying the germs to the feed of other cows.

It is always advisable to employ a competent veterinarian to help control the disease. It will not pay to sell a cow that has aborted, since any new cow coming into the herd will take the disease.

### Agricultural Notes

Soy beans are an excellent hay substitute when clover or alfalfa fails. Besides, soy beans are easily grown.

The length of time required for milk to sour is a good measure of the cleanliness of the milk, the temperature being constant.