

Assisting Conception in Cows.

Ed. Maritime Agriculturist.

I thought I might interest you and some breeders, if I related two of the main causes that I have found, during the last twenty years, to prevent conception, and how I have relieved them.

I think my observations may be of some value, for I notice in almost every herd there are one or more cows that fail to get with calf, even after the cow has calved once, and often using various bulls, large and small, usually throwing the blame on the bull. I am of the opinion it is seldom the fault of the bull, but almost always the relative location of the male germ and ovum in the cow. The male germ must meet the ovum beyond the *os internum* or conception will not take place. I will mention only two of the main causes and opposite conditions of the *cervix uteri*, *os tincæ* and *os internum*, that I find prevents conception. (There are other minor causes). Conception cannot take place if either of these two conditions exist. One is when the *cervix uteri* is patulous or relaxed and lets out the male germ and ovum before it makes its vital connection with the internal mucous membrane of the womb. The other is when the *os tincæ* or the *os internum* is closed or so small as not to admit the male germ to the womb easily, and thus cannot reach the ovum to impregnate it in the womb. The usual length of the cervix of a cow is about one and one-half inches long. In a post mortem examination made by myself of a cow that had been killed for beef, I found the *cervix uteri* full five inches long from *os tincæ* to *os internum*, a very unusual length. I have found quite a number that measure three and four inches, and with the *os internum* open and *os tincæ* closed. This great distance of *cervix uteri* to *os internum*, and its firm closure, with open *os tincæ*, has deceived me, and, no doubt, others. The *os tincæ* often being easily opened with the finger, and the extra depth of the *cervix* causing the operator to think he was through both *sphincters* and into the womb.

Treatment.—There is no medicine that will prevent or relieve these two conditions. The only relief is by mechanical means. First condition: When the *cervix uteri* is patulous, a medicine that will produce contraction of the *os tincæ* to hold the male germ, will produce its expulsion into the vagina, and so out. Keep the cow on low diet and no water for a day before served; and then use a one-fourth inch cord ten feet long, with a loop or ring in one end.

Throw the loop end over the back of the cow just in front of the hips, bringing it up in front of the bag to the middle of her side. Make a loose half-hitch; as soon as the bull leaps, instantly draw the cord as tight as possible, and leave it on for twelve hours, without feed. This puts the cow in general distress; puts nearly all the muscles in the system into a more or less contracted condition, and prevents her assisting in the expulsion of the male germ. I have not failed to get a cow with calf when this particular condition existed. Straining and voiding the germ does not prove this condition. An educated finger examination only reveals this condition of the *os tincæ*.

Second cause: Closure of the *os tincæ* or *os internum*.

Treatment: Extract of belladonna will relax the *cervix uteri* when the tube is pervious, but no medicine will open the internal *os* when closed by a cicatrix caused by abortion or the rupture and tear of the mucous membrane near the *os internum* at natural calving. The whole mucous membrane that lines the womb is thrown off every time a cow aborts or calves, except just at the internal neck. I believe this torn condition of the membrane and its healing, causes this cicatrix and closure. I have seen this cicatrix so strong as to stand the force of five bulls, large and small, for four years, she having once calved. Another that had never calved and took the bull regularly for four years, had her first calf when five years old. The canal to the womb must be opened by mechanical means. The parts are of a very delicate structure, and this must be done by very gradual easy dilators and a day or two before the cow comes into heat. I have not been able to find any dilators or sponge tents that will answer this purpose fully. The sponge tents were too soft, and give before they could be got inside. The instrument had to be used with one hand and that in the vagina, and so could not handle the instrument and at the same time keep the finger at the *os tincæ*, and thus prevent the instrument from catching into the folds and fossas, and could not use gradual continuous pressure, and was uncertain when the canal was tortuous. To overcome these defects I made a metallic bougie two feet long; the end of flexible metal that could be bent to any sweep by the end of a right fore finger acting as a live guide at the *os tincæ*. With an arrangement at the end of the vagina, I can make the flexible point sweep in any course, and at the same time keep

up a steady, continuous pressure at the obstructions. Some points are made of soft material, strengthened by internal broken joints that adjust themselves to any course by a simple rotation, so there is no danger in wounding the canal. As soon as the canal is pervious, I introduce sponge tents to make the canal larger and remain open. These should be made of tough sponge well saturated with gum-arabic and bound tight over a steel knitting needle, to be removed when dry.

I know that if a correct diagnosis is made and either of these two conditions are found, and the treatment as above followed, many of the worst cases of barren cows can be made to breed that otherwise could not.

A. D. NEWELL, M. D.,

New Brunswick, N. J.

Weight and Yield of Eggs.

The following statement of the weight and yield of eggs of the different prominent breeds of fowls is from an exhaustive tabular statement by Mr. L. P. Simmonds, who is considered standard authority on poultry statistics:—

Light Brahmas and Partridge Cochins—eggs, seven to the pound; they lay 80 to 100 per annum, or even more, according to treatment and keeping.

Dark Brahmas, eight to the pound and about 70 per annum.

Black, White, and Buff Cochins, eight to the pound, 100 or less per annum.

Hymnouth Rocks, eight to the pound, 100 per annum.

Houdans, eight to the pound, 150 per annum.

La Fleche, seven to the pound, 150 per annum.

Black Spanish, seven to the pound, 150 per annum.

Dominiques, nine to the pound, 130 per annum.

Game fowls nine to the pound 130 per annum.

Leghorns, nine to the pound, 150 to 200 per annum.

Hamburgs, nine to the pound, 175 per annum.

Polish, nine to the pound, 150 per annum.

Bantams, sixteen to the pound, 60 per annum.

Turkeys, five to the pound, 30 to 60 per annum.

Ducks, five to six to the pound, 30 to 60 per annum.

Geese four to the pound, 20 per annum.

Guinea fowls, eleven to the pound, 60 per annum.

The eggs of the modern improved breeds of fowls have gained one-third in weight, as compared with eggs formerly laid.