

growers who supplied the latter. Obstruction of an officer acting under this section, or the giving of a false name or address, constitutes an offence, and the penalty, on conviction, shall be a fine up to £10. There is a strong desire to have this bill extended to Great Britain, but up to the present time this has not been consented to.

THE UNSOUND STALLION EVIL.

Another highly-important measure which it is hoped will soon materialize—it is still "feeling its way"—deals with the question of unsoundness in stallions. Schemes of horse improvement in Ireland have been tried, with not a little success, but it has been plainly taught by experience that the fullest benefit cannot be expected until some check is placed upon the unsound sires that travel round the country for public service. Common sense might, in an ideally-ordered community, suggest to farmers the wisdom of giving such horses the go-by, but things do not exactly work out that way under actual conditions, and the weedy sire unfortunately gets a lot of patronage. Legislation is now proposed to prohibit any stallion standing for public service without a license from the Department (with the exception of registered Thoroughbreds); and such license, it is proposed, shall be granted only to sires that have passed the Department as free from hereditary disease, and as being up to a certain standard of excellence, this standard not to be too high to start with. The country has taken kindly to the foregoing idea, and several county committees have, in effect, said: "Not stallions only, but bulls and boars, as well."

A NOVEL, EAR-MARKING SCHEME.

While on the subject of horses, it will not be out of place to refer to a newly-suggested solution of the national horse-supply problem. For purposes of defence, an adequate supply of good horses is essential, and a wise Government would not hesitate to encourage horse-breeding on an elaborate scale, with this end in view. Any scarcity that may arise will undoubtedly be due to the extensive purchases made throughout the United Kingdom by Continental buyers, and for a long time past the diminution in our stock of sound high-class brood mares due to this cause has been noted with regret and serious apprehension. Now comes along the promise of a new bill, promoted by the Ear-marking Association (recently formed, and successful, seeking the support of show societies on both sides of the Channel), which, it is hoped, will settle the difficulty in so far as brood mares are concerned. The scheme suggested is a voluntary arrangement between the farmer and the Government, under which the former agrees, for a grant, say, of £10, to retain his marked brood mare at home, although he is free to sell her foal as he likes. After the brood mares have been secured, the scheme may be applied to filly foals. A simple ear-mark is proposed, and the co-operation of the customs authorities in stopping at port any "ear-marked" animal, completes the outline of the scheme. Of course, a Government grant must be obtained, but this is thought to be well on the way already, and the proposed bill will aim at emphasizing the vital importance of "the retention principle," for, as Phillips Williams, the Secretary of the Association, aptly says, "If the horses we create for national defence with our taxpayers' money are to strengthen foreign armies, it seems that we should be better with no grant at all."

IRISH CROPS IN 1909.

The Irish harvest season is now drawing to a close, and, taken in its entirety, the year has proved a satisfactory one. The official estimates of crop areas reveal a general increase in the cultivation of wheat amounting to about 20 per cent. The grain has turned out good on threshing, and the crop has been a successful one. Barley, also, has extended its area by about 5 per cent., and fine average yields of high-class quality have been obtained. Oats, the staple grain, declined in area by about two per cent., but the produce has turned out satisfactorily, in spite of some trying weather periods, though the straw has been short. Potatoes are one of the best crops of the year, being remarkably free from blights and diseases. The climatic conditions have not favored too well the turnip and mangel crops, but a fine September helped the later growth forward. Of the former, the area is slightly smaller, but mangels are apparently becoming more popular. Flax is a rapidly diminishing quantity in Ireland, owing to recent unfavorable prices. This year the decline in area represents a fall of over 8,000 acres, or nearly 20 per cent. A promise has been made of a Special Committee of Inquiry into flax culture, which will, it is hoped, discover the best way of reviving the industry and developing it on a more firmly established basis.

LIVE-STOCK POPULATIONS.

Official figures on this subject are not altogether of the most gratifying description, as, taken together, they show a decline of 91,000, equal to 1.6 per cent., in 1909, show a decline of 21,000 milch cows, a 2 per cent. The falling off of 21,000 milch cows is a disquieting feature. Pigs are fewer by nearly 70,000, sows accounting for 3,200 of this num-

ber. In this connection, however, it is worth mentioning, in light of my recent article on "Ireland's Pig-breeding Industry," September 2nd issue, that the Ulster province is making up its deficiency of brood sows, this part of the country having increased its stock of breeders by over 3,000, and its total pig population by nearly 30,000. All classes of horses show small decreases, amounting in all to 5,336, or the trifling percentage of about 8 per cent. Goats and poultry are both more numerous. In the matter of sheep, there is an increase, the total being the highest since 1902.

The markets for sheep have been exceptionally dull for several months past. Pigs, on the other hand, have been selling steadily at high prices, and the cattle trade has been rather firm. On the whole, indeed, there has not been very much to find fault with in our agricultural experiences this year, so far as these hard times go.

—EMERALD ISLE.

HORSES.

Administering Medicine to Horses.

Medicine may be administered through different organs, and in various ways. It is fortunate for us, and for our patients, that we are able to do this, for sometimes one organ, say the mouth, is so affected that we cannot use it, and we have to give our medicine by some other channel. The organs or channels we use are: (a) The mouth, (b) nose and trachea, (c) skin, (d) rectum, (e) urogenital organs, (f) blood vessels.

Mouth.—The medicine may be in one of the following forms: (1) Ball or pill, (2) drench, (3) electuaries or pastes.



Desford Future Queen.

Shire mare. First and champion, Royal Show, 1909.

MAKING AND ADMINISTERING A BALL.

The ball or pills for the horse should be cylindrical, about two inches long, and having a diameter of about three-quarters of an inch. They should be freshly prepared, because when old they are apt to become dry and hard, and may even be passed whole, without being dissolved or having done any good. Usually, the drugs in these balls are bitter and disagreeable to the taste, and would be accepted with difficulty in any other form. The body of the old-fashioned balls was linseed meal, which was added to the drugs, and mixed together with soap or treacle. They must not be sticky, and for this reason it is usual to wrap them in thin, strong paper.

Many modern balls are given in capsules. It is easy to understand that only those drugs which occupy a small compass can be made into balls. In order to give them to the horse, take off the coat and roll up the right sleeve. Now loosen the halter, and turn the horse round in his stall. This is to prevent him flying back. Now take the ball in the right hand, holding it by the tips of the first two fingers and the thumb, and form the whole hand into a long cone like a letter "y." Now take the tongue in the left hand, pull it forward and sideways, so that it lies between the teeth on the right side of the jaw. Insert the right hand, holding the ball into the open mouth, keeping the back of the hand against the palate,

or roof of the mouth, and push it backwards until the hinder part of the tongue is reached and there appears to be a space. Keep cool, don't be afraid, and don't be in a hurry, but push well in. The horse cannot hurt you. He is unable to bite while you hold his tongue.

Withdraw your right hand; leave hold of the tongue; hold up his head, and you will see the ball move along the left side as it is swallowed. Some horses hold the ball in their mouths for quite a time. For such, have a bottle near at hand, with a little clean water in. When the tongue is released, the water can be poured into the mouth, and the whole sent down together. You can pour in the water before releasing the tongue, if you prefer.

The advantage of giving a ball is that you know exactly how much you are giving, and it is far easier for both man and beast. Some would prefer to use an instrument called a speculum, to keep the mouth open, but I never use one. Others, again, use an instrument for throwing the ball into the mouth. It is termed a "balling gun," but is not really necessary, unless you are treating "bronchos."

It would be well to practice this until you are able to do it without fear.

GIVING A DRENCH.

The drugs are given in the liquid form when they are bulky, and each dose is termed a drench. If the drug is insoluble, it may still be mixed with water, but be sure to shake the bottle up well. Use enough water (or raw linseed oil) to prevent the medicine being too strong, because if you burn or injure his mouth, he may resist you the next time you want to drench him. The bottle I use and prefer is a strong one, with no shoulder. An aerated water bottle is just the thing. In many cases a cow's horn is cut so as to form a kind of sloping spout, and is kept for drenching alone. Or a tin bottle can readily be obtained. These latter are used, because of the risk of having the bottle broken by the teeth; in which case you may cause serious injuries.

To hold the horse's head up, take a rope, make a loop at one end, throw the other over a beam, pass the loop over the upper jaw, just past the bridle teeth, then pull up the head and pour the medicine into the open mouth. Perhaps there is no beam. Then, tie a loop in the end of a strap, rope, etc., put this over the upper jaw, knot upwards. Put a stable fork under this, and lift up the head by means of the fork. Notice that in both instances the lower jaw is free. He will probably open his mouth himself. If not, pull the corner of his mouth outwards, to form a funnel, and pour the medicine in. Don't be in a hurry; two or three ounces are enough to give at once. If you press the mouth of the bottle between the bridle teeth and the molars, and towards the roof of the mouth, he will at once open his mouth. If he does not swallow, I rub my finger or the bottle (finger generally) along the bars on the roof of the mouth, and he very rarely causes any trouble. Then I pour in a little more, and so on, until all is taken. Some men take more of the medicine on their clothes than the horse takes inside. Personally, I feel that it is my fault if any is lost.

Patience and gentleness are all that are required. Do not on any account pinch, thump or rub the throat, and there is no necessity to pull his tongue. Simply tickle the roof of his mouth with the finger, and he will swallow. Should he cough, drop his head at once—at once, mind. Or some of the medicine may go down to the lungs, and cause mechanical pneumonia. This tells you not to tie the head up. Leave it so that it can be dropped at once. It is for this reason that you are strongly advised never to drench through the nose. Do not even put water in.

I might have said that sometimes a syringe is used for drenching the horse, but unless the quantity given is small, it is too troublesome. Do