

which is insoluble. Bulk doses of tea or coffee with milk should then be given and the animal kept warm.

*Arsenic.*—In dipping-fluids the alkali arsenite employed is generally sodium arsenite, which is easily soluble and the most poisonous of the ordinary arsenical preparations. The general symptoms of arsenical poisoning are salivation, thirst, colic, and a subnormal temperature with trembling, stupor, and convulsions. Death takes place sometimes very rapidly. There is a very marked stiffness in movement almost amounting to paralysis, especially of the hind limbs. Often portions of the skin assume a characteristic purply-blue colour, especially noticeable round the udder in a cow; later this area may undergo sloughing. This is comparable to arsenical eruption noted in man.

The chemical antidote is freshly prepared ferric hydroxide (an iron compound). In addition milk, white of egg, and lime-water in large quantities are useful.

*Phosphorus.*—Yellow phosphorus is the form met with in vermin-poisons. In New Zealand it is used in the manufacture of phosphorized pollard for rabbit-destruction. A peculiarity is that symptoms may be delayed some hours, even days after taking, as it is slowly absorbed. The symptoms are those of intense thirst and abdominal pain. Possibly the breath may be luminous in the dark. In pigs I have found free phosphorus in the stomach-contents several hours after death. Blue-stone is given as an antidote, it being supposed to remove the poison in the form of copper phosphide. In phosphorus poisoning any oils, milk, or anything of a fatty nature should be carefully avoided.

*Strychnine.*—Strychnine is one of the two chief alkaloids of the seeds of *Strychnos nux vomica*, an East Indian tree. The prepared drug is a white crystalline substance having an intensely bitter taste. It is extensively used in medicine as a tonic. Employed in New Zealand as a rabbit-poison.

Poisoning cases occur mostly in small animals, particularly dogs, but strychnine is also a source of danger to sheep and the larger animals. It acts on the central nervous system, and produces convulsive seizures followed by a period of relaxation. The symptoms are similar to those of lockjaw. Two or three grains would be sufficient to poison a sheep, and slightly less than half a grain to poison a dog.

In the case of a dog an emetic should be given. The best physiological antidote is choral hydrate. Others are tobacco and permanganate of potash. Needless to say, any attempt to antidotal treatment must be carried out rapidly.

*Ragwort.*—This poisoning is due to stock eating the common species of ragwort (*Senecio Jacobaea*) found in this country. It is the cause of so-called Winton disease in New Zealand, Pictou disease in Canada, and Molteno disease in South Africa. It is worthy of note that the major portion of the original investigation work into the poisonous effects of ragwort was carried out in New Zealand by Dr. J. A. Gilruth. As is well known, many areas of this country are badly overrun with the weed, and losses of stock due to its cause are by no means uncommon in those districts.

Ragwort poisoning has occurred in horses, cattle, and sheep, and roughly that is also the order of susceptibility. The plant contains