**Diseases affecting cattle at Elizabeth Macarthur Agricultural Institute (EMAI)**

As is the case with all farming enterprises, cattle are susceptible to a range of diseases caused by microbes, invertebrates and adverse environmental conditions. The principal effects of these diseases include:

* death of valuable animals
* failure to make normal growth
* lowered production
* lowered quality of produce
* failure to reproduce

In practical terms these result in a loss in production. This in turn leads to a loss of income and often an increase in costs as a result of the need to treat the disease.

At EMAI the following diseases are of prime concern.

1. **Bovine Johnes Disease (BJD)**

Bovine Johnes Disease is a bacterial disease of cattle. There is no known cure for it.

Find out more about Bovine Johnes Disease using the following websites and then complete the activity that follows at the end of this section.

<http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/animal-diseases/beef-and-dairy-cows/bovine-johnes-disease/what-is-bovine-johnes-disease>

<http://www.animalhealthaustralia.com.au/programs/johnes-disease/what-is-johnes-disease/>

1. **Neospora**

Neospora is a disease that is caused by a protozoan infection. It causes abortion of foetuses in cattle.

Find out more about Neospora using the following website and then complete the activity that follows at the end of this section.

<http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0020/160436/neospora.pdf>

1. **Leptospirosis**

Leptospirosis is a bacterial disease that affects the reproductive system of cattle and causes abortion of foetuses. It can be transmitted from infected cattle to humans, causing a severe and debilitating fever. It is amongst the world’s most common diseases that are transmitted from animals to people. These diseases are known as ***zoonoses***. Hence, its prevention is a vital workplace health and safety measure.

Find out more about Leptospirosis using the following website and then complete the activity that follows at the end of this section.

<http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0014/110084/leptospirosis-in-cattle-herds.pdf>

1. **Bovine Ephemeral Fever (Three Day Sickness)**

Three Day Sickness, as it is commonly known, is a viral disease of cattle that is usually short lived (as the name suggest). Most cattle recover fully from it.

Find out more about Three Day Sickness using the following website and then complete the activity that follows at the end of this section.

<http://www.dpi.nsw.gov.au/agriculture/livestock/health/specific/cattle/bovine-ephemeral-fever>

1. **Bloat**

Bloat is a metabolic disorder of cattle that arises as a consequence of grazing on certain types of pasture.

 Find out more about Bloat using the following website and then complete the activity that follows at the end of this section.

<http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0009/111411/bloat.pdf>

1. **Milk Fever**

Milk Fever is a metabolic disorder that affects cows close to calving time.

 Find out more Milk Fever using the following websites and then complete the activity that follows at the end of this section.

<http://www.dairyaustralia.com.au/Animals-feed-and-environment/Animal-health/Animal-health-fast-facts/Downer-cows/Milk-fever.aspx>

<http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/animal-diseases/beef-and-dairy-cows/milk-fever-hypocalcaemia-in-cows>

1. **Botulism**

Botulism is a paralysing disease of cattle. It is caused by a potent nerve toxin produced by the bacterium Clostridium botulinum. Most cases of botulism in cattle are associated with feeding supplements such as silage. If the bodies of small animals such as snakes, turtles and rodents are accidently harvested and incorporated into the silage their decomposing bodies may contain botulism toxins.

Find out more about botulism at the following website and then complete the activity that follows at the end of this section

<https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0003/139233/Botulism-in-cattle.pdf>

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1. **Internal parasites**

Internal parasites are various types of worms that invade the body (usually the digestive system). Young animals are usually affected more severely than adult ones.

Find out more about internal parasites using the following website and then complete the activity that follows at the end of this section.

<http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/146693/cattle-worm-control-the-basics.pdf>

1. **External parasites**

External parasites are invertebrate animals (usually insects or arachnids) that feed on the outer surfaces of an animal.

Find out more about external parasites using the following website and then complete the activity that follows at the end of this section.

<http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0017/104066/cattle-lice.pdf>

<https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0011/723917/Ticks-of-concern-to-NSW-stockowners.pdf>

**Activities for you to complete**

Using the websites shown above (and any others that you might like to search out), construct and complete tables to summarise the causes, effects and prevention/treatment of each of the above cattle health problems. Construct your tables as follows as shown. Make a point form summary under the headings given.

**Infectious diseases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Disease** | **Cause** | **Symptoms/economic impact** | **Prevention/treatment** |
| **BJD** |  |  |  |
| **Neospora** |  |  |  |
| **Leptospirosis** |  |  |  |
| **Three Day Sickness** |  |  |  |
|  |  |  |  |

1. **Metabolic diseases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Disease** | **Cause** | **Symptoms/economic impact** | **Prevention/treatment** |
| **Milk Fever** |  |  |  |
| **Bloat** |  |  |  |

1. **Parasitic diseases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Disease** | **Cause** | **Symptoms/economic impact** | **Prevention/treatment** |
| **Internal parasites** |  |  |  |
| **External parasites** |  |  |  |