

Jr: "Explain proper usage of medicines & vaccines"

This will be a two-part question. The first being, there are 3 different "medication uses" commonly known as the following; Label, Off Label, and Extra Label. Please define and provide examples for each, along with noting what you believe to be the best practice or practices amongst these "medication uses".

Part two of this question concerns the route of administration of any given medication. The 4 common injection routes to administer medications to livestock are the following; subcutaneous, intramuscular, intravenous, and intradermal. Please explain each type of injection and note what injection(s) would be considered the most commonly or widely practiced in livestock.

Int: "What are some desirable & undesirable genetic traits in each species of livestock?"

When considering the sheep industry specifically and some of the undesirable genetic and degenerative diseases, one that quickly comes to mind is Scrapie (*Codon 171 Genotype*). The eradication of Scrapie was made a priority amongst US sheep producers to have accomplished by 2010. Which is why it's not uncommon to see the Codon 171 Genotype (*RR(resistant), QR(carrier), & QQ(susceptible)*) revealed on most any set of EPD's for both rams and ewes.

Please explain the cause, possible transmission(s), and symptoms of Scrapie, along with the steps taken to eradicate Scrapie in the US.

Sr: "What are the positives and negatives of artificial insemination?"

Because many producers of all types of species will utilize EPD's to ultimately decide which sire they will choose to use on their herds, one could agree that understanding EPD's is an important skill for selecting the right sire for their herd's needs.

<i>No.</i>	<i>Litter Size</i>	<i>21-Day LWT</i>	<i>Days to250lbs.</i>	<i>BF EPD</i>	<i>LEA</i>
<i>1</i>	<i>8</i>	<i>80</i>	<i>179</i>	<i>+ 0.06</i>	<i>7.21</i>
<i>2</i>	<i>14</i>	<i>150</i>	<i>165</i>	<i>-0.08</i>	<i>9.11</i>
<i>3</i>	<i>5</i>	<i>41</i>	<i>168</i>	<i>-0.02</i>	<i>8.65</i>
<i>4</i>	<i>12</i>	<i>131</i>	<i>170</i>	<i>+0.02</i>	<i>9.20</i>

EPD's will typically break into 3 different categories, (*Growth EPD's, Reproductive EPD's & Carcass EPD's*). These categories help us break down EPD's further so that we can then study their heritability.

As a swine producer, you are trying to select a sire to use on your herd to improve maternal/reproductive traits as much as you possibly can. Please explain which of the sires listed above in the given EPDs, that you feel would be the best choice to utilize on your sows. Also explain which category (*Growth, Reproductive or Carcass EPD's*) is considered the most heritable and least heritable for swine.