



## URINARY CALCULI

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April is when the urinary calculi phone calls begin. It is an annual occurrence and will continue to be as long as minerals containing phosphorus are added to finishing rations for sheep. Whole corn pellet rations also contribute.

Finishing rations need at least a 2:1 Calcium to Phosphorus. ratio. Ideally .8% calcium and .4% phosphorus. Phosphorus levels of over .4% are trouble and the addition of phosphorus to attain the .4% level should be avoided when finishing lambs. Basic rule of thumb is when formulating corn soybean oil meal rations add 30 lbs. of limestone, 20 lbs. of iodized salt, 5 lbs. of ammonium chloride with no added phosphorus. Clean loose white salt should always be available and good quality alfalfa hay offered free choice. If rations are structured correctly free choice hay won't affect their efficiency and may improve it.

Other factors that cause calculi problems include a lack of clean loose salt, minerals being self fed that contain phosphorus, sorting of rations in a way that individual sheep don't consume entire ration whole corn and pellet rations, lack of a clean water supply and mineral content of water.

Whole corn and pellet rations warrant special mention because more urinary calculi occur on these rations versus conventional rations. If whole corn and pellet rations are formulated correctly and genetic and husbandry conditions are correct they can be very effective. It is difficult to maintain the correct Calcium to Phosphorus ratio and maintain a good pellet. It is impossible to include the salt and ammonium chloride at recommended levels and maintain palatability. Regimes that use 500# of a pellet in grower ration and decrease to 300# in a ton of finisher absolutely can't be balanced.

Some ideas about prevention and treatment are as follows. Flock treatment is aimed at prevention and reversing the condition that is producing calculi. Water supply needs to be evaluated, is it clean and available? With whole corn pellet rations make palatable hay available free choice. Salt can be mixed 50-50 with limestone. In texturized rations ammonium chloride can be raised to 10 lbs. Be sure there is 20 lbs. of salt and 30 lbs. of limestone per ton with no added phosphorus.