SUMMARY: A FEW THINGS A DVM NEEDS TO KNOW WHEN FILLING OUT A VFD

Terminology:

Type A medicated article: The standardized highly concentrated feed additive from the manufacturer. Example: the Type A Medicated Article forms of Aureomycin® from Zoetis are 100, 90 and 50 (100 grams of chlortetracycline (CTC)/lb, 90 grams of CTC/lb and 50 grams of CTC/lb, respectively). Type A products require further mixing in either a Type B or Type C (see below) medicated feed(s) before they can be fed to cattle.

Type B medicated feed: A medicated feed that will contain the Type A product plus other ingredients (protein sources, trace minerals, macro minerals, organic feed sources (like soy hulls, wheat midds, molasses, etc.) The Type B medicated feed contains a lower level of drug than the Type A but also requires further mixing into the Type C (complete feed or total mixed ration) before feeding. A feed mill normally purchases a Type A feed additive to be mixed with specific ingredients to provide a liquid, pelleted or mash/meal supplement (fed at various rates) to be mixed with other feed ingredients at the feedyard to make a complete feed (normally a beef term) or total mixed ration (dairy feed term).

Type C medicated feed: Usually the complete feed/ total mixed ration (TMR) which contains a Type A medicated article or a Type B medicated feed plus corn, hay, silage, distillers grains (etc.) that will make up the total mixed ration. A Type C can also be a top dress formulation that can be fed over the top of the TMR to supply chlortetracycline.

For feedyards with a micro-ingredient machine, the yard normally purchases Type A medicated article which will then be mixed directly into other feed ingredients (corn, hay, silage, etc.) to make the Type C complete feed. A micro-ingredient machine may allow the yard to "bypass" the need for a Type B medicated feed that contains the feed additive (or Type A).

How to calculate Grams of drug/ton of ration needed for a specific VFD:

Easiest: Call the Feed Mill or the Nutritionist for the client.

Or, do a little math:

Example: You want to provide Aureomycin (one gram CTC/100 lbs Body weight for up to 5 days) to a set of 500 pound calves. How many grams of CTC is needed in a ton of feed (Type C or TMR) to meet this dose?

Use these figures below to estimate (DM) intake for a given set of cattle. When using DM intake instead of AS Fed intake, one does not need to know the moisture level of the ration, which may change frequently.

Individual Animal	DM Consumption
Live Weight, lb.	DM intake as % BWT
300	3.0
400	
500	2.7
600	
700	2.5
800	
900	2.3
1000	
1100	2.2

Source: Personal experience; private communication with other feedlot nutritionists: Dr. Joe Wallace and Dr. Stan Smith, NMSU, retired; Dr. Bill McCullough, Moorman Mfg. Co., retired; *JAS* 1990, 68:245-253.

You also need to realize a group of 500 wt animals/calves will probably have a variation in live weight of +/- 150 for the group of animals. You will need to decide whether you formulate for the heaviest weight animal in the group or the average weight of the group.

Assume you are using average of 500 lb

The 500 pound calf above will need 5 grams of CTC daily. How much will he eat?

- 500 lb X .027 BW = 13.5 lb of feed consumed on a 100% DM basis daily.

Therefore, you'll need to add 5 grams of CTC for every 13.5 pounds of TMR or complete feed. For the complete feed or TMR, the math is: 5/13.5 = X/2000 (if 5 pounds of feed contain 13.5 gm of CTC, how many grams do you need in 2000 pounds of feed?).

5 X 2000 divided by 13.5 = 740 grams of CTC for every 2000 pounds of feed (on a dry matter basis).

Please note: All VFDs (except Pulmotil for beef) are required to be calculated on a 90% DM basis. To calculate on a 90% DM basis, then multiply .9 X 740 = 666 grams of Aureo per ton or ration on a 90% DM basis. Thus for VFD purposes only, a DVM does NOT need to know moisture level of the ration.

All trademarks are the property of Zoetis Services LLC or a related company or a licensor unless otherwise noted. © 2016 Zoetis Services LLC. All rights reserved. GBF-00104

There are additional Medicated Feed Calculators available for industry and inspectors to use at www.AAFCO.org

Home Regulatory Medicated Feed Calculators

Medicated Feed Calculators

Disclaimer:

These calculators were developed to assist you in calculating appropriate approved levels of drug in animal feed. A specific situation that a particular calculator is intended to address is explained in the purpose/example section in each calculator. The calculators include the U.S. and where appropriate the metric system of units.

Although every effort has been made to ensure proper functioning of these calculators in your personal non-commercial use, we cannot guarantee that they will always provide you with an accurate result.

All calculators are provided in Excel (.xls) format.

1. Unit Converter
2. Monensin TMR
3. Drug on Dry Matter Basis
4. Drug Intake: from mg per lb to per ton
5. Drug Intake: from mg per head per day to g per ton

OTHER information:

Category I and II Feeds and Registered vs Non-registered Feedmills

Category I – Type A Medicated Article products which have NO withdrawal period at the lowest use level in at least one species fo which they are approved.

Category II – Feed additives that are categorized based on: 1) a required withdrawal period at the lowest use level in each species for which they are approved or 2) are regulated on a no-residue basis or a "zero" tolerance because of a carcinogenic concern, regardless of whether a withdraw period is required.

Registered Feed Mill – Feed mill uses a Category II Type A medicated article (feed additive.) Must register with the FDA, hold an approved medicated feed mill license, and perform required feed assays.

Non – Registered Feed Mill – All other feed mills. They can use Category I, Type A medicated articles, to make Type B, and/or C medicated feeds; and/or Category II Type B or C feed additives.

Withdrawal Times – Each withdrawal day is a full 24 hours starting with the last time an animal receives the drug. For example, if a drug has a 2 day withdrawal period and the last feeding is 10am on Friday, the end of the withdrawal period would be 10am on Sunday.