Protocol for Using Penergetic K in Dairy Barns

Penergetic k may be used wet or dry – if there are animals already in place the best option (for environmental/health reasons) is to apply dry.

<u>Using Penergetic k in Stalls in a Tie Stall or Free Stall Barn</u> (e.g. a milking cow barn)

Step 1: in order to increase the volume of product being spread and thereby make it easier to spread a small quantity in a stall mix penergetic k with an "absorbent and non-slip" material. Recommended rate: 1.0 lb. of penergetic k per 10 – 12 lbs. (or 2 kg of penergetic k per 25 kg) of "absorbent, non-slip material".

Dehydrated lime is less desirable for this purpose as it is dusty (and also tends to fill the grooves of a grooved flooring (which can end up being hazardous for cows). There are a variety of other commercially available products that penergetic k can be mixed with (and which are less expensive) including: magnesium, bentonite, stone dust or fine sawdust may be used.

Step 2: If bedding is to be applied in the stalls, apply penergetic k (as part of the absorbent/non-slip – penergetic k mixture) at a rate of approx. 1.0 lb. per 100 stalls (or 5 grams per stall).

Step 3: Apply in the stalls either every day at a rate of 2.25 oz. of penergetic k per 100 stalls cow (or if applied weekly at 1.0 lb. per 100 stalls per week). When penergetic k is mixed with another commercial product, the application rate of the other product can be significantly reduced.

Note: in the case of cows exhibiting signs of mastitis apply more frequently (e.g. daily) and at a higher rate, e.g. 3 to 5 grams per stall (or effected cow) per day. This has proven to be a very effective means of addressing environmental mastitis.

<u>Using Penergetic k in an Open Barn on Bedding Pack</u> (e.g. barn for dry cows or heifers)

Step 1: same as above - mix penergetic k at a rate of 1 lb. of penergetic k to 10 – 12 lbs. (or 2 kg of penergetic k per 25 kg bag) of selected "absorbent or non-slip material"

STEP 2: First application, apply on floor before bedding is installed at a rate of 12 to 22 oz. per 1,000 sq. ft. (4.0 to 7.0 grams per sq. yd.)

STEP 3: Subsequent application(s) - Apply on bedding at a rate of 4.0 oz. per 100 LUSs per day.

Alternatively, to minimize the amount of work (labour = expenses) associated with daily application, apply penergetic k (combined with other absorbent/non-slip material) so that the penergetic k is applied at a rate of 1.1 lb. per 100 LSUs per week. [Note: depending on the condition of bedding this rate can be varied by $\pm -30\%$.]