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Seed Treatment Calibration

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SEED TREATMENT CALIBRATION

I. Basic Facts To Know Before Calibrating a Seed Treater.

All seed treatments are quoted in dry ounces or in fluid ounces (per 100 pounds, or per bushel). Remember, there is a difference between dry ounces and fluid ounces.

16 dry ounces = 1 lb.
128 fluid ounces = 1 gal.

1 fluid ounces = 30 cc's. Example: At a rate of 3 fluid ounces per cwt, you are actually applying 90 cc's per cwt.

When slurries are made by mixing wettable powder chemicals with water, the treater is then applying the slurry in fluid ounces of the TOTAL mix.

Chemical cup sizes are measured in cc's. Sample: Setting the dump weight to apply 3 fluid ounces (90 cc's) per cwt:

15 cc	16 pound dump
10 cc	11 pound dump
7.5 cc	8 pound dump
5 cc	5.5 pound dump
2.5 cc	3 pound dump

II. Accurate Calibration of a Seed Treater.

With no chemical in the metering tank, run 100 pounds of seed through the treater and count the number of times the weigh-pan dumps. Divide 100 pounds by the number of times the weight trips.

This gives you the number of pounds of seed per dump of the weighpan. Record the numerical setting of the weight on the weighpan arm for future use.

Determine how much liquid your treater metering cups or buckets will dump onto the seed each time the weigh-pan arm trips by manually tripping (without seed) the weigh-pan arm a specific number of times.

Catch the amount of chemical that is dumped in a measuring cup. Divide the amount of chemical caught by the number of times you tripped the weigh-pan. This gives you the amount of chemical delivered per dump of the weigh-pan. (Record for future use).

After completing operation one and two, you will know exactly what your treater is presently set at.

Remembering that there are two ways to vary the dosage of chemical to seed, either change the setting of the weight on the weigh-pan arm. . . (raise weight to increase amount of seed dumped or lower to decrease) OR replace existing cup in metering tank with another size cup to deliver more or less chemical per dump as necessary. For additional information on calibration, use calibration instruction manual furnished with each machine by the manufacturer.

Special note for WETTABLE POWDER chemicals that must be mixed with water. Most wetttable powders are applied at the rate of 1 to 5 dry ounces per 100 pounds of seed. Normally, a chemical to water mixing rate is not quoted on the label, so you will have to experiment to suit yourself. Example:

A chemical cup goes on at the rate of two dry ounces per 100 pounds of seed. The seedsman has found that mixing five pounds of chemical (80 dry ounces) with one gallon of water, gives him the slurry consistency that he desires.

Then, it must be kept in mind that the total volume of slurry (in this case, approximate 1.2 gallons) is enough to treat 40 cwts (4,000 lbs.) of seed.

So. . .

$$1.2 \text{ gals.} = 153.6 \text{ fl. oz.}$$

And. . .

$$153.6 \text{ fl. ozs.} (153.6 \div 40) = 3.84 \text{ fl. oz./ per cwt. seed}$$

Then. . .

Just use the techniques.convered earlier.