MODEL 'D' OPERATING INSTRUCTIONS

TO MIX AND GRIND FEED

1. Mix Auger Dials on Mill (set for desired ration)
2. Power On - Overload On
3. How Much Feed to Make (set main mix auger recorder or timer)
4. Set Grinder Controls to Grind
5. Set Mixer Controls to Automatic
6. Set Mixer Controls to Mix
7. Push Start Button
8. Set Speed Control

AT THE END OF FEED MAKING RUN CLEAR DISCHARGE AUGER OF FEED

1. Set Mixer Control Switch to Manual
2. Set Speed Control to Zero
3. Push Start Button
4. After Feed Delivery System is Cleaned (Approximately One Minute) Push Stop Button

TO MIX FEED ONLY SCREEN MUST BE REMOVED

1. Mix Auger Dials on Mill (set for desired ration)
2. Power On - Overload On
3. How Much Feed to Make (set main mix auger recorder or timer)
4. Set Grinder Controls to Augers Only
5. Set Mixer Controls to Automatic
6. Set Mixer Control to Mix
7. Push Start Button
8. Adjust Speed Control

NOTE: IF MONITOR LIGHTS FAIL TO LIGHT REFER TO THE SECTION ON THE CONTROL PANEL SAFETY CONTROL CIRCUITS AND PANEL LIGHTS.

MODEL 'D' CALIBRATION

WITH COUNTERS

PREPARING TO CALIBRATE

1. The proportioner is designed so that it will operate only when the speed control knob is turned above a setting of one. The auger turns faster as the speed control knob is advanced to a higher number. None of the augers will turn when the speed control knob is set to zero. A slight hum from the motor is normal if the speed control knob is turned to zero.
2. To obtain accurate samples each mix auger compartment must be full of its ingredient and the mix auger must be operated until the ingredient flow is consistent. Do this separately for each mix auger so the ingredients can be kept separate.
3. A container large enough to catch a sample weighing approximately 30 to 50 pounds will be needed. A set of scales will be needed to weigh your samples. Your calibration will only be as accurate as your scales and your following of the calibration procedures.
4. Turn the proportioner speed control knob to a setting of 5. Turn the overload switch to the "ON" position. Turn the power switch to the "OFF" position.
5. Remove the mill back by releasing the two side latches. Lift up and over the bottom catch and set to one side. REMOVE MILL SCREEN. Install the sampling back assembly and secure with the two side latches. Check the neoprene seal to insure the top and sides of the sampling chute assembly is sealed so you won't lose any of the ingredient while taking your samples.
6. Turn all proportioner knobs to zero. Turn the power switch to the "ON" position. Place a container under the number one sampling chute. Turn the number one mix auger knob to the twenty five position. Grinder Control in "GRIND" position. Place the mixer control switch in the "CALIBRATE" position. When the ingredient flow is consistent place the calibrate switch in the "MIX" position. Dispose of this ingredient. Turn the number one mix auger knob to zero.
7. Run ingredients for mix augers numbers 2, 3, 4 and 5 the same as above. When completed, turn each mix auger knob back to zero.
8. Reset all ration recorders to zero by depressing the black reset button on each recorder. Preset the main mix auger (#2 ration recorder) to a setting of one hundred.
9. NOTE: The switch on the #2 ration recorder will provide automatic shutdown only while grinding feed. Manual shutdown is required during the calibration procedure.

CALIBRATION PROCEDURE

REFER TO THE SAMPLE SHEET ALREADY FILLED OUT WHILE READING THESE INSTRUCTIONS. THIS SHEET IS LOCATED IMMEDIATELY FOLLOWING THESE CALIBRATIONS PROCEDURES.
FILL OUT THE TOP SECTION OF A CALIBRATION DATA SHEET. THEN PROCEED AS FOLLOWS FOR EACH LINE OF THE DATA SHEET.

LINE A - INGREDIENT:

For feeder auger column # one space A_1, write in the ingredient you will be augering thru that compartment. Write in all ingredients in their proper spaces until spaces A_1 thru A_5 have been filled in. XXXX out any column you will not be using.

LINE B - AMOUNT WANTED PER TON OF FEED GROUND:

For feeder auger column # one space B_1 write in the amount of the ingredient you want per ton of feed. Write in the amount wanted per ton in the proper space on line B for each ingredient.

LINE C - PERCENTAGE OF INGREDIENT:

(THIS IS THE RATIO OF EACH MIX AUGER INGREDIENT TO THE MAIN AUGER INGREDIENT.)
C_1 is obtained by dividing B_1 by B_2 x 100 -- Record in C_1 space.
C_2 is obtained by dividing B_2 by B_2 which will always equal 100%.
C_3 is obtained by dividing B_3 by B_2 x 100 -- Record in C_3 space.
C_4 is obtained by dividing B_4 by B_2 x 100 -- Record in C_4 space.
C_5 is obtained by dividing B_5 by B_2 x 100 -- Record in C_5 space.

LINE D - KNOB SETTING FOR CATCHING SAMPLES:

All knobs will be on zero except when running the sample for that feeder. Samples should be run at the twenty-five setting. Reset knob to zero after sample has been taken.

LINE E - GROSS WEIGHT OF SAMPLE:

Run each sample as described under "preparing to calibrate" section of your manual. Run each sample for feed auger numbers 1, 2, 3, 4 and 5 and record weights in the proper space.
TO OBTAIN THE GREATEST ACCURACY RUN ALL SAMPLES FOR A MINIMUM COUNT OF 100 ON EACH INGREDIENTS RATION RECORDER.

LINE F - CONTAINER WEIGHT:

Weigh the empty container and record in the proper spaces on line F.

LINE G - NET WEIGHT OF SAMPLE:

Deduct the container weight from sample gross weight for each ingredient and record in the proper space on line G.

LINE H - NUMBER OF COUNTS PER SAMPLE:

Running your samples for a count of 100 will simplify the calculations on line J. On the one-quarter speed number five mix auger you may want to run the number five counter to 200 or more. Just be sure you record the actual number of counts used when taking the sample. After recording all counts reset each small counter to zero. Failure to follow this procedure could cause an error in your calculations and an incorrect ration.

LINE J - POUNDS OBTAINED PER/COUNT OF THE RATION RECORDERS:

Divide the net weight of the sample (line G) by the actual number of counts used (line H) for each column. Example: if 135 pounds of corn was caught in our sample and we used exactly 100 counts we simply move our decimal point two places to the left: 135.00 lbs. would then equal 1.35 lbs. per count.

LINE K - INGREDIENT KNOB SETTING:

Use the following formulas to obtain knob setting.
Feeder #1, K1 = (C1 x J2 x .015 divided by J1) x K2.
Feeder #2, K2 = 24 or lower.
Feeder #3, K3 = (C3 x J2 x .015 divided by J3) x K2.
Feeder #4, K4 = (C4 x J2 x .015 divided by J4) x K2.
Feeder #5, K5 = (C5 x J2 x .060 divided by J5) x K2.
Assume K_2 to be a setting of 24. If any of the four other knob settings are greater that 25 divide 600 by the highest knob setting. Use this figure (whole number) for K_2 and recalculate the other 4 knob settings.
To arrive at the most accurate K value for all knob settings, go through all the calculations for feeder #2 at knob settings from 25 to 10 on the "K" knob setting chart page 29. Pick out the knob settings that are closest to the nearest whole number for feeders #3, #4 and #5. Such as in the example ration, it was found on the K_2 chart that knob setting #21 on the #2 feeder had the closest values to the nearest whole numbers on feeders #3, #4 and #5.

NOTE: FEEDER NUMBER FIVE IS FOR A ONE QUARTER SPEED AUGER.

HALF-SPEED AUGER WOULD USE A .030 MULTIPLIER INSTEAD OF NUMBER .060.

LINE L - COUNTS NEEDED PER TON OF FEED: NOTE IF MORE THAN ONE TON OF FEED IS WANTED YOU MUST MULTIPLY THE FIGURE OBTAINED ON LINE L BY THE NUMBER OF TONS WANTED.

For each feeder column divide the figure you obtained on line B by the figure on line J. (Total lbs. wanted divided by the lbs. per count). Multiply by the number of tons you want to grind. Preset the main mix auger recorder to this figure.
Remove the sampling chute back and install the regular mill back in place. Set the knobs according to your calculations on line K.

LINE M - ACTUAL COUNT CHECK:

You are now ready to grind feed. Set your main panel controls as follows:
GRINDER CONTROL - Set to grind position.
MIXER CONTROL - Set to mix position.
MANUAL/AUTOMATIC - Set to automatic position.
MAIN MIX AUGER COUNTER - Set to desired number (Line L_2 x Tons to be ground).
START/STOP SWITCH - Depress to start. The mill motor, proportioner motor and auger motors will all start. Adjust the speed control knob slowly until the meter registers full load current for the motor. If the speed control knob is advanced too rapidly an overload can occur due to the time required for the ingredients to reach the mill knives after the knob is advanced.
After the initial run of feed is made compare the actual number of counts recorded with the number you calculated you would require on Line L.
NOTE: Should a malfunction of the safety control circuitry occur the system will shut down. Should counts remain on the main ingredient recorder, the machine can be restarted when the malfunction has been corrected. The balance of that batch of feed would then be made and a normal shutdown would occur.

LINE N - INGREDIENT DENSITY:

The ingredient density can be determined by weighing one cubic foot of the ingredient. Use a Mix-Mill calibration box for this procedure. The calibration box holds exactly one cubic foot of material. Use the procedure outlined for catching samples for calibrating when checking densities. Do not bump the box because this can cause settling of the contents and give you a false reading. After the box is run full a straight edge should be used to level off the top of the box. Make only one pass across the box when leveling. If the box is bumped and the contents settle after you have reached this point it will not affect the weight. Weigh this sample and then deduct the weight of the calibration box. Record the density in the proper space on line N. Multiply by 1.25 to convert the density to bushel weight. Repeat this procedure for each ingredient.

WHY INGREDIENT DENSITIES ARE IMPORTANT:

If you have weighed and recorded the density of each material you are using, weighing a new batch will tell you if recalibration is necessary. ANY SIGNIFICANT WEIGHT CHANGE IN AN INGREDIENT CAN AFFECT THE ACCURACY OF YOUR RATION.
NOTE: Failure to follow the above procedures may cause an error in your calculations and an incorrect ration.

Mix-Mill Calibration Data Sheet

Mill Owner: Hogs Inc. Address: Bluffton, In.

Feed Description Gestation Ration Date 11-15-82

Formula Number ONE Premix Number GES-1 Speed Knob Setting

LINE	PROCEDURE	FEEDER #1	FEEDER #2	FEEDER #3	FEEDER #4	FEEDER #5
A	INGREDIENT	A_1 X	A_2 CORN	A_3 ALF. PELLETS	A_4 BEAN MEAL	A_5 GES. PREMIX
B	AMOUNT PER TON	B_1 X lbs.	B_2 1279 lbs.	B_3 300 lbs.	B_4 336 lbs.	B_5 85 lbs.
C	PERCENT OF INGRED. #2	C_1 X %	C_2 100%	C_3 23.46 %	C_4 26.27 %	C_5 6.65 %
D	0 TO 25 KNOB SETTING	D_1 25	D_2 25	D_3 25	D_4 25	D_5 25
E	GROSS WEIGHT OF SAMPLE	E_1 X lbs.	E_2 65.75 lbs.	E_3 61.25 lbs.	E_4 49.00 lbs.	E_5 52.25 lbs.
F	CONTAINER WEIGHT	F_1 X lbs.	F_2 10 lbs.	F_3 10 lbs.	F_4 10 lbs.	F_5 10 lbs.
G	SAMPLE NET WGT.	G_1 X lbs.	G_2 55.75 lbs.	G_3 51.25 lbs.	G_4 39.00 lbs.	G_5 42.25 lbs.
H	NUMBER OF COUNTS PER SAMPLE	H_1 X cts.	H_2 100 cts.	H_3 100 cts.	H_4 100 cts.	H_5 100 cts.
J	POUNDS PER COUNT (DIVIDE LINE G/H)	J_1 X lbs.	J_2 .5575 lbs.	J_3 .5125 lbs.	J_4 .3900 lbs.	J_5 .4225 lbs.
K	INGRED. KNOB SETTING (SEE FORMULA BELOW)	K_1 X	K_2 21	K_3 8	K_4 12	K_5 11
			SEE "K" CHART			
L	COUNTS NEEDED /TON LINE B DIVIDED /J	L_1 X cts.	L_2 2294 cts.	L_3 585 cts.	L_4 862 cts.	L_5 201 cts.
M	ACTUAL COUNT CHECK	M_1 X cts.	M_2 2294 cts.	M_3 582 cts.	M_4 871 cts.	M_5 200 cts
N	INGRED. DENSITY	N_1 X lbs.	N_2 46.25 lbs.	N_3 lbs.	N_4 lbs.	N_5 lbs.

ON STANDARD MILLS THE NUMBER 5 FEEDER AUGER WILL BE A ¼ SPEED AUGER.

FORMULA FOR FIGURING KNOB SETTINGS IS AS FOLLOWS:

FEEDER #1: (C_1 x J_2 x .015 DIVIDED BY J_1) TIMES K_2.

FEEDER # 2: 24 OR LOWER

FEEDER #3: (C_3 x J_2 x .015 DIVIDED BY J_3) TIMES K_2.

FEEDER #4: (C_4 x J_2 x .015 DIVIDED BY J_4) TIMES K_2.

FEEDER #5: (C_5 x J_2 x .060 DIVIDED BY J_5) TIMES K_2.

NOTE: A HALF SPEED AUGER WOULD USE A .030 MULTIPLYER.

"K" KNOB SETTING CHART

(FOR MOST ACCURATE "K" VALUES)

FEEDER #1	FEEDER #2	FEEDER #3	FEEDER #4	FEEDER #5
X	25	9.57	14.08	13.16
X	24	9.19	13.52	12.64
X	23	8.80	13.00	12.11
X	22	8.42	12.44	11.58
X	21	8.04	11.87	11.06
X	20	7.66	11.31	10.53
X	19	7.27	10.74	10.00
X	18	6.89	10.18	9.48

MODEL "D" CALIBRATION

WITH TIMER

Line A: Ingredient

Write in the names of the ingredients you will be metering thru each feeder. Draw a line thru any feeders not used.

Line B: Pounds per Ton

Your feed ration should be proportioned in pounds per ton of each ingredient. Put these amounts on line B.

Line C: % of Ingredient #2

Calculate the percentage of the #2 ingredient pounds per ton for each ingredient. Divide line B for each ingredient by line B for feeder #2, and then multiply the result by 100.
(Ex. feeder 1: $(B_1 \div B_2) \times 100 = C_1$)

Line D: Sample Gross Weight

Collect a sample from each feeder by the following procedure:

1. Remove mill door and screen - install calibration chute.
2. Set knob for feeder on 15 - all other knobs on zero. Set D.C. motor speed dial on half speed.
3. Start mill by putting cal/mix switch to calibrate position. Collect ingredient in bucket or tub.
4. When flow of feeder is established, switch to another bucket for two minutes. The samples for each ingredient must all be caught in equal time periods.
5. When the sample time period is over, switch back to the other bucket, and put the cal/mix switch back to the mix position.
6. Weigh the sample and container.
7. Repeat process for other ingredients. Do not change D.C. motor speed dial.

Enter the gross weight of the sample on line D.

Line E: Container Weight

Weigh the sample container empty and put the weight on line E.

Line F: Sample Net Weight

Subtract line E from line D and enter result on line F.

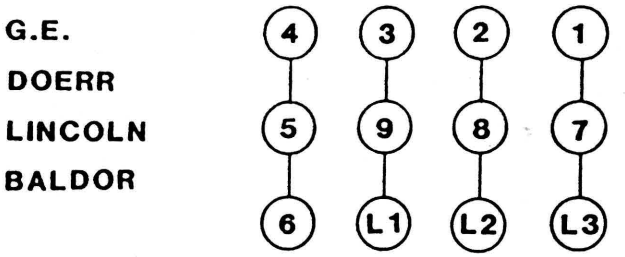
Line G: Percent of Ingredient #2 Delivered

Divide line F of each ingredient by line F for feeder #2, and multiply result by 100.
(Ex. feeder 1: $(F_1 \div F_2) \times 100 = G_1$)

Line H: Initial Knob Setting

For each ingredient multiply line C by 24 (initial knob setting for feeder #2) and divide the result by line G. If this number is larger than 24 for any feeder then use a smaller number for the initial knob setting of feeder #2.

NOTE: Motor connections are here for reference, these connections are prewired at the factory.



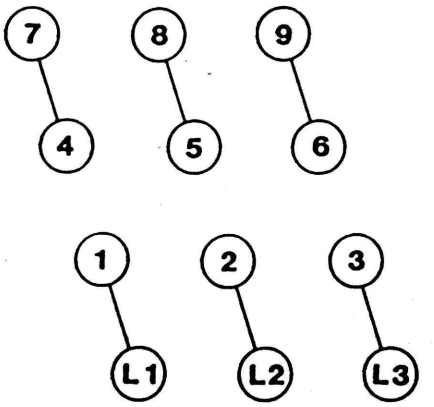
The mill motor may be operated with either CW or CCW rotation. To change rotation, reverse any two (2) of the black leads to the motor.

INCOMING POWER

A wire harness will have to be field supplied containing lines L1, L2, (L3 if 3Ø) and a neutral, which needs to be connected from the circuit breaker box to the D mill panel. These leads should be sized accordingly to the amps on the D mill name plate and any other additional motors that are added. Connect lines L1, L2 and (L3) of the incoming power to L1, L2 and (L3) of the magnetic starter and wire nut the neutral lead to the white lead wire connected to N1 of terminal block. A ground rod is a must! Drive a ground rod into permanently moist undisturbed earth. Connect a wire, that is equivalent to the incoming wire size, from the rod to the panel and secure the wire to the ground connection in the upper left inside corner of the panel.

SPECIAL ORDER MODELS REQUIRING 460 VOLT 3 PHASE POWER

If you require a mill for 460 volt 3 phase operation, several changes are required in the control panel components and in the wiring procedures. We recommend you special order this mill from the factory. Mill motor wiring connections are as follows:



All 3Ø mill motors can be wired for 230 volt or 460 volt operation. See the specification sheets for 230 volt 3 phase motors for motor part numbers and other information.
If a 230 volt mill is to be converted in the field the other changes required for converting a 230 volt control panel to a 460 volt panel are as follows:
The overload relay must be replaced by one of the correct amperage range.

The control circuit power to the circuit breaker must be disconnected from the L1 and L2 terminals of the mill magnetic motor starter. A separate 120 volt 60 HZ input power line must be connected to the circuit breaker "CB_1". The hot lead connected to the upper left input terminal and the neutral to the control panel neutral terminals on the terminal block. (Two top terminals)
The voltage source for the, "power in light," must also be changed. To do this, proceed as follows:
Reconnect lead that was attached to L2 on magnetic starter to terminal block #1.
A separate (additional) auxiliary relay must be added to the control panel for ground feed auger motor control. This second auxiliary relay should be wired as follows when 460 volt auger motors are being used.
A separate set of wire leads of correct size for motor load should be brought into the panel through a circuit breaker from the main panel.
DO NOT Use the Same Input Leads That Are Connected to the Mill Motor Magnetic Starter.
The new 460 volt input lead wires should be connected to the relay contacts #L1, L2 and L3. The external auger motors should be connected to the relay contacts #T1, T2 and T3.
The auxiliary relay must have a 120 volt coil and this coil should be connected in parallel to the existing auxiliary relay coil.

INSTALLATION PROCEDURES:

WARNING! Failure to properly ground this machine could lead to serious injury to animals or persons operating the equipment. GROUNDING of all equipment is recommended. Grounding should be in accordance with the national electrical code and should be consistent with sound local practice.
Before attempting repairs to any equipment, disconnect and "lock out" the incoming power to that equipment. An electrical shock can be obtained from an electric motor even though the incoming power is shut off. This could be caused by capacitor discharge in single phase, capacitor type motors.

Line K: Knob Setting - Corrected for Premix Accuracy

Multiply line H for each ingredient times the next whole number less than H_5 and divide the result by H_5.

Example: If $H_5 = 4.32$ and $H_4 = 12.1$

Then $K_4 = (12.1 \times 4) \div 4.32$

D-MILL CALIBRATION SHEET

FOR MILL CONTROL PANEL WITH TIMER

MILL OWNER: _____ ADDRESS: _____

FEED DESCRIPTION: _____ DATE: _____

RATION NUMBER: _____ PREMIX NUMBER: _____

LINE	DESCRIPTION	FEEDER 1	FEEDER 2	FEEDER 3	FEEDER 4	FEEDER 5
A	INGREDIENT	A_1	A_2	A_3	A_4	A_5
B	POUNDS PER TON	B_1	B_2	B_3	B_4	B_5
C	PERCENT OF INGRED. 2	C_1	C_2 100%	C_3	C_4	C_5
D	SAMPLE GROSS WGT.	D_1	D_2	D_3	D_4	D_5
E	CONTAINER WGT.	E_1	E_2	E_3	E_4	E_5
F	SAMPLE NET WGT.	F_1	F_2	F_3	F_4	F_5
G	PERCENT OF INGRED. 2 DELIVERED (LINE F ÷ F2)	G_1	G_2 100%	G_3	G_4	G_5
H	INITIAL KNOB SETTING (LINE C X 24 ÷ LINE G)	H_1	H_2	H_3	H_4	H_5
K	CORRECTION FOR PREMIX (LINE H X NEXT WHOLE # LESS THAN H_5) ÷ H_5	K_1	K_2	K_3	K_4	K_5

Mix-Mill Calibration Data Sheet

Mill Owner: _____ Address: _____

Feed Description _____ Date _____

Formula Number _____ Premix Number _____ Speed Knob Setting _____

LINE	PROCEDURE	FEEDER #1	FEEDER #2	FEEDER #3	FEEDER #4	FEEDER #5
A	INGREDIENT	A_1	A_2	A_3	A_4	A_5
B	AMOUNT PER TON	B_1 lbs.	B_2 lbs.	B_3 lbs.	B_4 lbs.	B_5 lbs.
C	PERCENT OF INGRED. #2	C_1 %	C_2 **100%**	C_3 %	C_4 %	C_5 %
D	0 TO 25 KNOB SETTING	D_1 **25**	D_2 **25**	D_3 **25**	D_4 **25**	D_5 **25**
E	GROSS WEIGHT OF SAMPLE	E_1 lbs.	E_2 lbs.	E_3 lbs.	E_4 lbs.	E_5 lbs.
F	CONTAINER WEIGHT	F_1 lbs.	F_2 lbs.	F_3 lbs.	F_4 lbs.	F_5 lbs.
G	SAMPLE NET WGT.	G_1 lbs.	G_2 lbs.	G_3 lbs.	G_4 lbs.	G_5 lbs.
H	NUMBER OF COUNTS PER SAMPLE	H_1 cts.	H_2 cts.	H_3 cts.	H_4 cts.	H_5 cts.
J	POUNDS PER COUNT (DIVIDE LINE G/H)	J_1 lbs.	J_2 lbs.	J_3 lbs.	J_4 lbs.	J_5 lbs.
K	INGRED. KNOB SETTING (SEE FORMULA BELOW)	K_1	K_2	K_3	K_4	K_5
L	COUNTS NEEDED /TON LINE B DIVIDED /J	L_1 cts.	L_2 cts.	L_3 cts.	L_4 cts.	L_5 cts.
M	ACTUAL COUNT CHECK	M_1 cts.	M_2 cts.	M_3 cts.	M_4 cts.	M_5 cts.
N	INGRED. DENSITY	N_1 lbs.	N_2 lbs.	N_3 lbs.	N_4 lbs.	N_5 lbs.

ON STANDARD MILLS THE NUMBER 5 FEEDER AUGER WILL BE A ¼ SPEED AUGER.

FORMULA FOR FIGURING KNOB SETTINGS IS AS FOLLOWS

FEEDER #1 ($C_1 \times J_2 \times .015$ DIVIDED BY J_1) TIMES K_2.

FEEDER # 2: 24 OR LOWER

FEEDER #3: ($C_3 \times J_2 \times .015$ DIVIDED BY J_3) TIMES K_2.

FEEDER #4: ($C_4 \times J_2 \times .015$ DIVIDED BY J_4) TIMES K_2.

FEEDER #5: ($C_5 \times J_2 \times .060$ DIVIDED BY J_5) TIMES K_2.

NOTE: A HALF SPEED AUGER WOULD USE A .030 MULTIPLYER.

Mix-Mill Calibration Data Sheet

Mill Owner: _____ Address: _____

Feed Description _____ Date _____

Formula Number _____ Premix Number _____ Speed Knob Setting _____

LINE	PROCEDURE	FEEDER #1	FEEDER #2	FEEDER #3	FEEDER #4	FEEDER #5
A	INGREDIENT	A_1	A_2	A_3	A_4	A_5
B	AMOUNT PER TON	B_1 lbs.	B_2 lbs.	B_3 lbs.	B_4 lbs.	B_5 lbs.
C	PERCENT OF INGRED. #2	C_1 %	C_2 100%	C_3 %	C_4 %	C_5 %
D	0 TO 25 KNOB SETTING	D_1 25	D_2 25	D_3 25	D_4 25	D_5 25
E	GROSS WEIGHT OF SAMPLE	E_1 lbs.	E_2 lbs.	E_3 lbs.	E_4 lbs.	E_5 lbs.
F	CONTAINER WEIGHT	F_1 lbs.	F_2 lbs.	F_3 lbs.	F_4 lbs.	F_5 lbs.
G	SAMPLE NET WGT.	G_1 lbs.	G_2 lbs.	G_3 lbs.	G_4 lbs.	G_5 lbs.
H	NUMBER OF COUNTS PER SAMPLE	H_1 cts.	H_2 cts.	H_3 cts.	H_4 cts.	H_5 cts.
J	POUNDS PER COUNT (DIVIDE LINE G/H)	J_1 lbs.	J_2 lbs.	J_3 lbs.	J_4 lbs.	J_5 lbs.
K	INGRED. KNOB SETTING (SEE FORMULA BELOW)	K_1	K_2	K_3	K_4	K_5
L	COUNTS NEEDED /TON LINE B DIVIDED /J	L_1 cts.	L_2 cts.	L_3 cts.	L_4 cts.	L_5 cts.
M	ACTUAL COUNT CHECK	M_1 cts.	M_2 cts.	M_3 cts.	M_4 cts.	M_5 cts.
N	INGRED. DENSITY	N_1 lbs.	N_2 lbs.	N_3 lbs.	N_4 lbs.	N_5 lbs.

ON STANDARD MILLS THE NUMBER 5 FEEDER AUGER WILL BE A ¼ SPEED AUGER.

FORMULA FOR FIGURING KNOB SETTINGS IS AS FOLLOWS:

FEEDER #1: (C_1 x J_2 x .015 DIVIDED BY J_1) TIMES K_2.

FEEDER # 2: 24 OR LOWER

FEEDER #3: (C_3 x J_2 x .015 DIVIDED BY J_3) TIMES K_2.

FEEDER #4: (C_4 x J_2 x .015 DIVIDED BY J_4) TIMES K_2.

FEEDER #5: (C_5 x J_2 x .060 DIVIDED BY J_5) TIMES K_2.

NOTE: A HALF SPEED AUGER WOULD USE A .030 MULTIPLYER.