

FEED MILLING CHALLENGES FOR ORGANIC PRODUCTION

Edward Kleinwort

A third generation miller.

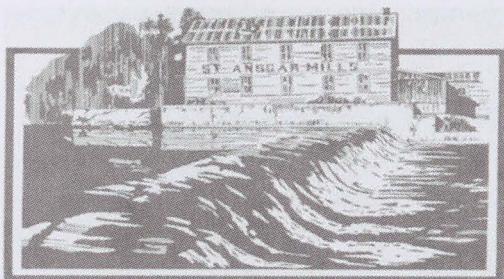
FEED MILLING CHALLENGES FOR ORGANIC PRODUCTION

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Order of this Presentation

- Grandpa and the fish food.
- Organic standards and good nutrition.
- Mill and elevator design for organic production.
- Sample Production Forms
- Sources of information.
- Questions?

OUR FACILITIES, circa. 1856



GRANDPA AND THE FISH FOOD

- In 1930, my grandfather traded a mortgaged farm for a flour mill. The flour mill was about to fall into the river it derived its power from, but he poured some cement, and kept it upright.
- A look at our business as it existed in 1930 has some parallels with the organic feed business of today.

- Founded in 1856, the mill processed home-grown wheat into flour. This was back before pollution, so the "waste" (byproducts) was just dumped into the river. It made great fish food, but was not a source of revenue to the business.
- Grandpa was a reader, and read where middlings and red-dog could be used to advantage in chicken feed. He quit disposing of the leftovers, and started selling them as part of **Old Mill** brand chicken feed. He had good enough products he was able to develop a dealer network in the towns surrounding ours.
- I have the feed formulas for those feeds. They are fun to look at now and then.

- In my opinion, organic feed manufacturers need to team up with the organic food manufacturers to do similar things now.
- Two examples of feed stuffs we are currently utilizing which were disposal problems prior to our "discovery" of their potential would be Okara and screenings.

MILL AND ELEVATOR DESIGN
FOR ORGANIC PRODUCTION

- Our company is lucky enough to have a working relationship with one of the first adapters of organic livestock feeding. We have worked as a team to do some of the testing of potential ingredients. These tests are **not** always successful.

- When looking for potential ingredients, it is important to remember that the producers of food are getting paid to put this food out their front door. The byproducts out their back door are to them, a nuisance at best. Their primary focus has to be on what pays their bills. They will not seek you out. You have to do the searching.

ORGANIC STANDARDS AND
GOOD NUTRITION

- The USDA has established, with much help from and consultation with the organic community, official organic standards. Prior to these standards, each certifying agency had their own, a very confusing situation.

ORGANIC CLASSIFICATIONS
IN ORDER OF COMPLEXITY

- 100% ORGANIC
- ORGANIC
- MADE WITH ORGANIC.....
(SPECIFY WHICH INGREDIENT(S) OR
GROUPS OF INGREDIENTS)

- As you start organic feed production, you will need to find out which of these classifications your customer requires for the livestock they intend to feed. If your customer is just starting, they may not know. More complex rations can only be used to produce animals or animal products to be labeled the same or with less complexity.

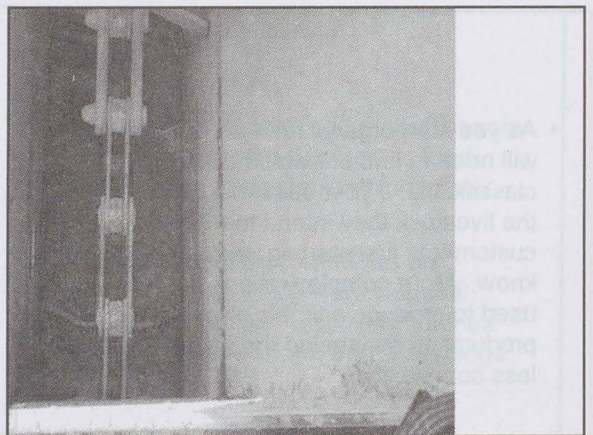
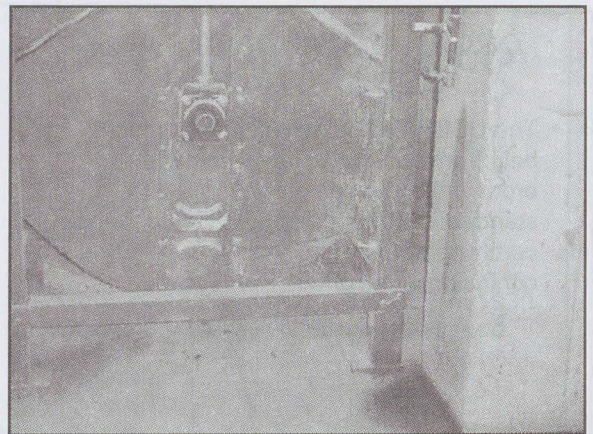
- Please note: The organic standards REQUIRE the feeding of adequate nutrition. This is an animal welfare issue.
- Meeting the animal's requirements may determine the attainable organic classification. For instance: if you cannot afford to feed enough intact "100% Organic" proteins to satisfy a chicken's Methonine requirement, you may have to settle for an "Organic" label.

- By meeting the organic requirement to provide “a feed ration sufficient to meet nutritional requirements, including vitamins, minerals, protein and/or amino acids, fatty acids, energy sources and fiber (ruminants)” a service is performed. In our company’s brief organic history, we have improved hatchling survival from 50% to over 95% in one species simply by providing adequate nutrition.

MILL AND ELEVATOR DESIGN FOR ORGANIC PRODUCTION

- Scheduling, Sequencing and Segregation
- Most of the mills who are not exclusively organic will need to schedule to be sure no possibility of contamination exists. Batches mixed with substances named in the organic standards as “prohibited” must be cleared from the system by proper sequencing before cleaning for organic production begins. This goal can also be reached by segregating organic production into specific production equipment (bins, totes, etc.)

- Flow charts and flow plans are a part of the organic certification process.
- Our certification agency suggested we explain how each piece of our equipment maintained organic integrity. We did this at each step of the flow.
- The following slides show some of the equipment we use.



- Our mixer has a full bottom dump, so no residues of the last feed are left to contaminate the next batch, organic or conventional.

D I M I
L B I X
L Y E
E D Y R

DAILY ORDER SHEET

DAY/DATE:

BACK DOOR

DAILY PRODUCTION RECORD

DAY/DATE:

Seq No.	Invoice or Lot No.	Customer/Description	FC	Drug Used	Flush Ingr. & LBS	Mix Cn Y/N	Theor. Actual Quantity	Bin No.	Mix By	Del By	Ric No.

PELLET MILL RECORD SHEET

DATE CUSTOMER NAME FEED PELT BINS TON SIZE IN OUT COMMENTS

DATE	CUSTOMER NAME	FEED	PELT	BINS	TON SIZE	IN	OUT	COMMENTS

CLEAN TRUCK CERTIFICATE

On _____ we loaded _____ tons of _____
 Lot number _____. This product was loaded after the truck/trailer was (please circle) swept,
 blown down with compressed air, washed, flushed, vacuumed. Previous load records were examined to
 check for possible contaminants.

Loader _____

Trailer number/license number _____

FEED DELIVERY & LOAD OUT RECORD

DATE: _____

TRUCK: _____

DRIVER: _____

TIMES: LEFT THE MILL: _____ ARRIVED AT MILL: _____

T	RB	UJ	CN	K	LOAD	UN-LOAD	CUSTOMER	FEED DESCRIPTION	DRUG USED	INVOICE	WT	BATCH	Q	FLUSH	E

XX INFO: _____

- In addition to the proper equipment, documentation of cleaning, flushing, and sequencing is vital. Our FDA mandated records have been judged adequate to meet organic standards.
- Clean vehicle certificates are required for delivery equipment.

- ### SOURCES OF INFORMATION
- Antique text books. (1940' and 1950's)
 - American Society of Animal Science *Journal of Animal Science*
 - American Dairy Science Association
 - ASAS/ADSA Midwest Section Meetings
 - Extension services
 - Organic certification agencies
 - Practical Farmers of Iowa

QUESTIONS?

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