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## SEED PROCESSING OPERATIONS - MANAGEMENT

A. H. Boyd and G. M. Dougherty-1/

Man has been able to survive in his present numbers and state of well-being only by developing a highly organized system whereby individuals can specialize in production of goods or services and exchange them for other goods and/or services he wants or needs. We as seedsmen are an example of this. There are even numerous specialties within the realm of seed technology. Each of us have our own niche to fill and the very fact that we are gathered here this afternoon is visible proof of our determination to fill our place more competently, more completely, and if possible, more profitably.

Our specific line of interest is seed processing operations. It is very difficult to consider seed processing in the traditional sense of "all processes from bulk storage of the dry seed to the bagged seed." Operations have grown in size and complexity so that processing must be considered in all planning phases of the seed company.

We must condition our thinking to the "System Concept" of processing operations. This concept should have as its objective the production of maximum seed quality consistent with practical economic inputs and outputs. This approach does not necessarily mean highly sophisticated automatic controls and large complicated machines. Neither does it mean pretentious buildings and empire-like organizations. Any seedsman no matter how small needs to consider the system to syncronize the many jobs into as smooth an operation as possible.

#### Trends of processing operations as we have seen them

- Volume is increasing and seedsmen are tending to become more specialized in few crops, often only one or two.
- At the same time the increase in adapted varieties has forced many to handle several varieties of that crop with all the problems in storage, inventory, etc., that this brings on.
- Custom cleaning plants are tending more toward the production contracting route as farmers save less of their own seed and individual seed growers specialize.

1/ Staff members Seed Technology Laboratory, paper presented at 1971 Short Course for Seedsmen, STL, Miss. State University by Mr. Boyd.  Special processing problems and competition force the processor to become more skillful in solving individual processing problems and operation of the processing system.

#### Decisions to be made in evaluating the system and planning operations

Seedsmen make many management decisions routinely. The principal differences he is finding today is that he must calculate everything more closely and have more and better information on which to base decisions to get maximum capacities from equipment and optimum production per worker.

As we emphasize the systems concept, let's not overcomplicate the problem. Most seed processing plants are really relatively simple operations. Keep the problems in perspective and attack them in manageable steps. I have never seen a seed processing machine that required a genius for an operator.

Most often the problems we find troublesome are problems because we assume the old way we have been doing things is either the best or the only way we can operate. The emphasis we place on areas for maximum effort can strongly affect the kinds of problems we can expect. At a recent seedsmen's short course a representative of the state seed certification agnecy commented that his agency is approving fields with certain weeds present expecting the processing plant to remove the undesirable seeds. His reasoning was that with the high cost of labor it will be cheaper to do the job by processing than to pay for better weed control in the field.

Let us enumerate a few of the pros and cons of maximum emphasis on clean fields as opposed to maximum effort in the processing plant.

Maximum emphasis in the field:

Problems:

- 1. More labor
- 2. More supervision
- 3. Closer selections of fields
- 4. Closer selections of Producers
- 5. Possibly higher prices to the contractor

#### Advantages:

- 6. Higher yields
- 7. Better harvesting efficiency
- 8. Less drying problems



THE PROCESS OF CONTROL

- 9. Less waste handling
- 10, More processing capacity/\$ investment
- 11. Possibly fewer pieces of equipment in the processing line.

Maximum emphasis in processing:

Problems:

- ${\bf l}$  . More time spent in quality evaluation at delivery
- 2. Makes consolidation of small lots risky
- 3. Cleanout loss greater (must lose some good seed to get out bad)
- 4. Requires more skill in operating the plant
- 5. More salvage and waste handling problems
- 6. Lower capacity for a given size machine

Advantages:

- Low value lots of seed can often be up-graded to saleable quality.
- Labor may be in more abundant supply during the processing season than during the growing season.
- Current trend in restrictions on chemicals may dictate greater use of processing to solve weed seed problems.

Throughout all our system we must maintain the thread of control to assure that the results of operations conform as closely as possible to our goals. We must have quality control as well as production and cost control and these are as essential to the small seedsman as to the large company.

## Basic Elements of Control

 Set our standards of performance of each phase of the operations.

2. Compare actual results with our standards (quality tests, production records, etc.)

3. Take corrective action.

Regardless of what we control the same three elements will be involved.

If we maintain good control and continue to raise our standards of performances as we become more proficient with our operating skills we should still be successful seedsmen when we return to reminisce after the second 20 years.