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# IOWA QUALITY GRAIN STUDY

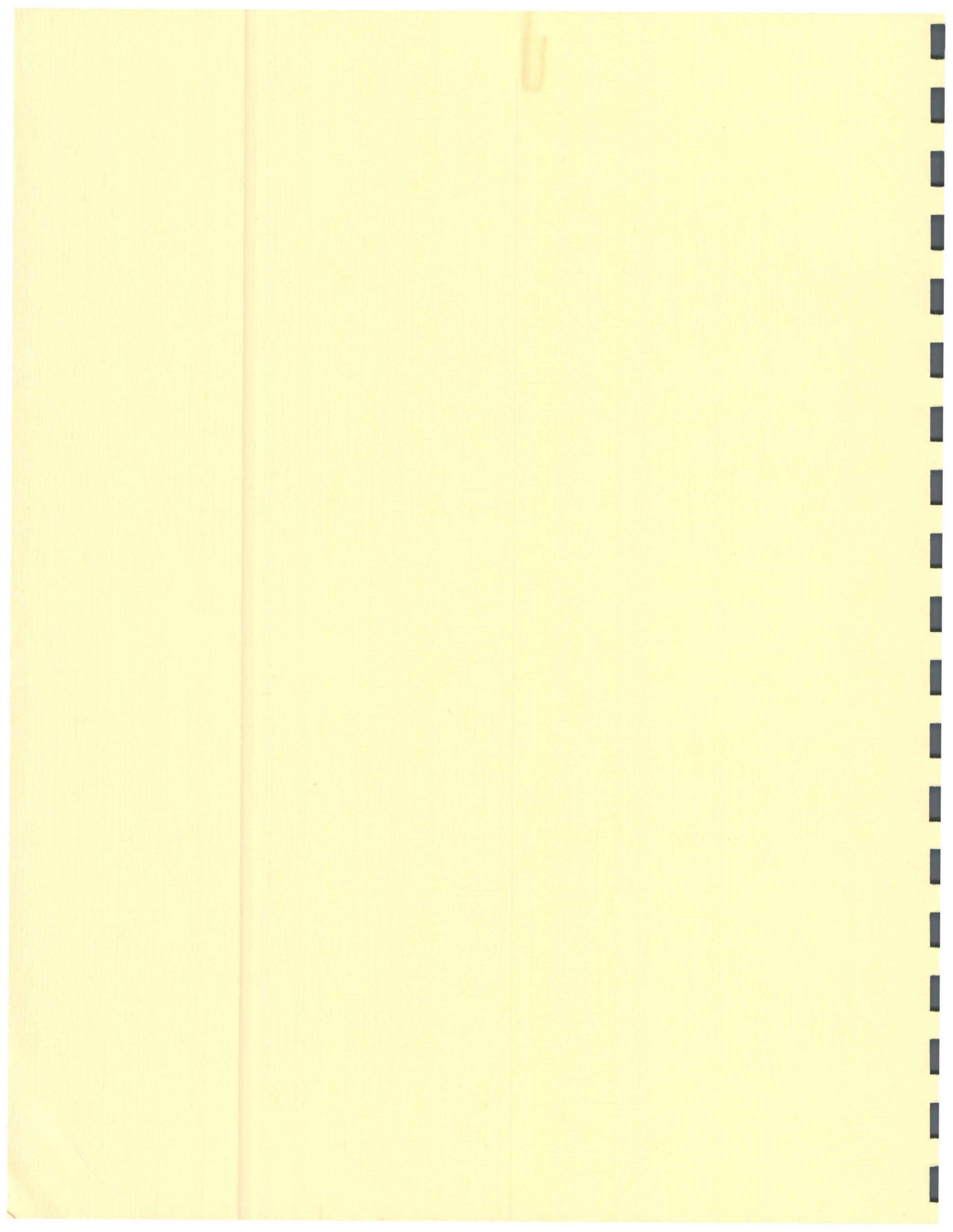
## INTERIM REPORT

August 14, 1987

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CONTRACT ACKNOWLEDGEMENT

This interim report is prepared and submitted in accordance with the requirements set forth in Contract AMB-009 dated April 16, 1987 between the Iowa Department of Economic Development and Evans & Associates.

## PURPOSE OF THE STUDY

The basic goal of Iowa is to strengthen the competitiveness of Iowa grain in both domestic and foreign markets. Therefore, Iowa producers and policymakers in this study seek to identify and define reasonable roles for the State of Iowa to perform in improving the quality of grain available from Iowa and in expanding both domestic markets and exports of Iowa grain from the United States.

## Section I. EXECUTIVE SUMMARY

- \* Many foreign customers of our grains are dissatisfied with the quality of corn and soybeans they receive from the U.S. The principal complaint is not that they are unable to buy grain of high quality from us, but that they often do not receive the quality for which they pay. There are solid grounds for this complaint.
  
- \* Unfortunately, official grain standards and procedures have been (and still are to some extent) worded in a manner to give the seller a marked advantage over the buyer. In the buyers' market for grains which currently exists worldwide, consistently shortchanging the customer is extremely poor national policy. Considerable progress is being made to correct this situation.
  
- \* The subdivision in foreign ports of large export cargoes to multiple end users presents a serious challenge for assuring that each user receives grain of the quality and value to which he is legitimately

entitled. Segregation which occurs during loading and after final U.S. inspection is passed on to the users. Some will receive grain of significantly lower quality and some a significantly higher quality grain than that for which they have paid. Unfortunately, U.S. traders have tended to dismiss this as the buyers' problem, which is not compatible with efforts to retain and/or increase markets for U.S. grain. This disregard for customer satisfaction cannot be allowed to persist.

\* Other problems contributing to foreign dissatisfaction with our grains include:

- Different countries use different standards, which leads to misunderstandings.
- Countries differ in how they define such things as what constitutes a damaged kernel and how to define the moisture content of grain. This too leads to misunderstandings.
- Tendency of grain, particularly corn, to deteriorate in handling, transportation, and storage.

- \* To assume that all grain quality problems originate and can be corrected at the export terminals would be a serious mistake. A substantial share of the problems can only be corrected by grain producers and local warehousemen.
  
- \* U.S. seed producers place far more emphasis on breeding grains to increase yields than to increase post harvest grain quality. There is a good reason for this emphasis on higher yields. That's what producers request.
  
- \* Foreign consumers of our grain have great interest in buying directly from our producers, going around the major grain companies and utilizing identity-preserved shipments to assure the quality received.
  
- \* The logistical arrangements for such identity-preserved shipments are entirely feasible for both containerized and bulk cargoes. However, the price required to routinely move grain in this manner is unknown because the market for such services has not been developed.



\* Few foreign consumers of our grains are willing to pay a substantial premium for quality. What they want is to actually receive the quality for which they have been paying, or the quality they can receive from other origins at equal prices.

\* There are far more foreign consumers of grains interested in buying directly from U.S. producers and grain merchants than there are producers and small grain merchants willing and able to sell. Some of the more important reasons for this shortage of sellers include the following:

- The huge tonnages and large dollar values involved;
- The large risks;
- The small profits that would be possible;
- Lack of understanding of the long and complex export process; and
- Inability of would-be sellers to mobilize sufficient tonnages of grain of the required quality characteristics for reasons which include:
  - Producers and small warehousemen now do little to segregate their grains by quality

characteristics and many have too few bins to do so.

- Many would-be sellers do not have access to a large grain collection network such as those that have been developed over many years by the major grain companies.
- Local warehousemen holding grain of good quality often believe (correctly) they can make the most money by blending their good quality grain with grain of lower quality.
- There is not now any national market established for grains of high quality or with special characteristics.
- The Commodity Credit Corporation is holding huge tonnages which are not readily available and must eventually be marketed in a much deteriorated condition.

\* Technology is rapidly evolving to permit quick measurement of many quality characteristics of grains, characteristics that could not be readily measured in the past. Examples include:

- Protein content.
- Oil content.
- Starch content.
- Hardness of kernels.
- Stress cracks.
- Maximum variation of moisture in kernels constituting one lot or cargo of grain.
- Presence of toxins and residues.

\* The sophistication of grain users is increasing rapidly in terms of understanding the profit implications of small differences in such things as protein, oil, and starch content.

\* Users of grains can be expected to rapidly become more specific in requiring special characteristics in the grains they purchase. Given current market conditions, we cannot expect large premiums in exchange for guarantees on these characteristics.

\* The state of Iowa is not a very logical geographic unit upon which to build a quality grain program. The Mississippi and Missouri Rivers are better

viewed as arteries of grain transportation than boundaries for a special production area.

\* If we are to upgrade the quality of grains moving in commercial channels we must change the existing system to provide the producer and small warehousemen economic incentives for preserving quality. This report suggests several specific ways to accomplish this goal.

\* At present there is no ready means of communication between sellers (producers and small merchants) who have and wish to sell quality grain and buyers (including exporters) wanting to acquire such grains. Exports of Iowa quality grains and profits of producers and small merchants would certainly be enhanced by development of a new marketing mechanism specifically designed to bring together these potential buyers and sellers. One way to do this would be through a cash grain exchange utilizing the traditional outcry system like that of the St. Louis Merchants Exchange, which now brings together buyers and sellers of barge-load lots of standard grains and

barge freight. Another approach would be a computerized clearinghouse serving a similar purpose. A hybrid system combining the two is an interesting possibility.

\* The report addresses a number of other possibilities for increasing exports of Iowa grains. A few of these are:

- A port and export authority operating on the Mississippi and Missouri Rivers.
- Improved warehousing capable of segregating grain by quality characteristics, strategically located to maximize competition in transportation charges to the ports, and readily available to Iowa producers and grain merchants.
- Maintaining pressure on the federal government to improve official grain standards and procedures.
- Working with end users to identify mutually acceptable methods of resolving segregation/uniformity problems.
- Developing user-oriented contract specification alternatives to some provisions currently found in many contracts.

## Section II. BACKGROUND OF STUDY

Agriculture, encircled by significant change, is receiving unprecedented attention. Much of the focus is on the problems facing individual farmers. There is little awareness of the speed with which new directions for agricultural policy are being defined. Amidst the restructuring, challenge and opportunities gradually re-establish order.

There is no consensus among producers or policymakers as to the overall solution to agriculture's problems. However, in a world awash with grain it is agreed that grain quality becomes fundamentally more important than it was in the 1970's. The world is changing -- rapidly becoming a society that expects and demands "quality" in products and services. Thus, even when the grain surpluses diminish there can be no return to a cavalier approach to the quality concerns of consumers of U.S. grains. The increased recognition of the importance of quality provides innovative leaders an opportunity to build on the inherent strengths of corn and soybean production in the Midwest.

Iowa producers are concerned with the growing dissatisfaction of their customers, both foreign

and domestic. The declining U.S. share of the world market is especially troubling. Declining export markets are not caused by poor grain quality; however, emphasis on quality is a key to retaining market share. The reluctance of major grain companies to change their practices and attitudes toward end users' needs is simply no longer acceptable to producers. Even with encouraging signs of change at many levels, continued pressure from producers and end users is needed to speed this change.

A review of U.S. official standards and procedures substantiates the reason for concern. These standards and procedures have for many years favored the exporter over the foreign buyer. No wonder end users are unhappy.

The Governor, the Iowa Secretary of Agriculture, and the Iowa Legislature share producers' concern. An increase in volume of Iowa grain sales would benefit many -- grain merchants, the transportation industry, as well as producers. The primary goal in seeking an appropriate state role is to provide a strong advocacy for producers as equal participants in merchandizing agricultural products.

It is essential to begin by developing a greater understanding of the problem. This not an issue well-suited to quick legislative or executive solutions. Controlling product quality is a more efficient means of solving the problem than attempting to control the export process. Our response must serve the needs of the end users of our grains. End users agree that they want something different in terms of quality, but many are not yet certain what specifications they want or need. Marketing opportunities exist if more information about end-use value is provided. However, change in any segment of the grain industry will have an echo effect on other segments. The greatest impact will be on producers. Therefore, careful consideration must be given to their interests.

As a result of this commitment, an indepth study of grain quality from a technical perspective is being conducted under the contract that has produced this interim report. The Iowa Department of Economic Development in partnership with the Iowa Corn Promotion Board and the Iowa Soybean Promotion Board approved funding for a six-month study to determine what roles are appropriate for the State, and to evaluate the merits of each option.



To implement the study a task force of 15 members has been organized. The task force membership includes representatives of the Iowa Corn Growers, Iowa Corn Promotion Board, Iowa Soybean Association, Iowa Soybean Promotion Board, Iowa State University, exporters, grain merchants, transportation industry, international finance, Department of Economic Development and the Department of Agriculture and Land Stewardship. The task force serves as an advisory committee to its chairman, Cooper Evans. Public participation in the study is enhanced through four subcommittees: finance, marketing, standards, and transportation. Membership lists of the task force and subcommittees are attached as Annex A.

The task force meets twice monthly and plans, in addition to this interim report, to have a final report in October of 1987.

The reports, written by Evans and Associates, are not intended to be consensus documents. The task force's discussions have significantly influenced the views set forth in the report. However, individual members may not hold the perspective expressed by the authors.

### Section III. TECHNICAL ASPECTS OF THE GRAIN QUALITY

#### PROBLEM

##### \* Customer Dissatisfaction.

Many foreign buyers are dissatisfied with the quality of corn and soybeans they purchase in the United States. As a result, these overseas customers tend to shop elsewhere in times like these when there is a surplus of grain in the world and there are many other sources of supply.

Unfortunately, this surplus is likely to persist for at least several years. If we in the United States are to maintain our share of world grain markets under these conditions, we must understand the dissatisfaction of our customers and what must be done to regain their confidence.

A point of great importance is that the principal complaint of foreign customers is not that they are unable to buy grain of high quality from the United States, as many people seem to believe. The real complaint is that regardless of whether they order grain of high or low quality they often do not receive

the quality for which they have paid. There are solid grounds for this complaint.

\* Problems Inherent In The United States Standards And Procedures.

Another misconception is that the blame rests largely with the export elevators. Actually there is overwhelming evidence that virtually all grain leaving the United States technically meets our national standards and the terms of the export contracts under which it is sold. But great emphasis must be placed on the words "technically meets" the standards and terms.

This gets at the heart of the matter. The truth is that the official United States grain standards and procedures for determining grain quality have been flawed for many years. They were written in a manner which virtually guarantees that a buyer can be deceived if a sophisticated grain exporter chooses to do so. Our major exporters are certainly sophisticated and sometimes have chosen to do precisely that. The temptation is great to legally ship grain of a quality lower than called for by an export contract, for the profits can be large.

\* Procedures Favor United States Sellers.

To illustrate how substandard grain can be legally exported, consider the official procedures for determining whether a sub-lot of grain scheduled to go aboard a vessel meets the required specifications. This determination is made by carefully examining and testing a small sample taken from the grain. The sub-lot usually contains several million pounds of grain. The sample weighs a bit over two pounds -- far too little for a high probability that the sample is truly representative of the sub-lot. If the sample passes all of the tests, as determined by the Federal Grain Inspection Service, the grain is approved and loaded aboard the vessel. If the sample fails the tests the sub-lot is not always rejected, as one might expect. Instead, in terminals that are suitably equipped a second sample is taken and tested to determine if this sample meets the specifications. If it does, the grain is loaded. Should the second sample also fail the tests, a third and even fourth sample may be taken in a continuing search for one which will pass and allow the grain to be legally put on board the ship.

Such searching for an acceptable sample is a statistical travesty. The procedure virtually guarantees that the quality of a cargo of grain, even though officially

certified by the government of the United States, will not actually meet requirements of the export contract.

To make matters worse, the official testing procedures contain other loopholes. To illustrate, a contract may call for grain with a maximum permissible moisture content of 14 percent. If so, some sub-lots containing as much as 14.5 percent may be deliberately and legally loaded. Similarly, if specifications require not more than 4 percent broken corn and foreign material, the official procedures permit some sub-lots known to contain 4.6 percent to be included in the cargo. Small wonder our customers are dissatisfied and now come to the United States for grain only reluctantly. Clearly the statistical soundness of our official loading procedures must be improved.

\* Standards Mislead Foreign End Users.

Unfortunately, problems are not limited just to loading procedures but extend to official grain standards as well. Rounding of numbers provides a good example. Until very recently the standards stated that the amount of dockage present in wheat would be rounded downward to the nearest full percent or half percent. Thus, 1.49 was rounded to 1 percent and 1.99 to 1.5 percent. Similarly, the amount of

foreign material in barley, rye, and sorghum is rounded downward to the nearest full percent, as is the percentage of split soybeans. All of these roundings overstate quality.

Determination of the extent of insect infestation in grain is also biased against the purchaser. Under United States standards only live insects are counted. Dead insects are disregarded, in spite of the fact that flour millers complain that dead insects make dark spots in flour just as live insects do.

Even the way grains are defined can lead to trouble. As an example, the official definition of soybeans states that soybeans are a grain which contains "not more than 10 percent of other grains...". To the unscrupulous exporter this means that if soybeans are worth \$5 a bushel and oats are worth \$1 a bushel, it will be possible under some circumstances to increase profits by adding oats to the beans as an officially acceptable foreign material.

Obviously these approved procedures and official standards are better suited to shortchanging customers than to pleasing them.

\* Grain Standards Amendment of 1986 -- Encouraging Signs  
Of Change.

There are, however, encouraging signs of change. The grain standards act was amended by Congress in 1986 to include a new statement of principle which is of great significance. The act now says that the principal purpose of grain standards shall be to "describe the true condition of grain as accurately as practicable". Clearly, present standards and procedures do not comply with this statement of purpose.

This has led to a great flurry of activity in the Federal Grain Inspection Service. A number of proposed changes in official standards and procedures have been drafted and published in the Federal Register for public comment prior to final adoption. These changes would go a long way toward correcting the deficiencies noted in this paper. Unfortunately, few concerned citizens see the Federal Register, let alone comment on proposed changes. However, the major grain exporters read the Register carefully and comment in great detail. Predictably, these special interests, with a few exceptions, resist changes. Those who favor the status quo are vocal and have powerful influence in Congress and the Department of Agriculture. It remains to be seen how rapidly the Federal Grain

Inspection Service can bring about needed change.

However, up to this point the Grain Inspection Service seems determined to implement the 1986 act.

\* Grain Standards And Procedures Differ Among Countries.

Another difficulty with grain standards is that they vary in detail from country to country around the world. This can lead to serious misunderstandings between sellers and customers.

The calibration of meters to measure the moisture content of grain is a good example. In the United States such meters are calibrated differently than meters in many countries which buy from us. Grain exported from the United States testing 14 percent moisture on our meters will test about 14.7 percent moisture on the meters of purchasers in many countries of the world.

Another difference is the way damaged kernels are defined. In the Far East a discolored soybean is generally considered a damaged bean. In the United States a discolored bean is classed as damaged only if the interior of the bean as well as the hull is discolored. It should be noted that here again the sophisticated exporter in the United States has an



opportunity to take advantage of an unsophisticated overseas buyer. Frequently the net effect of these country-to-country variations is to leave our customers with the feeling they have been shortchanged.

\* Impact Of Grain Surplus On Quality.

In addition, there is another whole class of problems which have much less to do with grain standards per se, but are serious nonetheless.

The very existence of our huge surplus of grain in the United States illustrates the point. Surplus grain must be stored for extended periods of time. Grain in storage deteriorates in quality. Sound grain is usually stored until it begins to spoil. Then the spoiling grain is moved into marketing channels and replaced by grain that is still sound. To put it differently, our massive grain storage program can be viewed as a system for converting good grain into bad on a continuing basis.

\* Tendency Of Corn To Break In Handling.

There is a tendency for grain, particularly corn, to break and pulverize as it is handled and moved through export channels. Numerous studies have demonstrated a

truly dramatic increase in broken and pulverized kernels as corn is moved from the Iowa-Illinois area down the Mississippi River and overseas to our customers around the world. This is true even of shipments of corn which are carefully shielded from questionable blending practices. It is not unusual for a shipment which leaves a farm in the Midwest containing two percent broken and pulverized kernels to contain 10 percent of such material when it reaches the retail customer in Europe or the Far East -- the increase caused solely by breakage in handling. The customer is always displeased to receive such grain because its storage life is short, and it is very likely to heat and mold. Unfortunately, in the United States little emphasis has been placed on developing corn varieties and handling procedures to minimize kernel breakage.

\* Producers Have An Important Role In Improving Grain Quality.

Finally, it would be a mistake to ignore the fact that those who grow the grain are responsible for some of the problems. Producers base their choice of seed almost entirely on the amount of grain that the seed should produce, not on the quality of grain which will be harvested. They often yield to the temptation to begin

combining corn at the earliest possible date when the corn kernels are relatively soft and susceptible to damage. They are not always careful about precisely adjusting the combine. In the rush of harvest producers run the combine too fast in the field, thus reducing grain quality. They often dry corn at temperatures so high that corn kernels develop stress cracks that make those kernels less resistant to breakage. They run augers faster than necessary and thereby increase breakage. And finally, producers are not always as careful as they might be in monitoring the condition of grain stored on the farm. Farmers, too must clean up their act. This is discussed in more detail in the grain standards subcommittee's interim report attached as Annex C, page 75.

\* Grain Quality, A Key To Retaining Market Share.

Correcting all of these deficiencies and restoring confidence among our overseas customers will take time. Necessary changes in this country will include altering attitudes and practices of long standing as well as improving our official grain standards. Substantial capital investments will be required. And we cannot assume that when these things have been accomplished our export market will dramatically improve. But one thing is certain, we cannot effectively compete in

today's world grain markets unless our customers will feel assured of fair treatment when they buy grain in the United States.

Section IV. Technical Feasibility Of  
Identity-Preserved Shipments Of Quality Grain

The popular perception of the nature of the grain quality problem leads to great interest in identity-preserved grain shipments. The problem is perceived to result from the grain industry's reluctance to deliver high quality grain to foreign customers. As a result there is a natural interest in maintaining quality by going around the major grain companies and preserving the identity of grain.

An initial assumption was that it would be a real challenge to create a logistical organization for identity-preserved grain shipments without using the facilities of major grain companies.

Despite the complexity of the problem it was quickly determined that in fact the network already exists for identity-preserved grain shipments without involving the majors -- even for bulk grain shipments.

Much of the intrigue with identity-preserved shipments is a result of the rapid growth of the container shipment industry. There was never any real question that identity-preserved grain shipments by container are

technically feasible and well suited to specialty grain markets. However, achieving the desired impact on Iowa's economy is another issue. To significantly increase the volume of Iowa grain that is marketed, the focus simply must go beyond developing specialty markets. Then the real issue with container shipping is whether large tonnages can be moved at an acceptable cost rather than whether the identity of grain can be preserved. This question of cost is being closely examined by the transportation subcommittee.

Relative to exports in bulk, Iowa is well-served by an independent network capable of collecting and transporting identity-preserved bulk grain. The grain may be originated from producers, cooperatives, or farm management firms. Independent elevators and loading facilities along the Mississippi and Missouri Rivers, barge lines, and/or railroads transport the grain to export points where publicly owned elevators, mid-stream elevators or export terminals owned independently of the major grain companies may be used to transfer the grain to vessels. In short, it is entirely feasible to preserve identity and to ship bulk grain from Iowa to foreign destinations without an exorbitant increase in cost. However, as is noted elsewhere in this report,

there is some question as to the maximum tonnage of quality grain that can be collected within the state in a short period of time.

In the industry there is of course some skepticism regarding identity-preserved shipments. Identity-preserved is often synonymous with a system used to procure specialty grains. Under such a system contracts are made with producers to grow specific varieties under certain requirements for harvesting, drying, and storing the grain as well as provisions for identity-preserved shipping. The increased cost for contracting with the producer and for supervision during handling is, of course, prohibitive for wide scale application.

A term evolving in the industry, specification-preserved, more accurately describes the intent for the use of identity-preserved shipments to assure that the grain meets contract specifications. In general, major grain companies are resisting the concept of contract specification since their flexibility to trade grain both on paper and physically would be severely restricted.

Despite the lack of enthusiasm within the industry, identity-preserved grain shipments -- better defined as specification-preserved shipments -- offer an attractive

marketing tool for Iowa.

During the study of the technical feasibility of specification preserved shipments it became clear that the challenges to increasing exports from Iowa are not entirely related to grain quality. ??

move this to next chapter. Doesn't belong here.

\* What does he mean?  
\* Needs stronger conclusion that transp'n infrastructure already exists and it is not the problem.

\* Need to flush out + define how this can be done. This chapter needs further development - possibly as an annex. (Report from Transp'n Subcommittee).



EXPORTING

Section V. DIFFICULTIES WITH IOWA GRAIN EXPORTS

\* General.

Predictably, the study identified many problems associated with exporting U.S. grain during this period of world surpluses. This section is not intended as an analysis of the overall grain export problem. The purpose is to note some of the difficulties, frequently unforeseen, that complicate the task of exporting quality grain from Iowa. The focus is on the factors that could influence possible roles of the State of Iowa in increasing such exports, particularly large bulk exports.

\* Shortage Of Sellers.

One of the unforeseen difficulties is that contrary to popular perception there seem to be far more foreign grain merchants interested in buying directly from Iowa than there are Iowans prepared and willing to sell. At present few Iowa companies are willing to assume the very considerable risks involved, particularly for substantial shipments of bulk commodities. Several of the major reasons for this reluctance are outlined in the following subsections. But it is important to note here that during the course of this study a number of serious requests for

bids were received to which Iowa companies were unwilling to respond. Admittedly it is possible that a wider dissemination of the requests might have resulted in bids if a mechanism for such dissemination had been available. However, a good example of the nature of the problem grew out of the visit to Iowa by two senior representatives of the Mexican oilseed processing industry. They were interested in direct shipments of Iowa soybeans. They visited an Iowa country warehouse facility and talked with the elevator managers in detail about how such transactions could best be handled. Then they returned to Mexico where they structured two requests for bids specifically to match the requirements of the Iowans as the Mexican representatives understood them. One request was for 6,000 metric tons. The other was for 6,500 metric tons. Both were to be shipped by rail. Iowa firms were unwilling to submit bids in a timely manner. A copy of the telex requesting these bids is attached as Annex B.

\* Complexity Of Export Process And Lack Of Experience And Knowledge In Iowa Companies.

The logistical and business sequence involved in transferring grain from Iowa producers to foreign users is long and complicated. Only a handful of Iowans have some understanding of the total sequence. In general,

Iowa producers and warehousemen have focussed their attention only on the small segments of the sequence affecting them personally.

\* Size Of Transactions.

In general, Iowans interested in exporting grain are discouraged by the size of typical transactions. The USSR has little interest in individual purchases of less than 250,000 metric tons of corn -- such a contract would require a commitment of roughly \$20 million. Many soybean processors like to buy 250,000 tons of beans for delivery over a period of several months -- that quantity of beans is worth about \$60 million. One average-sized ocean vessel carries about 40,000 metric tons -- so the value of a single cargo of corn is worth roughly \$3 million and one cargo of beans is valued at about \$9 million at current prices. These are frightening numbers to most Iowa producers and warehousemen. Containerized shipments are, of course, typically much smaller and more manageable.

*specialty*

\* Response Time To Typical Requests For Bids.

Most tenders for bids announced by overseas buyers allow a very short response time. Typically the specified time ranges from a few hours to at most several days. Often

the bids submitted leave some details open for further negotiation, but the first round bids generally determine who will get the contract. Such short response times have generally been incompatible with the decision making process existing in the Iowa grain merchandizing community.

\* Iowa Banks And The Financing Of Grain Exports.

In general, Iowa banks seem to have little interest in financing the export of agricultural commodities on the scale necessary to have any significant impact on the economy of the state. With very few exceptions, they have little or no experience with such transactions or with foreign letters of credit, government credit guarantee programs, fluctuations in international currency values, export enhancement programs, etc. There is, however, serious interest in providing such financing by some regional banks and by some foreign banks such as Norwest Bank, First Interstate Bank, and Rabobank of the Netherlands. For cooperatives, financing could be made available by the Farm Credit System's Bank for Cooperatives if they wished to do so.

\* How Typical Iowa Grain Elevators And Warehousemen Earn Profits.

To understand the reluctance of Iowa's typical elevators and warehousemen to bid on export tenders it helps to understand how an Iowa grain merchant makes money.

At the risk of oversimplification, profits are earned by:

- Storing corn for farmers or the CCC -- keeping all bins full and earning storage is crucial to profits;
- Blending low quality grain acquired at a discount with high quality grain purchased without paying any premium; and
- Elevation charges (and sometimes transportation) on grain moving into and out of the facility.

To say it another way, typical Iowa merchants do not like to own grain, except for very short periods as it passes through their hands. They much prefer that farmers and the USDA own the grain and pay the warehousemen to store it. Therefore, they seldom hold title to enough grain to respond quickly to a large export inquiry. In addition, they are generally reluctant to sell at market prices any high quality grain they may own (for which they probably paid the producer no premium) without blending it with low quality grain.

\* Independence In Decision Making By Typical Iowa Grain Elevators And Warehousemen.

The typical Iowa grain merchant is not large enough to handle a substantial export order for bulk grain. Therefore to respond to a tender a number of grain merchants must join together. In practice, this has proven difficult. It is the opinion of some that it will prove impossible to get most Iowa grain merchants to work together effectively on the scale necessary for export sales (although there are a few encouraging exceptions); and that a better base for such sales may be large farm management organizations and producers.

\* Iowa Grain Prices Compared To Prices At The Gulf Coast.

Frequently a comparison of Iowa grain prices and prices at Gulf ports will show that the difference between the two is less than the <sup>tariff published (tariff)</sup> cost of transporting grain from Iowa to the Gulf. This is most discouraging to the Iowa producer or merchant exploring the feasibility of exporting identity-preserved grain. There are several reasons for this. One is that Iowa has very good local markets for grain. Other reasons are noted in following paragraphs.

However, some railroads we talked to indicated that the large size of shipments typically involved in export grain sales (e.g. 40,000-250,000 tons) would make it possible to obtain negotiated contract rates for quality grain shipments. The problem

\* Negotiated Freight Rates. once again is the lack of sellers willing and able to ~~commit~~ <sup>commit</sup> to such large shipments.

USDA recently stated that as a result of the Staggers Rail Act approximately 60 percent of the grain moving by rail to the ports now moves under negotiated rates. These preferential rates are seldom if ever made public and are agreements between very large shippers and the railroads. The small shipper unable to negotiate such rates must move grain at the published standard tariffs which are much higher. The impact of the Staggers Act in the evolving

period of increasing freight rates is uncertain.

Take  
out  
unclear  
??

\* Restrictions On Leased Equipment.

Exports of grain to Mexico by rail or barge are complicated by the fact that many rail cars and barges are leased under arrangements that prohibit movement of these vehicles into foreign countries.

~~This is one more~~  
Sector However some  
railroads have indicated they  
would be willing to negotiate contract  
rates for the large quantities that  
are usually involved in foreign  
export sales. This  
once again  
raises the  
problem of the  
need for  
a large  
exporting capacity  
to provide

\* Control Of Stocks By USDA.

Export efforts of the small warehouseman are complicated by the fact that during this period of grain surpluses a major portion of their inventories is owned or controlled by the CCC.

\* Profit Margins Are Small On Grain Exports.

Generally speaking, profits earned on exports of grain are small. One Iowan who used to export grain and has long been associated with foreign trade recently stated that he "never could figure out how you make money exporting grain". Another Iowan who has been responsible for extensive foreign sales of grain states that he "seldom made money on overseas sales". He then added, "When I did make money on these transactions it often was on the storage, transportation, and elevation rather than on the grain sale itself."

\* Quality Is Not Good Or Bad -- It Is Something Different.

Discussions of grain quality tend to imply the quality of grain is either good or bad. In fact quality represents something different for each industry depending on the end use. Extra or better quality is not the issue. Markets exist for all qualities of grain.

\* U.S. Grades Do Not Really Reflect Quality.

U.S. numerical grades as these are defined today and quality are not congruous. A grade of #1 may or may not

*This does not really relate to problems in exporting grain. It is more appropriate under "standards" discussion.*

*If it does relate, please state how.*



represent a quality improvement over a grade of #2 from the point of view of an end user. U.S. grades simply have little correlation to the intrinsic value of grain. Factors used in determining the grade do not provide enough information to reflect end-use value. They fail to measure important constituent characteristics of the grain such as starch, protein and oil content. Better nutrient information is as important to domestic processors and our livestock feed industry as it is to foreign end users.

not related

\* End Users Are Searching For A Way To Find Quality Information In The Market Place.

Our customers know that American farmers produce good grain, but what is missing is a way to identify and deliver the kind of grain needed for their end use. A tremendous marketing tool will exist for those who first make this information readily available and solve delivery problems.

seems not related?

Need for Segregation

\* Customer Wants And Needs.

It is time to stop expecting customers to buy what we produce and to begin producing what they want. More and more, what our grain customers want is quality tailored to

It seems all of the "unrelated" items have really relate to a simple statement that more segregation will be needed by different qualities of grain. This creates 2 problems relating to export: 1) Need for more bins

at country elevators. large enough shipments to get good freight rates (unit-trains) unless you use "gathering-train" concept, + a large # of elevators.

their specific needs; for example, certain minimum levels of oil content, protein content, moisture, foreign material, etc. Foreign buyers would like to be much more specific on such factors. This will require producers and country elevators to do far more segregating of grain according to these factors than they do at present.

- need bins  
- need gathering  
trains + large #  
elevators in order  
to get unit trains

\* Merits Of Greater Use Of Contract Specifications.

U.S. producers and their customers have a mutual interest in correcting the shortcomings of current grain trade practices. Increased use of more specific contract terms to make clear the quality factors desired by the end user is an especially promising means of achieving this goal. Major grain companies would prefer that customers not specify more than a simple numerical grade. The fewer the additional factors specified by contract the better for the major grain companies, since simplicity of specifications facilitates collecting suitable grain, encourages profitable blending, and permits grain companies to swap and trade grain and to change ship destinations. However, the trade has adjusted to changes in the grades in the past and can certainly adjust to the use of more complex specifications. Producers must take the lead in bringing about this change. But we must keep in mind that it will take more time for producers and

Not really related to this chapter: ~~except~~ i.e. This is not a problem.

Not related to this chapter

exporters to make the adjustment than it will for foreign end users to write the desired new specifications into contracts. The U.S. has a great opportunity to be the first to make this adjustment, ahead of our competitors. The opportunity will not last forever.

\* Importance Of Well-Established Relationship With Overseas Customers.

Selling grain into the regular commercial markets of the U.S. is a very simple process for the producer or small grain dealer. Selling direct to an overseas user of our grain usually requires a well-established relationship based on trust and mutual understanding that often takes considerable time and money to develop.

\* Limitations Of Iowa As An Independent Entity In Grain Export Markets.

As a political entity, the piece of real estate known as the State of Iowa is well established, totally accepted and known world wide. The same cannot be said about Iowa as a logical entity upon which to base a grain export program. From the standpoint of ability to raise and ship high-quality corn and beans Iowa's boundaries are totally artificial. The Mississippi and Missouri Rivers are much

more the natural arteries of commerce than they are logical economic boundaries for commerce in grain. Politicians can perhaps prevail in making Iowa a successful grain exporting entity in spite of this fundamental disadvantage. However, geography and economics suggest that a regional approach in cooperation with one or more neighboring states such as Illinois could be far more successful.

\* Government Credit Guarantees And Export Enhancements.

A major share of U.S. grain exports are now made with federal assistance. Credit guarantees under the USDA's GSM 102 and GSM 103 programs are very common. Use of the Administration's export enhancement programs is expanding rapidly. Other guarantees can be available through the Export-Import Bank. The small firm interested in exporting grain is at some disadvantage in trying to participate in these programs. However, a thorough understanding of how they function is essential.

\* The Importance Of Warehouse Location.

Grain companies, railroads, and barge lines prefer strategically located grain warehouse facilities that provide a special advantage. Railroads like warehouses

not related to this chapter

Not  
related  
to this  
Chapter

to be located along their own rights-of-way and dislike those located at "gateway" points where two railways intersect giving a shipper a choice and thereby increasing rate competition. Rails and barge lines have the least enthusiasm for warehouses located where grain can be loaded out to barges or to one or more rail companies. However, such alternatives in shipping grain to the ports provide sellers of grains major advantages.

\* Advantages Held By Major International Grain Companies.

In spite of their tarnished reputations on grain quality the major international grain companies remain the preferred source of U.S. grain by most of our foreign customers. The principal reasons include:

- A proven record of being able to marshal and deliver large quantities of grain on schedule, even though there may be serious questions about meeting quality specifications;
- Ability to provide the grain at least cost because of the many economies of scale available to the majors;
- Well-established relationships with their foreign customers;
- A well-established relationship with USDA, CCC and other federal agencies that facilitates

access to credit guarantees, export enhancement assistance, and government grain stocks through swaps, etc.

- A vast array of elevators, warehouses and very efficient terminals to facilitate collection of grain to fill large orders.

Section. VI. MOVING TOWARD SOLUTIONS TO GRAIN QUALITY

AND EXPORT PROBLEMS

\* General.

This section examines steps that would be helpful in improving grain quality and in increasing grain exports. In general the subject is approached without attempting to differentiate between steps that could best be taken by the private sector and those that should be taken by government. Exceptions to this general approach of course exist, in areas such as what to do about changing federal grain standards which are clearly government functions.

\* Need For A Quality Grain Exchange Or Computerized Data Network.

Today, few producers have any way to market corn and soybeans of high quality other than into the regular commercial markets where that high quality is dissipated by blending. Similarly, few grain merchants interested in exporting high quality grains have access to sufficient quantities of such grains to meet their needs.

The quality is lost by the U.S. grain merchandizing system before the grain can enter their hands. Clearly, there is a need for a new marketing mechanism that facilitates the preservation of quality and the movement of such grain into the hands of those who will best use it. To accomplish this we must bring together potential buyers and sellers of high quality grain who now have no communication with one another. Two basic approaches are of interest.

- One is a cash grain exchange utilizing the traditional open outcry system. An excellent example of this approach is the St. Louis Merchants Exchange which brings together buyers and sellers of barge-load lots of standard grain and barge freight.
- The other is a computerized clearinghouse which collects information regarding quantity and location of grain based on quality factors. Such an electronic network could also include a mechanism for bids and offers.

\* The Possible Role Of A Port And Export Authority.

← To solve what problem?

Several years ago the State of Indiana took steps to encourage the formation of a port authority to promote



exports, including grains, from that state. The port authority operates on both the Great Lakes and the Ohio River. It has had aggressive and imaginative leadership and has been highly successful in assisting the private sector in moving Indiana products into world markets at competitive costs. Other states on the major rivers have initiated similar efforts. A comparable authority operating in Iowa on the Mississippi and Missouri Rivers could be beneficial and warrants detailed consideration. ) ?

\* Ensuring More Competition In Transportation And Broader Access To The Lowest Transportation Costs.

As noted in Section V, the cost of transportation within the United States is a very important factor in determining whether quality grain can be offered at the ports at competitive prices. Generally speaking the lowest transportation costs are available only to the largest grain merchants. At the present time these merchants have not demonstrated any great enthusiasm for changes that would improve the quality of grain delivered to foreign users. It follows then that exports of quality grain would be enhanced by steps to make lower transportation costs available to smaller exporters eager to provide quality. Such steps include:

- Negotiation of lower rail rates for more shippers by organizations with sufficient leverage to do so; such organizations include producer groups, associations of cooperatives, shipper associations, port authorities, etc.; and
- Support and incentives for construction and operation of grain warehouse space that ensures maximum competition in transportation costs; essential characteristics of such warehousing include:

\* Is there an existing port elevator/grain warehouse with these capabilities? →

\* Not sure warehouse needed unless you have a ~~big~~ large buyer who will be warehousing there.

\* Segregation must happen first at country elevator level for anything that passes through elevators.

\* Such a warehouse would really in effect be a large elevator on river to draw primarily ~~from~~ directly from farmers who would truck from their farms to the elevator. Thus, perhaps 50-mile "Quality Grain Band" on either side of river.

- Capability to load out grain to barges and to rail cars on one or preferably more than one railroad;
- Consistent availability of access to such warehousing by producers and small grain merchants as opposed to tight control of access by narrower interests; and
- Extensive capability of the warehousing to segregate grain according to quality factors.

\* The warehouse might also buy or store unit trains of grain from elevators across state who would segregate their grain at these elevators. However, it is not clear why this would be needed when they could just load directly to river themselves.

\* Working With Overseas Users Of Corn And Soybeans On Contract Terms To Ensure Quality.

Rapid progress in improving the quality of exported grain

is possible by educating foreign consumers of our grains on appropriate terms to be included in export contracts. Customer complaints can be quickly reduced if producers in the U.S. work closely with overseas users of our corn and soybeans to develop these changes. Such changes might include:

- Specifying that the cumulative sum loading procedure in its present form shall not be used in determining grain grades; but rather that each subplot must meet the loading specifications;
- Specifying not only average moisture content as is now customary, but an acceptable variation of moisture among kernels constituting a cargo; and
- Specifying appropriate discounts for failure of cargo to meet contract specifications as determined by testing by an international inspection company, mutually acceptable to buyer and seller.

\* Subdivision Of Grain Cargoes In Importing Countries.

Few, if any, end users in importing countries consume an entire grain cargo. Shipload lots are typically subdivided for transshipment to several end users. The usual practice is to issue a copy of the original Federal Grain Inspection Service loading certificate on the

entire shipload to each end user. Rarely, however, does an individual subplot of grain contain the same characteristics of the entire shipment. These inconsistencies are usually caused by disaggregation during the loading process and are due to differences in particle size. Rarely is this disaggregation reversed by reblending during unloading at importing ports. This results in some end users receiving much lower quality grain than indicated on the copy of the original loading certificate. There is a need to present information to importing end users on the cause of the problem and the alternative solutions including:

- Reblending or cleaning at importing ports;
- Cleaning the grain to a low level of BCFM at shipping elevators; and
- Providing end users a purchase contract specifying quality to be delivered, ie., destination grades or discounts for receiving lower quality grain than is indicated on the loading certificate.

*Would you have the end users who receive better than the average pay a premium for it? If not, where does the money come from to pay the discount?*

\* Promoting Domestic Markets And Uses For Low Quality And Fragmented Grain.

The best location to consume low quality grain and fragmented grain is as close as possible to the point

of its origin. At present the economic incentives are to blend this material into cargoes of grain destined for overseas use. As these export incentives are reduced we must do more to promote domestic utilization of this material for livestock feed, industrial feedstocks, and fuel.

\* Educating Producers, Warehousemen, Seedsmen,  
Politicians And The Public.

Any program to improve grain quality and exports of Iowa grain must include a strong effort to better inform all parties involved of the true nature of the problems and how they can be solved. To a considerable extent this educational effort must include on-going programs that extend over a considerable period of time.

The areas needing attention include the following:

- Dispelling a number of misconceptions that seem to be popular, including:
  - Misconception: all our foreign customers want high quality grain;
  - Misconception: most foreign customers will pay a premium for quality;
  - Misconception: most of the problems are concentrated at the export terminals,

and if the exporters could only be stopped from adding foreign material to grain that would take care of the matter; and

- Misconception: Iowa grain producers deliver only high quality grain into commercial channels.
- Better informing producers on a variety of subjects including:
  - How good grain quality benefits the producer by reducing drying costs, aeration costs, and spoilage;
  - The grain quality characteristics of the many seed varieties available;
  - How grain quality can be improved on the farm by better harvesting, handling, drying and storage techniques;
  - How to market high quality grain to ensure the best possible price and avoid giving to the grain merchants all the economic benefits of blending;
  - Keeping producers informed of the rapid changes taking place in quality characteristics desired by the users of our grains;

- Market price information on high quality and specialty grades of grain and prices of grains at the export terminals; and
- What foreign producers are doing about grain quality.
- Educating Iowa grain dealers and warehousemen and keeping them informed on:
  - The rapidly changing requirements of our overseas customers for particular quality characteristics in grain;
  - Foreign sales opportunities;
  - The grain export process and how it functions;
  - The growing importance of more segregation of grains by quality characteristics on the farm and at the point the grain first enters commercial channels; and
  - What our competitors are doing to provide quality grain to their customers.
- Seminars for legislators and other state employees on grain quality and grain export problems.
- Seminars for plant breeders and seed dealers on grain quality and exports.

\* Support For Appropriate Research, Development, Testing,  
And Demonstration.

Clearly, more financial support is needed for research, development and testing in a number of areas related to grain quality and exports. These include the following:

- New equipment for measuring and testing grain quality characteristics. No longer are the classical measurements of grain quality such as average moisture content, percentage of foreign material and percentage of total damage adequate to describe the quality of grain. Increasingly our foreign customers want to know the range of variation in moisture content among the kernels comprising a cargo, hardness, protein content, oil content, etc. This equipment should be made available quickly.
- Plant genetics and breeding for the grain quality characteristics our foreign customers desire.
- The economics of growing and exporting grains in a world that is rapidly increasing in sophistication relative to grain quality and the importance of specific characteristics in grains that effect end-use value.



- Grain handling and storage with emphasis on reducing post-harvest damage and identifying cost-effective ways of doing more to segregate grain according to quality characteristics.
- Improved and more cost-effective ways to transport identity-preserved grains and grains shipped to developing countries characterized by lack of adequate infrastructure for receiving and distributing grain.
- New uses for and better utilization of grain that is fragmented or of low quality.
- Demonstrations of the use value of quality characteristics.

\* Support For The Small Exporter.

The individual or small firm wanting to export quality grain from this state should be encouraged and will require a great deal of support and guidance. Since there is no substitute for the enthusiastic and vigorous entrepreneur in promoting progress, providing such support on a continuing basis must receive high priority in an Iowa quality grain program.

Best support is perhaps providing ways to consolidate; or <sup>providing</sup> one buyer who will buy from all these small firms.

— Why?  
 Everything else in this report points to the need to consolidate shipments into large quantities.  
 "Small" and "exporter" seem to be contradiction of terms.

\* Providing Incentives For Grain Quality.

Generally speaking, few if any economic incentives for quality are now included in the U.S. grain production and merchandizing system. Many authorities believe that incentives for quality offer the simplest and most effective means of overcoming many of the difficulties noted in this report. Some viable approaches to providing such incentives include:

- Changing Commodity Credit Corporation policy to include payment of premiums on forfeited grain that exceeds quality standards in addition to the current practice of charging discounts on grain which does not meet those standards;
- Changing the U.S. grain quality standards to measure grain weight (tonnage) on a dry matter basis; and
- Changing the U.S. grain quality standards to measure grain weight (tonnage) on a basis that does not include the weight of any foreign material in the grain.

\* Importance Of Quality Grain Programs Within The  
Commodity Organizations.

To be successful, any program to expand the export of quality grain from the State of Iowa must have the continuing support of the state's corn and soybean associations and promotion boards. Certainly such support exists today. There is no reason to suggest that this support will not continue in the future. The point of importance is that, as an Iowa quality grain program evolves, the state's commodity groups must be involved intimately in both the planning and implementation of such a program.

\* Tightening Federal Grain Inspection Standards And  
Procedures.

The technical shortcomings of U.S. official grain standards and procedures are outlined in Section III of this report. The section also notes that as a result of legislation passed and signed into law late in 1986 the Federal Grain Inspection Service is moving rapidly to correct many of these deficiencies. Clearly, a number of the corrections will be strongly resisted by powerful elements of the grain merchandizing industry. All of

those interested in improving grain quality in our exports must keep well informed on this subject and actively support change if significant progress is to be achieved. It is important to note that as yet no legislation has been adopted or changes proposed to address two major shortcomings of our national grain merchandizing system. These problem areas are:

- One of the most common complaints of overseas users of our grains is that spoilage or undesirable chemical changes occur in cargoes of U.S. grains because very wet grain has been blended into these cargoes. This causes problems even though the average moisture content of a cargo remains at an acceptable level. This must be addressed. One approach is to limit the permissible difference in moisture contents of grains that may be blended. Four percentage points has been suggested by some authorities. Another approach is to limit the maximum variation in moisture among kernels constituting a cargo or a lot of grain. As noted elsewhere in this section, considerably more testing needs to be done of equipment suitable for measuring such moisture variations.

- At present there is nothing to prevent the export from the United States of cargoes of grain which are known by the Federal Grain Inspection Service to be absolutely certain to spoil before they reach their destination. The Federal Grain Inspection Service has no authority to prevent such shipments. In the view of the authors of this report this constitutes totally unacceptable national policy.

\* Need For Pressure On The Major Grain Companies To Change.

*To do what?*

The major grain companies favor the existing U.S. system for merchandizing grain. In the past this system has served them and this country well. But the world grain trade is changing, and the major grain companies feel compelled to resist such change. It is important to note, however, that the major grain companies can and will change when it becomes imperative to do so. They will not be displaced in any major way. The point of importance is that realistically a principal goal of an Iowa quality grain program must be to maintain pressure on the major grain companies to change as opposed to being determined to permanently displace them. However, the

principal means of maintaining such pressure is to demonstrate that there is a substantial world market for quality grain and that they could eventually be displaced if they persist too long in resisting change.

## Section VII. OPTIONS FOR THE STATE OF IOWA.

The fundamental purpose of this study is to identify appropriate ways for state government to respond to the quality challenge. In the first four months of the study the focus has been on exploring the nature of the challenge, understanding the problems, and identifying ways of moving toward solutions.

In the remaining two months of the study the focus will shift to defining appropriate roles of the state.

Clearly, everyone involved in the grain industry from the plant breeder to the producer to the grain merchant influences the quality of grain available to all our customers. All are concerned. Each must participate in bringing about solutions to the problems of grain quality and declining exports, and each seems willing to do so.

The State of Iowa, if it so chooses, can certainly enhance these efforts. In the view of the authors of this report, several of the most promising areas for state participation are in:

- Educating producers and grain merchants;
- Funding and conducting research, development, and testing;
- Identifying markets;

- Serving as a clearinghouse for information that will bring together potential buyers and sellers of quality grains;
- Supporting entrepreneurs; and
- Vigorously supporting appropriate changes in federal policy, including incentives for quality and grain standards and procedures.

Following is a much more comprehensive listing of options available for state participation which will also be examined in more detail in the remaining two months of the study.



OPTIONS TO BE CONSIDERED FOR ROLE OF STATE OF IOWA

INFORMATION NETWORK

\*Serve As A Clearing House For Information:

- Inquiries from potential buyers
- Inquiries from potential sellers
- Current grain market price information or guidance on how to obtain it:
  - Gulf ports
  - Great lake ports
  - Pacific coast ports
  - Atlantic coast ports
- Current transportation costs or guidance on how to obtain it *+ negotiate rates:*
  - Truck
  - Rail
  - Barge
  - Container
  - Ocean freight
- Elevation charges: *services + facilities:*
  - River
  - Port
- Other charges:
  - Stowing and trimming
  - Inspection
  - Insurance
  - Demurrage
- Firms or persons willing to serve as "sellers":
- Persons offering other services
  - Freight forwarding
  - Inspection, grading, testing
  - Bagging
  - Insurance
  - Export financing
  - Legal advice on appropriate contract terms

*State can provide information on who provides services, but the private buyers + sellers will always need to contact the service providers for actual information on costs.*

*Why?  
Who is going to realistically use any of this information?*

*no*

*services + facilities:*

\*Provide Personal Assistance To Exporters And Those Interested In Exporting

EDUCATION AND RESEARCH

\*Conduct Appropriate Public Information And Education Programs:

- Producers
- Grain warehouseman
- End-Users

\*Promote Development Of Methods Of Harvesting, Drying, Handling, Storing And Transporting Grain That Minimize Damage

Support Development And Demonstrate Use Of Advanced Grain Testing Technology And Grading Equipment

- Oil, protein, starch content
- Variation of moisture within shipment

\*Work Closely With Foreign Buyers And End-Users of U.S. Grains on Improving Contract Specifications

\*Work Closely With The State Of Illinois To Develop Cooperative Programs That Will Enhance Grain Exports

\*Promote Development Of Grain Varieties That Produce Grain Of High Quality

STANDARDS AND PROCEDURES

\*Serve As An Active Advocate For Improving National Grain Standards And Procedures

- Inform producers and warehouseman of comment periods for FGIS regulations.
- Should FM be a grade determining factor

\*Iowa Quality Grain Standards

- State inspection and certification of factors that are not grade determining
- Separate standards based on end use;
  - food
  - fuel
  - export
  - other
- Promote markets and uses for screenings and low quality grain in Iowa:
  - Feed
  - Fuel
  - Separate grade for broken corn

\*Impact Of USDA Policy And Farm Program On Quality

- Storage
- Premium/Discounts

FINANCE AND DEVELOPMENT

\*Provide Tax Incentives That Will Increase Exports Of Iowa Grain

- Preferred treatment of profits and losses on identity preserved exports of Iowa grain
- Preferred tax treatment of earnings and losses of Iowa banks on loans to finance exports of Iowa grains
- Preferred tax treatment of investment in and profits and losses on:
  - Grain warehousing at key intersections of rail and water transportation
  - Grain cleaning equipment
  - Equipment necessary for loading and handling containerized grain shipments
  - Equipment for utilizing low quality grain or broken grain and foreign material as fuel or for other comparable specialized purposes

\*Assume A Part Of Financial Risks To Limit Exposure Of Iowa Exporters

- Foreign/Domestic joint ventures

\*Subsidize Trial Shipments

\*Support construction of public grain warehousing and port authority at major intersections of rail and barge transportation routes

- Seek futures contract delivery point status for such warehousing

MARKETING

- \*Authorize And Support Official Iowa Grain Export Company
- \*Identify Markets And Appropriate Sources of Grain To Meet The Demand
  - For domestic markets
  - For export markets
- \*Identify Contract Producers To Grow Specific Varieties
- \*Support Trial Shipments For Demonstrations For A Period of Market Observation
- \*Make Available An Official Grain Identification Program Using Confetti Or Dye As Markers
- \*Publicize Grain Quality Characteristics In Connection With State Variety Test Program.

TRANSPORTATION

*Potential*

*Specification*

\*Develop ~~Transportation~~ Plans For ~~Identity~~-Preserved Shipment

--Bulk ~~and containers~~

--Containerized

\*Develop ~~Guidelines~~ And Information On Negotiating Freight Rates

No



\*Develop And Support Freight Rate Information Service

ANNEX A

GRAIN QUALITY TASK FORCE MEMBERSHIP

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Mark Danneburg  
10518 Ricardo Rd.  
Des Moines, IA  
515-223-6659

465653SOYPRO  
Y  
1773300 ANIAME

ANNEX B

TELEX NO. 1747/87

MAYO 11 DE 1987.

COOPR EVANS AND ASSOCIATES  
MRS. KRISTI LIVINGSTON.

ACCORDINGLY, OUR MEETING HELD LAST WEEK WE WOULD LIKE TO INVITE --  
IOHA'S COMPANIES TO BID SOYBEANS FOR NEXT WEDNESDAY THE 13TH.

THE OFFERS WILL BE RECEIVED BEFORE 16:00 HOURS AND WE REQUEST THOSE  
FIRM UNTIL 20:00 HOURS, YOU CAN USE TELEX, OUR NUMBER IS: - - -  
017-77-371 OR 017-73-600 ANSWER BACK ANIAME

- 1.- 6,000 TONS. (75 HOOPERS CARS) (5 0/0 SELLER OPTION)  
C P F MIDDLE BRIDGE EL PASO, TEXAS.  
1ST. OR 2ND HALF JUNE (BUYER'S OPTION)  
MAXIMUM GROSS WEIGHT PER CAR 109.2 METRIC TONS. AND
- 2.- 6,500 TONS. ( 75 HOOPERS CARS) (5 0/0 SELLER OPTION)  
C P F MIDDLE BRIDGE LAREDO, TEXAS.  
1ST. OR 2ND HALF JUNE (BUYER'S OPTION)  
MAXIMUM GROSS WEIGHT PER CAR 122 METRIC TONS.)

QUALITY:  
-----

U S NO. 2 OR BETTER.  
IN ADDITION  
MOISTURE 13 0/0  
ADMIXTURE 1.5 0/0

WE WOULD LIKE YOU TO CONFIRM PROTEIN AND OIL CONTENT.

WE WOULD PROPOSE THIONVILLE LABORATORY (NEW ORLEANS) TO MAKE ANALYSIS  
OVER SAMPLE TAKEN AND SENT BY F. O. I. S.

PAYMENT  
-----

ANIAME WILL BE ESTABLISH 1 OR 2 LETTER OF CREDIT ON A FIRST CLASS -  
AMERICAN BANK, USING 6SH-102 PROGRAM OF COMMODITY CREDIT CORPORA--  
TION REGISTRATION COST ON OUR BEHALF.

PERFORMANCE BOND  
-----

WE REQUIRE A PERFORMANCE BOND FOR 10 0/0 OF TOTAL AMOUNT FOR THE -  
SHIPMENT PERIOD AND 30 DAYS AFTER.

NOTICE OF SHIPMENT.  
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NOTICE OF SHIPMENT MUST BE GIVEN WITHIN 2 DAY AFTER LOADING, BY --  
TELEX OR CABLE.

RAILROAD PREMANIFESTATION AT BORDER  
-----

SELLER GET OBLIGATION TO PUT ALL DOCUMENTATION AT BORDER ON TIME,  
IN ORDER TO PERMIT, HIS REPRESENTATIVE TO FILL ALL THE EXPORT CER--  
TIFICATE AND CAR LIBERATION TO MEXICO WITHOUT DELAY. ACCORDINGLY - -  
TO RAILROAD SPECIFICATIONS.

WE WOULD APPRECIATE YOUR SENDING COPIES OF THIS INVITATION TO - - -  
MR. ROLAND MCCUBBIN AND MR. DARWIN LUEDTKE.

REGARDS,

A.N.I.A.M.E.

LIC. JOSE LUIS SANDOVAL LUNA  
/OPERATION MANAGER

ANNEX C

Capturing Iowa's Comparative Advantage in Grain Quality

Grain Standards Subcommittee  
Iowa Grain Quality Task Force  
Interim report  
June 16, 1987

I. A comparative advantage is the ability to produce and deliver superior quality grain at the same or lower prices than other growing areas. Capture of comparative advantage requires recognition of naturally occurring situations that other sellers cannot readily duplicate. This is different than producing grain of specific quality for an end-use, to specifications that other sellers may be able to meet. This report emphasizes Iowa as a grain producing unit with comparative advantage. In reality, contiguous areas of the Central and Western Corn Belt have similar growing conditions, and probably would share any increased demand for quality products.

II. Quality has to be defined in economically significant terms.

- Freedom from defects
- Shippable and storable
- Tailored to its intended end use.

All the major decisions that determine grain quality are made by growers and/or the first off-farm handlers. There are four key determinants of grain quality, in addition to weather which cannot be controlled.

1. Genetics. Variety selection affects nutritive composition, kernel strength and field drydown rate. Current market practice offers little incentive for farmers to select for factors other than yield and field drydown.
2. Harvest damage. Stress cracks are formed when grain is harvested too wet or too rapidly. Cracked kernels will break into smaller pieces in subsequent handlings.
3. Drying rate. Rapid drying in dryers that allow grain temperatures to reach 160 degrees or more cause further internal cracking. Dryer cracks can increase corn's potential to break fourfold over air or low heat drying.
4. Storage management. The majority of corn receives its initial drying and storage on the farm, especially in recent years as growers participated in the nine-month loan program. Grain has a finite shelf-life. If most of the shelf-life is consumed through poor storage practices, grain is much more likely to deteriorate in-transit.

The grower and country elevator control all these decisions. Any effort to improve quality will fail if it does not provide incentives at the local level.

III. Major corn and soybean defect factors are:

- Foreign material
- Damage
- Toxic substances
- Insect infestation

All end-uses are affected adversely by increasing percentages of defects. The amount of the adverse effect may vary, but no user is completely neutral to higher defect levels.

-Advantages for Iowa-corn

- \* Lower harvest moisture content (20-22%) = fewer fines  
This is a distinct advantage for Iowa over Eastern Corn Belt.
- \* Hybrids matched to maturity--less frost damage
- \* Lower weather variability, good soil fertility
- \* Field drydown means higher kernel strength.
- \* Harvest weather suited to lower temperature drying  
Less chance of weather-damage while still in the field
- \* Typical corn at harvest vs. US #3 standards

Factor	Typical farm	Typical export	#3 Std
BCFM	1.0-1.5%	3.5-3.9%	4.0%
Damage	2.0-2.5%	4.0-6.0%	7.0%
Test Wt.	56-57 lb/bu	54-56 lb/bu	52.0 lb/bu
FM (8/64 in.)	0.3-0.5%	1.0-1.5%	N/A
FM (6/64 in.)	0.2-0.3%	0.7-0.8%	N/A

FM = foreign material. Number in parenthesis is the screen size used to measure FM.

With no incentive to do otherwise, these advantages are lost and Iowa's corn will be no different than any other corn. Iowa corn could have superior handling and storage properties, if growers and country elevators had a reason to make this so. Any conscious program to maintain these advantages will require livestock feeding in cash grain areas as a market for the high-defect grain that should not be blended with good corn.

- Advantages for Iowa- soybeans

- \* Clean fields, low weed seed levels

- \* Little mold damage in the field
- \* Killing frost stops weed growth-cleaner harvesting
- \* Fewer insect problems, less pesticide residue  
Especially important in a food product
- \* We do not use many pesticides that are still legal overseas.
- \* Typical Iowa soybeans at harvest vs. US #2 standards

Factor	Typical farm	Typical export	US#2
Foreign Mat.	0.5%	1.8%	2.0%
Damage	0.5%	1.0-2.0%	3.0%

- Disadvantages for Iowa: both grains

- \* The distance, and barge-rail freight differentials, to the Gulf export market favor barge shipments.
- \* Barge shipments require 2-4 more handlings *(except when drawn from an area where grain is trucked directly to the river.)*
- \* Iowa grain is "older" when it hits the market because grain in higher price areas sells first. Government national target prices and loan rates magnify this situation.
- \* Our major quality risk is early frost. Frost is more likely to be localized than drought.

IV. Handling and storage factors include:

- Breakage susceptibility
  - Insect infestation
  - Moisture and moisture variation
- Advantages for Iowa:
- \* Moderate harvest moisture contents reduce stress cracking.
  - \* Cold winters allow effective insect control, although many growers and handlers are not adequately aware of insect problems. Tighter infestation tolerances in the national Standards will promote interest in insect control strategies.



- \* Moderate harvest moisture contents and reduced temperature drying reduce kernel to kernel moisture variation.

V. End-use factors are:

- Composition
- Test weight and hardness
- Advantages for Iowa:
  - \* Ability to collect large quantities of specialized qualities.
  - \* Farmers responsive to new technologies, genetics
  - \* Broad genetic base adapted to our climate.
- There is little comparative data on intrinsic corn quality by growing region.
- A 1986 soybean survey showed Corn Belt soybeans to contain about two percent less protein than Southern soybeans. However, genetic tests prove that Iowa beans have the genetic diversity to eliminate this difference if there were incentives to do so.

VI. The following areas have potential to accentuate our advantages and reduce our disadvantages.

1. Promote improved national grain Standards and alternate factors.
2. Reduce the impact of government income-protection programs on quality.
3. Expand education, public information and research programs.
4. Upgrade the testing capabilities of country elevators.

## 1. Improve National Grain Standards and Alternate Factors

The primary purpose of the official U.S. Standards for grain is to describe and certify the quality of grain as accurately as practicable. They should define uniform and accepted descriptive terms to facilitate trade in grain, to provide information to aid in determining grain storability, to offer end users the best possible information from which to determine end-product yield and quality, and to provide the framework necessary for markets to establish grain quality improvement incentives.

One factor change that Iowa might have an advantage in and could capitalize on is the separation of broken corn and foreign material. An indepth impact study needs to be commissioned to determine the effect of separating broken corn and foreign material. If the results of this research indicate no adverse impact on any particular segment of the grain industry the broken corn and foreign material should be separated for grading purposes. A grade determining factor called broken corn with levels set to be consistent with objectives of increasing corn values could be established. For the ease of commerce, it has been further suggested that a tolerable level of foreign material be established with the balance above that point becoming a weight subtraction. The foreign material would be a grade determining (discount) factor. This concept is already applied to several small grains, with the term dockage used in place of foreign materials. Preliminary evidence indicates that the majority of Iowa corn is delivered to the first point of sale within these guidelines already so there shouldn't be a burden placed on Iowa farmers. This would allow the market to create the incentive necessary to encourage cleaning of grain by subsequent handlers when it is in their possession. Iowa corn is harvested at a lower moisture content which results in fewer fines. Iowa's lower weather variability and good soil fertility produces a more uniform product.

This same scenario could probably be applied to the reduction of foreign material levels of soybean grade factors. Iowa has clean soybean fields with low weed seed levels and a killing frost that stops weed growth and allows for cleaner harvesting and the delivery of a product with lower foreign material levels.

These advantages for Iowa would also carry over to other grade factor changes, such as insect levels and damage, that are currently being investigated.

In addition there are several regulatory issues, which aid in making the Standards more accurate, that are being studied such as the cu-sum loading plan, moisture level blending limits, barge loading and representative sampling procedures, and moisture meter calibration, that would place Iowa's grain at an advantage.

It is probably not the role of the State of Iowa to be actively involved in the discussion of these changes to the national Standards other than perhaps the passage of resolutions supporting those changes that would be to Iowa's benefit. The State could play a part, however, by encouraging the utilization of the screenings and foreign material within the state and making the grain sector aware of the comment period that proceeds proposed changes to the regulation of the Standards by the Administration.

If these changes come about, the Standard levels would be closer to the potentially deliverable quality which by some indications Iowa is already delivering. It would discourage deterioration in quality as it moved through the system, thus allowing the end user access to the quality of grain he desires. This would cause the sellers of low grade grain to bear the cost of that deterioration, and not benefit from a subsidy by the sellers of high quality product. The market would begin to encourage the delivery of, and perhaps offer the incentive for, high quality grain.

There has been much interest in additional information regarding end use quality factors that might be more beneficial than some of the factors already in the standards. These factors would not have to be grade determining, but could be listed on an informational basis to be used in the contracting of grain by the buyer for his particular needs. These factors would include such things as protein and oil for soybeans, protein and starch for corn, and hardness characteristics for corn along with others. However both the buyer and seller are hesitant to become involved in testing for these factors due to the uncertainty of the outcome and who should be assessed the costs. Because of this there may be a role for State become involved in the development of tests and the equipment needed, such as an instrument to determine the variation of moisture within a sample and foreign material tester research. The genetic breeding program supported by the State should be encouraged to incorporate hardness characteristics into its research.

The State could then take the lead in the demonstration of the use of these ideas in practice for the market to observe. Once the market was satisfied the tests were beneficial for both the buyer and seller and began to demand them, the state's role would be met and could step aside. When the tests became accepted the State could focus on those factors with which Iowa has an advantage and certify its high quality in them.

## 2. Reduce the Impact of Government Programs

Current market practice provides no direct incentive for growers to produce grain of higher quality than the minimum acceptance standards. Any higher quality grain is used to average out the lower qualities. Thus U.S. grain quality will always gravitate toward mediocrity. Since growers hold the keys to improved quality, they must have some form of overt incentives if the U.S. expects to upgrade its international standing relative to quality.

The largest purchaser of grain from farmers is the USDA, through forfeitures under the loan program. USDA policies are insensitive to quality concerns for two reasons--1) the acceptance standards for forfeited grain are generally one U.S. Grade number lower than market standards and 2) a storage period of nine months to three years is often required for growers to receive program benefits. Low acceptance standards reduce the incentive to maintain quality, leaving the problem of sorting out undesirable grain to the marketplace after the USDA has disposed of its stocks. Storage is a destructive activity. Low incentives for quality do not encourage the vigilance necessary to keep in-storage deterioration to a minimum.

The USDA should adjust its acceptance standards to conform with those normally used in the marketplace. It should also set up a premium structure to reward growers forfeiting grain of higher quality than the minimum standards. Growers would respond by altering harvesting, drying, and storage practices to prevent breakage and spoilage. Seed would be chosen not only for yield potential but also quality potential. The market in general would be forced to discriminate more accurately in favor of high quality grain and against poorer quality lots.

Tight standards and premiums will not eliminate the inherent problems associated with storage. As long as storage is a key element of farm programs, we must search for ways to mitigate its impact on quality. Placing higher quality grain into storage is one strategy USDA could adopt. Iowa farmers would benefit to a greater degree from this policy because price patterns usually dictate that Iowa grain is more likely to be forfeited, and more likely to be stored for long periods than grain from areas closer to central markets.

### 3. Expand education, public information, and research programs.

Education represents a significant opportunity for the State to become involved. Among publicly-funded agencies, those most able to participate in grain quality educational efforts are State funded--Extension Service, Iowa Department of Agriculture, Universities. Educational efforts need to be targeted at several audiences--End-users, handlers, growers and agrisuppliers(plant breeders, equipment manufacturers, etc.) While all four have a role in determining grain quality, each has a unique position in the agricultural economy. Successful educational efforts will recognize the need to tailor the message to fit individual interests and market demands.

End-users need to be aware that quality other than "normal" U.S. #3 corn or #2 soybeans can be purchased. More importantly, buyers need to be convinced that market mechanisms exist that would put higher quality products in their hands. In some ways, this means promoting alternative buying and shipping arrangements to the conventional routings through multinational grain traders. The issue of buyer demand and buyer confidence is crucial to the success of any strategy to improve quality. Representatives of the State could play an important role in developing the needed connections and buyer relationships. A standard contract format emphasising quality options would be a valuable promotional tool. Presumably Iowa grain would be more likely to meet the terms of quality-specific contracts, and thus would increase in value relative to other origins. It is questionable whether Iowa grain per se will ever have a market identity just because it came from Iowa. The more likely scenario is that Iowa grain would be preferentially bought because contract terms dictated that the grain to fill them would be more often found in Iowa.

Considerable information is available on how to grow and maintain high quality grain. This information needs to be assembled and distributed to growers and handlers in ways that would convince them quality is good business. Grain quality control operations, such as cleaning, are oftens regarded as additional costs when in fact they may be sources of profit even in the absence of direct market premiums for the upgraded products. The Extension Service, the Department of Agriculture and trade organizations have an opportunity to develop a unified message conveying the benefits of grain quality. In this same vein, plant breeders need to be convinced that growers see a value in quality traits. Genetics can and will change in whatever direction the buyers of seed demand they should change.

Research is important to provide market information and testing capabilities. With growers and handlers sometimes having conflicting interests in quality, on a nationwide basis, the State of Iowa should assess its needs to support its marketing strategy, and pursue those needs with its own research capabilities. Some examples might be the development of meters to measure moisture variation, nutrient content and kernel strength. Application of existing technologies falls in the same category of need as new equipment. Market strategies should be supported by accurate information about the quality of grain from other growing regions, from international competitors, etc. We cannot rely on national programs to supply this information for us, for obvious reasons. We must accept the responsibility to take charge of our own planning.

#### 4. Upgrade the testing capabilities of the country elevator.

A basic presumption of all the efforts to improve grain quality is that economically motivated buyers will want to specify grain that will give them their highest possible economic return from end products. This desire will only be realized if buyers can be assured of accurate information and be confident that the qualities they desire will be preserved in sufficient quantity from the first point of sale forward. Factors which we feel will be relevant are:

1. Average moisture
2. Moisture range (individual kernel moisture)
3. Protein content
4. Oil content
5. Starch content (corn)
6. Breakage potential
7. Broken corn versus foreign material
8. Possibly free fatty acids, mycotoxins, or other end-product quality factors

It will be necessary to test additional factors quickly, economically and readily. For consistency and prevention of duplicitous government agencies, the logical focal point would be the Federal Grain Inspection Service and their licensed agencies. However, since these additional tests represent a marketing concept originated in a state, it appears that initially the State Laboratory or a designated private laboratory will have to be involved.

Additional or expanded testing at the country elevator has important operational implications. Ideally, the technology should provide whole-grain testing equipment that yields rapid data with little customer waiting, typically in less than one minute. There are methods of incorporating additional time lags into the grain receiving system, but customers would have to be convinced that the additional time was spent in a good cause, namely increasing their net revenue from grain sales. The largest bottleneck will probably occur at grain receiving pits if inbound deliveries must be segregated by quality. Not all elevators, in fact relatively few elevators, would work well for segregation. The basic design of workhouses at country elevators in the corn was established to move large volumes of a uniform grade commodity, with the capability to blend lesser amounts of lower grade grain to meet a standard specification. Additionally, the costs of owning and operating in-house testing equipment will be an important economic factor in determining whether such testing will be accepted.

Initially, the objective must be to identify and assure a superior product at a competitive price. Consequently, there may not be an immediate opportunity for the elevator to pay the farmer for a "Premium Quality" product. Smooth farmer-elevator relations will require an understanding that increased emphasis on quality is not just another excuse to discount, but rather is a market development tool for the future. Growers and elevator operators alike would soon tire of quality if every load became a source of controversy. At that point, the old averaging system would begin to look good again. Elevators will neither discount nor reward factors not part of the Official system without established assurance that the end user will recognize, and reward, their value. Until a region--a state, a part of a state, an individual company--develops the

reputation for providing a consistently higher valued product, and until the market perceives and seeks this higher value, there will be no market-driven incentive to provide end-use value assured grain.

Who is willing to finance the development of the testing and infrastructure to provide end-use value assured products? Who will take the risk? The State may have an important role in testing methods development, because at the moment instrument companies see little potential for profit for them to do the needed R & D. The State can also be an important player in creating the demand for quality. It may even have to support, financially, some initial efforts to demonstrate that the concept will work. Once past the demonstration stage, it is unlikely that the Federal system will move rapidly to incorporate new ideas and methods. Therefore, the State may be in the position of providing central laboratory and accuracy control support to local elevators. All these possibilities will require careful planning, to assure that the role of government is support, not intervention.

This report is a collective effort of the Grades and Standards Subcommittee:

Charles R. Hurburgh, Jr., Chairman.  
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Rollie McCubbin  
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Tim Sullivan  
Bob Wallantine

Note: The credit section will be more complete in the final draft.

GRAIN QUALITY TASK FORCE

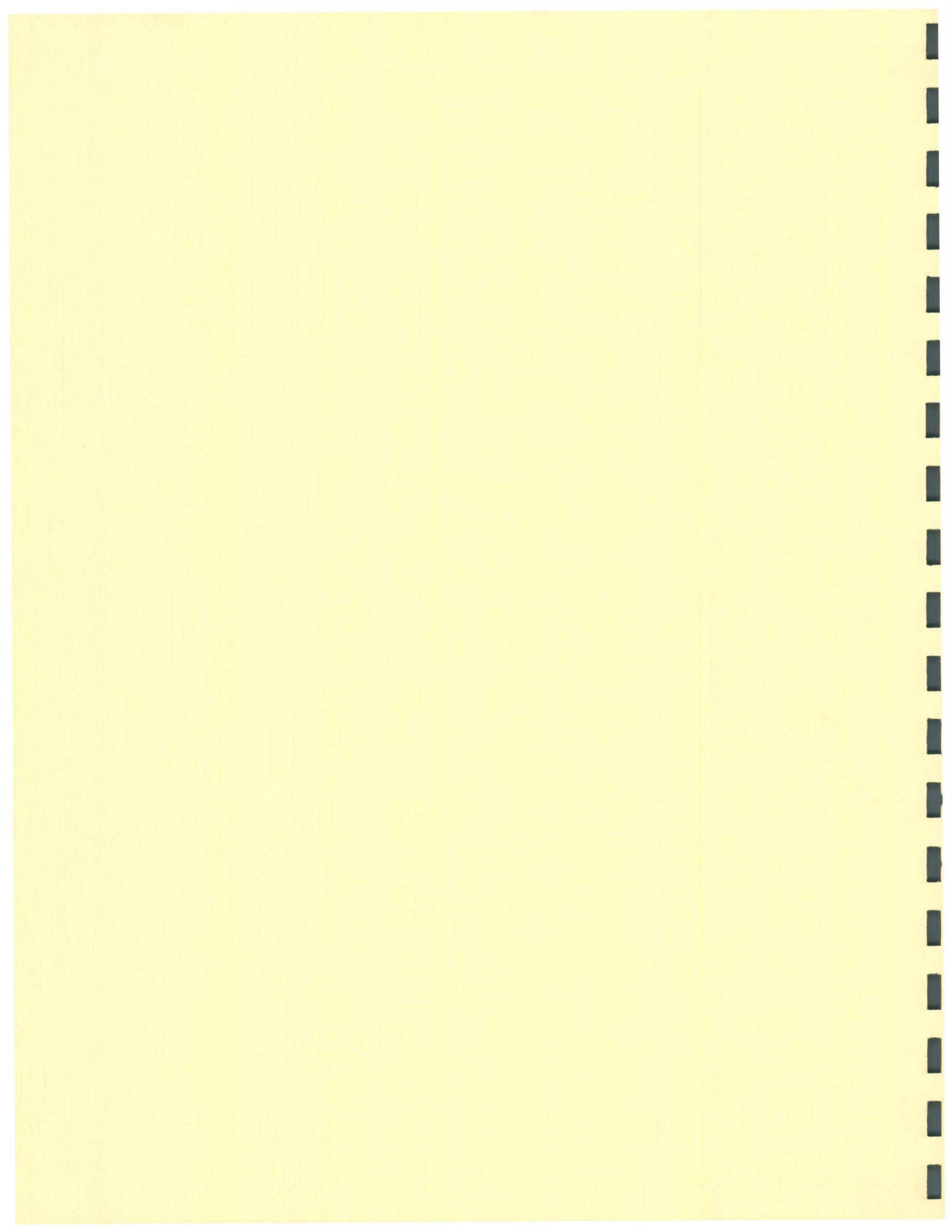
FINANCE COMMITTEE

INTERIM REPORT JUNE 25, 1987

The committee submits the following areas for review of the task force. These have surfaced as potential areas of activity for the State of Iowa and are recommended for indepth study.

1. Educate businesses on the two grain export activities. (High quality nitch markets and overall quality improvement).
2. Serve as a clearing house for information about businesses and business.
3. Provide feasibility study assistance.
4. Offer tax credits at critical merchandising steps.
5. Assist with paper work, especially GSM financing.
6. Offer in interest rate buy down on certain financing.
7. Iowa should not offer loan guarantees.
8. A financing institution locator service.
9. An export finance pool allowing a number of banks to participate.
10. Evaluation of trading companies as to their ability to take title of grain and perform effective international merchandising. A program to stimulate more businesses is a proper activity.
11. A program to encourage foreign companies to take title to grain here in Iowa and handle identity preservation to the point of use.





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