According to many scientists and political leaders, food production and distribution will be the dominant world issue of the future. Some even prophesy food wars. Others believe that we will always at least produce sufficient food for adequate diets. Still others agree that starvation for millions of people is inevitable. Nevertheless, the fact is that food production is now and will always be a "current issue".

In a recent article in Scientific American, the International Food Policy Research Institute identified only five countries as food exporters: Argentina, Australia, Canada, South Africa and the United States. The United Nations has identified 43 "food-priority countries" that have unbelievably low incomes, inadequate diets, and large cereal-grain deficits. Without doubt these food-deficient countries desperately need quality seed of improved varieties to increase yields. Fortunately, there are dozens of international organizations striving endlessly to develop new varieties. These agencies believe, however, that better seed is only one part of a much needed package program to noticeably improve world food production. They suggest that the package must also include new production practices, access to production inputs, adequate equipment, financing, markets and perhaps, most important of all, adequate knowledge to blend separate resources into a total crop production program.

Is it possible that packaged crop production programs are also needed in the United States? If we are to maintain our dominance in agricultural productivity, the answer must be yes. The American farmer also needs better seed of improved varieties, better production practices and the other components that work together for an efficient and profitable agriculture.

Problems of Americans are more complex than those in other countries because of the extremely high level of technology at which we operate. Each step is more difficult than the previous step. Each new product or idea that is developed requires more resources for development than the previous item and it is likely to be percentage wise, less profitable. Economists refer to this as the law of diminishing returns. Overall, American agriculture operates in the area of diminishing returns. This is, however, a credit to our industry because it implies efficient use of resources. Yet it means that each new variety, product, or idea is more critically evaluated for profit potential than was the previous variety, product, or idea. Today our farmers operate with their thoughts on profit rather than tradition. Most serious farmers maintain adequate records that enable them to determine those resources that do in fact return profits.

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Does this indicate a bleak future for the seed industry? Quite the contrary, seed are basic and cannot be replaced by new technology. In fact, the future should be interesting, exciting and profitable for those companies that offer quality products and quality services. Improved crop varieties with disease and insect resistance and other beneficial qualities may reduce our dependence on chemicals, fuels, and other production inputs. Such seed will be even more important and valuable.

A recent USDA release indicated that farmers spent $81.8 billion for production goods and services during 1975. Seed and plants, fertilizers, lime and soil conditioners, and agricultural chemicals cost producers $11.4 billion. An interesting part of that release shows that only 4% of all farms accounted for almost 46% of these total expenditures.

Pogo said, "the trouble with the future is that it ain't what it used to be." The future of the seed industry largely depends on our ability to provide the seed and services needed by today's seed users. Our future depends on our actions this year; perhaps even our actions this week. If we fail to satisfy our customers today, we need not worry about his future needs. He will be a competitor's customer.

Farm statistics reveal a continued trend toward larger farm units with more highly trained managers. It may be necessary to sell products and provide services to fewer customers, however, quantities per customer will increase dramatically. Competition for those dollars will increase.

You must know and respond to the characteristics of today's farmer. The farmer no longer has blind confidence in anyone or anything. He does not accept a Madison Avenue sales job for a mediocre product. He is responsive, however, to sound sales promotion of a sound product or service. These young and more competent farm managers make decisions based on the facts of past experiences tempered with a desire to accept new practices or services that appear profitable.

Sociologists tell us that an individual proceeds through five stages during the adoption of a new product or service. The stages are:

1. Awareness - the first knowledge about a new idea, product, or practice.
2. Interest - the active seeking of extensive and detailed information about the product.
3. Evaluation - weighing and sifting the acquired information and evidence in light of the existing conditions into which the product would have to fit.
4. Trial - the tentative utilization of the new product accompanied by acquisition information concerning how it is used.
5. Adoption - the full-scale integration of the product into the on-going operation.

The time period from awareness to adoption has decreased steadily during the past years. This trend will continue as younger, better educated and more aggressive farm managers take charge of agricultural production.
Sociologists also tell us that certain product characteristics affect the rate of their adoption and use. These characteristics include:

1. Relative advantage - the degree to which a new product is superior to an old product.
2. Compatibility - the degree to which a product is consistent with existing values and past experiences of the user.
3. Complexity - the relative degree that a new product is difficult to use or understand.
4. Divisibility - can the product be tried on a limited scale.
5. Communicability - can the benefits of the product used be easily told to others or easily visible to others.

We are fortunate in the seed industry because quality seed receive an excellent rating in all of the above characteristics. They possess relative advantage. They are compatible with other practices and are not complex. They are divisible and can be tried on a small scale. Their benefits are easily told to others. And yet, it takes many years to convince our farmers to use quality seed of improved varieties. Why is this true? Probably because we are unable at this point to provide the seed user with accurate and detailed information during his interest, evaluation and trial states of adoption. In other words, there is a need for improvement of our salesmanship abilities.

A North Carolina seedsman indicated that in his opinion, most seedsmen lack marketing interest. Most seedsmen are on a program that requires a 99% effort on production and a 1% effort on promotion. Customers tend to accept the second best variety because they are not exposed to or sold on a better variety. Good salesmanship is a customer service needed by most farmers. Seedsmen must actively take their products to the market place and promote them.

Certified seed has been our standard of quality. Has the lack of "proprietary varieties" inhibited our salesmanship?

The following quotes were printed in a 1967 issue of the Crops and Soils magazine:

Lars Jensen of North Dakota State University states, "Certification agencies, seed dealers, the extension service, and others have not come out with a hard sell program on the practical value of certified seed for commercial crop production."

Ed LeGrand of Oklahoma State University states that, "Seed dealers do not adequately promote certified seed."

Also in 1967, Vern Palmberg of Northrup King & Company stated in a lecture to the seed dealers in Wisconsin, "all of us who are in the business of supplying agriculture are responsible to a larger degree for the low production we see today on so many of our farms."

Are these comments still applicable to our promotion of quality seed? How important and beneficial is the information that a seedsman
provides his customers?

Survey results reported in the April, 1976 issue of Successful Farming revealed that 76% of the respondents believed that commercially sponsored meetings were equally as useful as extension sponsored meetings. Sixty-four percent responded that they relied more than ever on research and information from private companies.

Such reports indicate that seedsmen can succeed in marketing quality seed. To succeed, seedsmen need proactive rather than reactive seed production and marketing programs.

The fact is that seed are a sideline with many retail farm and garden supply stores. The salesmen in many of these stores are not technically competent in the field of seed. They cannot service the needs of farmers without adequate knowledge. This lack of technical competence affects the image of the total seed industry and if he sells your seed, it affects the image of your company. Image is created by the satisfaction which people receive from us or from our products and services. Seedsmen should insist that retailers have adequate knowledge to sell seed and to provide follow-up services as needed.

Salesmanship ability is a valuable asset to a seed firm and to a customer. Salesmanship has been defined as the judgment and ability to sell the right man the right quantity and quality of goods and services at established prices, and to follow up with services that will insure mutually beneficial results. Each person literally sells himself, his company and his product.

Knowledge of good seed characteristics is an absolute necessity. Also attitude, motivation and action are important in selling. The salesman must follow-up his sales and check on performance of the crop. Products should perform according to the claims for them.

How can you as a seedsman better serve the farmer with both the farmer and your company benefitting?

Researchers in Ohio questioned farmers concerning the most important characteristics of seed corn dealers. Over three-fourths of these farmers responded that honesty and reliability were the most important characteristics of the dealers. Almost one-half of the respondents preferred dealers that showed a personal interest in them. Technical knowledge ranked a close fourth.

Farmers feel that seedsmen must be honest and sincere about their products. Seedsmen need to develop their market with their reputation being as good or better than the information provided with the product. Build your reputation on quality seed.

Seed users simply want you to deal with them in an open and honest manner. In E.R. Squibb & Sons' "Standard of Ethics" are these words, "The priceless ingredient of any product is the honest and integrity of its maker."
Here are some comments from a North Carolina seed wholesaler. "Each seedsman should establish personal integrity and quality standards. Neither buy nor sell seed you would not plant yourself. Trade only with suppliers whose quality programs are compatible with your own. It is more profitable to miss a sale than to compromise your quality standards. Let the competition sell the "trash" and they will soon get that reputation. You must be technically competent. Know the peculiar problems that are inherent in each kind of seed bought and in each area of production."

Farmers consider product performance and service - not price - as the most important factors in making intelligent purchasing decisions. Managers of large farms seek quantity and cash discounts, but still consider product performance more important.

Seed dealers are providing agronomic advisory services and are participating in seed and variety research. Farmers enjoy planting variety test plots and are always most cooperative. However, if test plots are planted, it is best to select cooperators with above average management abilities. Plan to use the field tests and/or the results in an overall sale promotion program. Such tests can help you provide customers with local crop production information.

In general, any product or service that contributes to quality and better serves the farmer also better serves your company.

Most seedsmen are not wise enough to always anticipate farmer needs. Seed needs are affected by weather, fluctuations in export trade, over-or under-production in a given year, market potential, and other seemingly unrelated events. How can you plan seed production programs one, two or more years before you can market the seeds?

Decisions on seed production and/or inventory have to be based on history plus outlook. Seedsmen must use every available resource to project trends in seed needs.

Predicting the quantity of seed needed of each variety is like gazing into a many faceted crystal ball. There are literally hundreds of factors that influence final planting intentions. In non-controlled crops, expected product prices usually determine final planting seed demand. In acreage controlled crops, total seed needs are easily determined, but each seedsman must still evaluate his percentage of the potential market. Accurate projections require professional seedsmen.

Wheat acreage in Arizona jumped from 30,000 acres in 1974 to over 325,000 acres in 1975. Foreign buyers offered attractive contracts causing farmers to plant more wheat. Unfortunately, there is no way to prepare for such drastic changes in seed demands.

The seedsman needs a continuing dialogue with seed producers and farmers. A farmer advisory board made up of top farmers can help a seedsman project product and service needs.
Seeds must be aware of market conditions outside the seed trade that affect the seed industry. Consider these questions. Will high livestock prices increase the demand for grass and forage seed? How will the availability and price of synthetic fabrics influence the demand for cotton seed? Will overproduction in wheat reduce the demand for corn seed? How do new government programs and payments change seed needs?

Meteorologists say that we can no longer assume that patterns of good weather will continue in the future. Most current varieties were developed during relatively favorable weather. However, scientists are projecting a trend toward shorter growing seasons. This past winter was extremely cold. Unfortunately, drought is a current and possibly a continuing crisis in the west. Will our current varieties perform equally as well under such extreme weather conditions?

At this time, it is easier to project variety needs than quantity needs. Farmers are not likely to change varieties overnight. Farmers treat new varieties with caution until the varieties are thoroughly field tested. Most seedsmen feel that new varieties should be introduced into commercial production gradually - as they prove themselves on a particular farm or market.

A farmer adopts a new variety only if the new variety has a relative advantage over his current variety. This is obvious if we look at trends in varieties planted. In Mississippi in 1973, the two leading soybean varieties, Bragg and Lee, accounted for 75% of the acreage. By 1976, Bragg and Lee were planted on only 46% of Mississippi's soybean acreage. In Iowa, in 1973, the Corsoy and Wayne varieties were planted on 44% of the acreage. In 1976, the same two varieties were planted on 45% of the acreage. These varieties were released in the mid 1960's.

When new varieties possess superior characteristics, they are accepted quickly. For example, Blueboy wheat was released about 1965. Wheat is not a large cash crop in North Carolina, but within three years about 80% of our wheat acreage was planted to Blueboy. Blueboy had the relative advantage of superior yield. Florunner peanut was released in 1968. A few years later Florunner dominated the peanut acreage in the southeast. Again, superior yields.

Yield is the most important variety characteristic to farmers. Yield is the single characteristic that is easily measured and actually encompasses all other desirable traits. Don't count on a big switch to a new variety unless it possesses superior yield potential.

Many varieties have been released and promoted as superior, but failed to perform in farmers' fields. In some cases, the characteristics being promoted as superior were not in fact important to the farmer.

The Plant Variety Protection Act has increased private funding of variety development research. It is obvious that seed production decisions will be more complex as the number of varieties increase. Breeders should remain objective in the release of new varieties and
their companies promote only those with improved qualities.

In the rush for each company to have proprietary varieties, more "novel" than "improved" varieties have been released. Unique characteristics such as "an unlobed leaf rather than a lobed leaf" or "white flowers in contrast to purple flowers" are not important to a farmer unless it contributes to his profit.

The seed industry may be creating its own "credibility gap" by flooding the market with "novel" varieties. For example, as of December, 1976, 62 protection certificates for new soybean varieties had been granted with another 20 applications pending. Thirty-nine protection certificates for wheat had been issued and 15 applications are pending.

These varieties have not yet contributed to any significant increase in production. The average yield in the U.S. for soybeans was 26.7 bushels in 1970 and 25.6 bushels in 1976. The yield for wheat was 31.0 bushels and 30.3 bushels in 1970 and 1976, respectively. Farmers are beginning to ask if Plant Variety Protection is a method for raising seed prices without improving quality or performance.

Plant Variety Protection offers tremendous potential for our farmers. Let us not create doubts by promoting "novel" varieties when, hopefully, in a few years we can promote superior varieties.

What do farmers really want in seed quality and what will they pay for? Farmers want genetic purity, the highest practical germination, and expect the results from the seed to be in proportion to the price charged. For quality seed, they will pay a premium price.

Farmers, however, often fail to clearly communicate their needs to seedsmen. We encourage farmers to make their position clear as to what he expects from his crop. If the seed dealer does not have a variety that fully meets his requirements, he should explain this to the farmer and suggest alternative varieties.

Consciously or not, a farmer exerts all of his buying "know-how" when he chooses seed. He will gladly pay for the best seed of his number one money crop. He may, however, reverse his position as the crop's cash return potential diminishes. His desire for quality seeds and his willingness to pay is directly proportional to the relative contribution of the crop to his income. In North Carolina, for example, a farmer does not question the price of tobacco seed, but it is difficult to convince him to place the same emphasis on his purchase of pasture seed.

It is in these minor crops that seedsmen's standards automatically protect his customer and his land. The per acre seed cost for quality seed is only a few cents more and offers the customer land protection and superior production.

Does the seed industry provide the farmer with sufficient information about the quality and performance of a seed lot? Many people feel
that seed vigor information should be printed on the seed tag. Personally, I am not a strong advocate for providing vigor information. Those who advocate a need for more information imply that vigor predicts field performance and yield. My experience indicates considerable variability in seed performance from field to field regardless of vigor level. Thus, it is almost impossible to accurately predict seed performance in a specific field under the myriad of environmental conditions that may exist.

Presently, rather than needing more information on the seed tag, our farmers need a better understanding of the information already provided. We have encouraged the acceptance of germination and purity data as absolute facts rather than estimates based on samples.

In summary, our farmers simply desire quality seed, honesty, personal interest and friendship from their seedsmen. It is obvious that the most important information on a seed tag is still the seedsman's or grower's name.