

Maximum economic yields could boost world food output

ATLANTA, GA — Maximum economic yield production systems have the potential to restore the world's agriculture to economic health. It is the best approach to assuring adequate food supplies for a growing global population, reported Dr. R. E. Wagner during the international symposium on Potassium in Agriculture.

Dr. Wagner, President of the Potash & Phosphate Institute (PPI) and the Foundation for Agronomic Research (FAR), has traveled worldwide championing the Maximum Economic Yield concept.

The need for higher crop yields in developed and developing nations alike has assumed a greater sense of urgency. Productive agriculture is both a humanitarian and economic imperative.

The Food and Agriculture Organization (FAO) predicts that three-fourths of needed increases in food production must come from present croplands. So it is clear that more output per acre or per hectare is key to feeding the world. Indeed, the gap between average yields and maximum economic yields is the world's greatest undeveloped food reserve. Fortunately, that reserve is capable of development.

Because of so much unexplored potential around the world in both existing and new croplands, a cataloging of maximum production capacities by soil type and climate would be a significant

milestone. There are a few areas, such as the Cerrado region of Brazil, which have great undeveloped potential for crop production. And maximum attainable yield has not been determined in developed agricultural areas.

In most places in the world, land for food production is becoming increasingly scarce. So adding land to a farming unit may be less attractive and more costly than intensive management of current resources.

Understanding production potentials and making critical choices on land development around the world provides sound guidance to farmers. Researching maximum yield levels will enable quantification of production potentials of different areas. It will help to identify the most suitable areas for specific crops.

An objective of maximum yield research is to build systems in which the components of an integrated package of management practices interact positively. It can be defined as "a study of variables and their interactions in a multidisciplinary system that strives for the highest yield possible for the soil and climate of the research site. Most of the research now is of an applied nature. More of it necessarily will become basic. Knowledge of the below-ground environment and root interactions will be an ever-present and increasing need.

Identifying and evaluating a broad base of input interactions, many of which involve potassium, are essential to effective maximum yield research. Positive interactions are the key. They occur when the response to two or more inputs used together is greater than the sum of their individual responses.

Numerous positive interactions have been identified in agronomic research. They often result in significant yield or quality improvements which can be translated into increased profits at the farm level.

Interactions can also become complex, involving all components of the total production system in combinations of two or more. Research data show that hybrids and fertilizer alone are no substitute for good systems-farming, while some of these interactions have been identified, many are not fully understood and merit further research.

Maximum yield research is shattering more crop yield records in less time than ever before. It is showing that high yields can conserve the soil, that they can utilize water efficiently, and that they can preserve a clean environment.

Dr. Roy L. Flannery of Rutgers University in New Jersey is recognized as one of the pioneers of maximum yield research. In 1960, he produced a world record corn research yield (at that time) of 312

bu/A (19.6 tonnes per hectare). In 1962 he produced 338 bu/A (21.2 tonnes per hectare).

Also in 1962, research Ken Stevenson of Ontario produced 251 bu/A (15.8 tonnes per hectare) of corn, the highest yield ever recorded in replicated experiments in Canada. Many other milestones have been achieved by other researchers with various crops.

Maximum yield research can serve to establish a yield curve from which maximum economic yield level can be determined. The individual farmer can better judge the yield goal which will produce the greatest net economic return.

Because soils and climates of the world are highly diverse, it follows that there would be wide variation in maximum economic yields.

In most any maximum economic yield system there are essential inputs that cost nothing. They can be just as important as high-cost items in making interactions positive and in making more efficient use of all inputs. Examples

include timeliness of planting and harvesting, equipment adjustments, plant spacing, and row width.

While more yield usually requires more expenditure per acre or per hectare, the real key is that it cuts the cost per tonne or other unit. While individual farmers have little control over cost of inputs or market price of crops, each can control yield levels and unit cost of production, to some extent.

Well-managed, high input systems generate high return on investment. Maximum economic yields expand the "profit zone", giving the farmer a buffer against adversity of price, weather, or other unforeseen problems.

Though still in its infancy, maximum yield research is building a factual base for a maximum economic yield agriculture of the future. Maximum economic yields, in which potassium will have a major role, can mean greater and more efficient production.

ITC to investigate apple juice imports

PARK RIDGE, IL — The International Trade Commission will begin a special investigation to determine the impact of imports on the American apple juice industry.

The investigation was requested recently by Clayton Yeutter, U.S. Trade Representative. In a letter received by the ITC, Yeutter asked for the investigation to "determine whether apple juice is being imported in such increased quantities as to be a substantial cause of serious injury or the threat thereof to the domestic industry producing a like or directly competitive article."

The Trade Representative's action came as a result of requests from Rep. Guy Vander Jagt, (R-Mich.), and the Farm Bureau.

"Our growers are seeking protection from the flood of juice that is being imported. Americans are drinking more apple juice than ever, five times more than they drank just 10 years ago yet domestic apple growers are not benefiting. In fact, more apple juice is being imported than is being produced in the U.S.," says Ken Nye, American Farm Bureau commodity specialist. "About 210 million gallons of juice were im-

ported last year, accounting for almost 54 percent of our market."

According to Paul Drazek, international trade specialist for the nation's largest farm organization, the ITC must render a decision within six months from the time it received Yeutter's request.

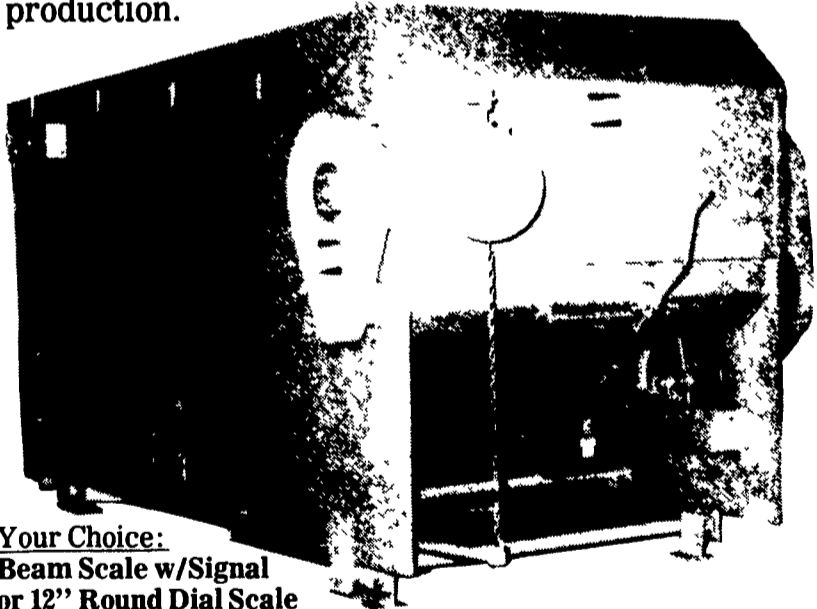
"They will survey American growers and processors and hold public hearings to determine the impact of imports on the domestic industry. If the commissioners decide imports hurt our growers and processors, they may offer recommendations to the President for appropriate relief," he said. Relief could be in the form of new tariffs, increased duties, temporary quotas or a combination.

Drazek said the President must accept, reject or modify the ITC's recommendation within 60 days. His decision must then be implemented within 15 days. "Even if totally successful, this trade action will only provide temporary relief since in can, by law, be in place for no longer than five years. It will not shut the door to imports but will provide American producers time to take the necessary steps to reestablish their competitive position with respect to competition from imports," he said.

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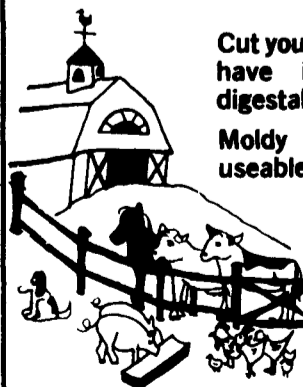
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