

Cotton's Interest in Research

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PERIODICALLY, THE COTTON INDUSTRY finds itself being depicted as a lame duck ruler of the textile kingdom—a ruler with exaggerated southern graciousness who indifferently awaits the time when man-made fibers will assume the position of textile leadership. A modest slackening of activity in the textile business has been the occasion for a recent revival of this picture. It seems to



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have some superficial authenticity, but only to those who look backward for scattered evidence in support of a downward sloping trend line. Such a picture simply doesn't describe the real life posture and viewpoint of the cotton industry today.

"King Cotton" Folklore

Any vision of cotton as king of the textile economy has long since been relegated to the realm of folklore by the industry itself. It feels perfectly at home in a democracy. In keeping with this role, the industry has been turning with increasing emphasis to research and promotion as the real opportunities for building its competitive strength and ensuring its economic growth.

The miraculous development of man-made fibers and their impact on the textile economy have been so dramatic as nearly to obscure some rather important facts. The first of these facts is that the chemical industry has provided cotton with a yardstick for measuring the inadequacies of its own scientific and promotional efforts. Second, from the standpoint of its chemical and structural make-up, cotton is even more miraculous than the so-called miracle fibers made by man. Were such a fiber to be discovered in a world accustomed only to the synthetics, cotton would surely be received with unparalleled enthusiasm.

Gains Through Research And Promotion

Recognition of these facts and of the opportunity for turning them to the ad-

vantage of the cotton industry resulted in the creation of the National Cotton Council 14 years ago. Its steady and substantial growth measures the industry's strengthening conviction as to the potential gains it can win through research and promotion.

Research Opportunities

As a textile raw material, cotton is at least equal to the man-made fibers in the theoretical opportunities it offers for innovations through chemical modification and treatment and through process improvements. Even a cursory look at how cotton has responded to our woefully inadequate research efforts in production problems will suggest the tantalizing possibilities for the future. In this matter of the qualities of the fiber itself, for example, we have seen some astonishing progress, which is still going on, although it generally escapes public attention and acclaim.

There have been marked increases both in the average length and in the average strength of the commercial crop during the past 20 years. But relatively speaking, very little of the truly potent accomplishment of genetic research has yet reached commercial application. Cotton geneticists have been able to transfer to some of our domestic varieties certain of the desirable properties that they have found in exotic species from all over the world. The pressure for varieties that will produce a larger yield is never ending. As production practices shift from hand methods to the use of high speed multirow tractor equipment, plant breeders are called on to develop varieties with substantially new agronomic characteristics compatible with the operating limitations of mechanical equipment.

Research Problems

And, as cotton production technology moves forward, new problems for the plant breeder are emerging much faster than the answers are forthcoming. And genetics research is not an exceptional case; in the areas of agronomy and soil science, engineering, physiology, entomology, and agricultural chemistry, we could point to a record of achieve-

ments which equals the work in genetics. Likewise, we could point to probable future accomplishments of tremendous potency in those fields.

Both the private and the public research programs undertaken on cotton's problems have made remarkably productive use of the resources available. They have demonstrated that the cotton industry is enormously responsive to research effort and that we may expect an increase in research accomplishments to accompany any expansion of research effort.

Agriculture's Research Disadvantage

In the matter of a research program for converting cotton's opportunities into realities, cotton faces an enormous disadvantage—one common to all of agriculture and which farm leadership is taking steps to overcome. Like any other agricultural industry, cotton involves so many individual interests, its problems are so complicated and interrelated, and the obvious nature of its scientific requirements is such that there simply is no feasible approach to developing an adequate research program entirely along private and individual lines.

If there is to be a "parity of opportunity" for agriculture then the scheme of things must include adequate provision for generating agricultural technology. The Federal Government acknowledged a large obligation in this matter almost 100 years ago. However, the importance of research to agriculture, and to the whole of our national economy, seems to have been overlooked in our preoccupation with the political emollients for agriculture's troubles during recent decades.

Symptoms of Atrophy

Publicly supported programs of agricultural research and education haven't grown any since we became involved in World War II, and the symptoms of atrophy have become obvious.

There are bright prospects for a reversal of this tendency of neglect in the general outlook of agricultural affairs. Even for the oncoming year, a modest increase in federal appropriations for agricultural research and extension seems to be assured. These increases should produce a snowballing effect—through matching contributions from the states and by generating correlated research activity by the many commercial interests with a vital stake in agricultural progress.