

and plus 120 per cent of U. S. wheat production per annum. Vast as this deficiency is, it is within reach of increased production in North America alone, and could easily be attained in the world as a whole.

"KNOW-HOW" AVAILABLE

There is now on hand the requisite technology, know-how, equipment, supplies, facilities and capital to increase the world production of grains, pulse, meats, vegetables, fruits, dairy products and fish by a factor of ten within the next decade. It has taken the United States and the other Western nations 150 years to resolve the myriad natural problems which had held farming in chains for five millenia; but now these difficulties have yielded to the advance of science and the fantastic productivity of the American farm is the proof of our success. For we have truly made four blades of grass, four ears of corn, four hogs and four fruits to grow where (as one frustrated Congressman on the Agricultural Committee said), "Damn it! only one ought to grow." We have done this and we could, with effort, make it eight or even sixteen.

This has come about through research and the rapid and assiduous application of its findings literally to the grass roots out on the farm. Our land grant college system, now celebrating its centennial, has taught our rural peoples how to farm scientifically and has, more importantly, inculcated a thirsty curiosity among them to learn and to put into practice every original idea, new piece of equipment, improved strain of animal or plant, useful chemical, redesigned soil management program and fresh approach to the market which their research has produced in a continuous flow over the past century.

We have drawn upon the basic researches of many fundamental and pragmatic sciences in the solution of problems in the production of our food and fiber. The hundreds of thousands of published and recorded journal papers, station bulletins, reviews and texts stand witness to the stupendous intellectual and physical effort which has been devoted to increasing the productivity of American agriculture.

ASTOUNDING BREAKTHROUGHS

We have done this because we have used the scientific method under freedom of thought and enterprise. We have made astounding breakthroughs in plant and animal breeding, in soil management, in forest engineering, in pest control, in agricultural machinery, in animal nutrition and disease control, in food processing and distribution. Each factor has been linked into a continuous chain extending from scientific imagination to the farmer tilling the soil. The research scientist, the technical agriculturist, the industrial chemist, the biologist, the college professor, the county