

PUBLIC FUNDING FOR RESEARCH INTO SPECIALTY CROPS

by

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INTRODUCTION

Government involvement in agricultural R&D is justified if the benefits exceed the costs. Does the private sector neglect socially profitable investments? So-called market failures in R&D can result if inventors are unable to fully appropriate the returns to their inventions—if “free-riders” can adopt new technology and benefit from it without having to contribute to the costs of research. In agriculture, in particular, it seems likely that, absent government intervention, the private sector will invest too little in certain types of R&D, and there is a strong in-principle case for government to intervene either to improve private incentives or, more directly, to fund or undertake research.

In the United States, both state and federal governments are extensively involved in agricultural R&D. Perhaps the most obvious, and arguably the main form of involvement is the government production of agricultural science—in government labs or in public Universities—using general government revenues. This intervention is justified both in principle and by the evidence that the rates of return to public agricultural research have been very high, even with very extensive government intervention to correct the private-sector under-investment in agricultural R&D (e.g., see Alston et al. 2000). This suggests that the government intervention to date has been inadequate; that the United States could have profitably spent much more on agricultural R&D.

These observations apply to differing extents to different elements of U.S. agricultural R&D in aggregate in terms of fields of science, locations of production, or commodity orientation of research. This paper considers public funding for R&D directed to specialty crops. Specific questions to be addressed include whether R&D for specialty crops has been under-funded, both in absolute terms and relative to other crops and agriculture more generally. First, evidence is presented on past funding patterns and on rates of return; second implications of that evidence in the context of specialty crops production are discussed.