

# SUMMARY

Each year, a significant amount of taxpayer funds – an average of \$6.3 billion – is spent in the agri-food sector. The majority goes to producer support – the business risk management (BRM) program area. Other areas include inspection and quality assurance programs, marketing and promotion activities, research and development programs, extension services and education. The distribution of this spending has been rather heavily weighted toward producer income support through BRM type programs, receiving over 50% of program spending. Other areas receive much less. For example, R&D receives 7% of spending.

Of particular concern is how taxpayer funds – already scarce – are allocated between program areas, particularly when this allocation is influenced by political considerations, fiscal constraints, and special interest groups. One way to judge the merits of current allocations is to assess the returns (or benefits) of program spending in relation to the taxpayer costs. Generally, program areas with higher rates of return to society should be allocated more funds, while areas with lower returns of return should be allocated fewer funds. There are two general ways of measuring whether program spending has a net social benefit. One way is through a computed “internal rate of return” (IRR), with the return on public expenditure exceeding a hurdle rate, which in many cases is the public cost of funds (long run yield on government bonds and securities). A related measurement is the benefit-cost ratio (BCR), and whether it is greater than one [1:1].

Published report and journal articles provide evidence on the returns to spending in the above areas. The published evidence (including meta-analysis) indicates that the return on public R&D spending has an IRR that is in the 40% to 60% range, which implies a BCR of at least 10:1. Within the R&D complex, evidence from the USDA indicates that publicly supported basic research has the highest return, followed by applied public research, then private research, followed by farmer education and then agricultural extension. Private research has a smaller benefit than applied public research, simply due to the spillover effects of publicly funded

research. In most cases primary producers as well as consumers benefit from R&D spending directed towards commodities.

Judging from 13 separate studies, the evidence indicates that market promotion activities generate supply chain benefits with a BCR range of between 2:1 and 10:1. Producer benefits are often attributable to expanded sales volume, rather than higher prices. There are few studies on the net benefits of quality assurance and inspection programs; what published results there are suggest a BCR of at least 2.1.

All funds provided through decoupled direct payments are initially retained by producers. However, some of the benefit accrues to landlords, resulting in a BCR of less than one even though the intent was to provide income support to the farm operator. The literature indicates that government spending on direct farmer subsidies through BRM type programs is an inefficient way to transfer income. The high BCR of spending in other areas such as R&D indicates that the societal benefit is much greater than that from spending on direct income support programs. However, the distribution of benefits is across a number of segments in the food supply chain, and not just to producers.

Given the above scenario, why is agricultural R&D at only 7% of spending, while direct farm subsidies exceed 50%? A primary reason is that a long gap exists between undertaking research and reaping the benefit; moreover, research does not address farm sector income issues that require an immediate political response. The literature also suggests that producers and policy makers may not believe in returns to research data, or that producers fear that technical changes could impact them negatively while input suppliers and consumers could benefit.

This paper provides further support for a re-alignment of program spending in the food supply chain. Based on internal rates of return (IRR) and benefit cost ratios (BCR), it is evident that fewer funds should be allocated to BRM programs, while spending should be increased on program areas such as R&D and promotion.