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| Degree sought: | PhD | No. of words in the main text of thesis: | | 293 |
| Title of thesis: | Economic instruments for supplying agrobiodiversity conservation | | | |

Insert the abstract text here - the space will expand as you type.

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| Agrobiodiversity is declining across many farm production systems. These declines include farm animal genetic resources (FAnGR) and plant genetic resources (PGR), which are the focus of this PhD. Animal and plant genetic diversity can sustain greater adaptability and resilience in commercial production through so called ‘option value’. In addition, PGR and FAnGR embody cultural and heritage attributes that are often under-valued by society. Conservation is therefore important and economic incentives represent a potential mechanism to improve the status of rare breeds, cultivars and crop wild relatives. Incentive tools in the context of PGR and FAnGR are under explored and may improve the economic efficiency of conservation decisions. Using different survey instruments and modelling approaches (including choice modelling, linear programming and multi criteria decision analysis) I investigate how targeted incentive interventions, could result in better conservation outcomes. The findings suggest optimising subsidy support relies on three factors. First, institutional and incentive support offered to farmers for conservation should reflect local circumstances, including barriers-to-entry in conservation schemes. Second, identifying least cost suppliers of conservation services may enable more diversity to be conserved at comparable cost. Third, optimising the species, varieties and breeds that are supported may improve conservation outcomes through more rationalised investments in diversity. Policy responses to address declining FAnGR and PGR should consider the use of tender instruments (i.e. reverse auctions) to identify least cost suppliers for conservation services. Optimisation modelling and decision analysis techniques can be used to measure trade-offs inherent in different conservation goals, and ultimately balance the use and non-use values of diversity that are supplied through the market. While the drive for sustainable intensification of production may improve productivity, we need to be clear how the value of breed and cultivar diversity can be included in future policy instruments. |