

## Research and development

The CCMAT's R&D program focuses on developing improved technology for detection and neutralization of anti-personnel mines, protection for the deminer, and enabling technologies, such as robotics. The program is carried out in-house and through contracts with Canadian companies who use CCMAT test facilities for field trials. In detection, the strategy is to investigate a large number of promising technologies and choose the best of these for advanced development and eventual deployment. Projects underway include an investigation of the potential of hyper-spectral imaging for aerial mapping of mine affected areas. In protection, a better understanding of the physics of mine blast and the mechanism of injury has made an important contribution to the development of a new humanitarian demining ensemble.



June 2000 validated the surrogate mines as a tool for evaluating mechanical demining equipment. Several countries have shown strong

interest in the surrogate mines and a Canadian company is negotiating a licence to manufacture and market them. Through the multinational International Test and Evaluation Program (ITEP)

it is hoped these surrogate mines will become an international standard for test and evaluation of neutralization equipment.

Another example of sophisticated technology is the Frangible Surrogate Leg, which was developed in Australia and



## Assessment of new products

Over the past year, facilities and procedures for test and evaluation have been enhanced by the latest technology, developed in-house or under contract to the CCMAT or acquired through the Centre's contacts with the international defence research community. For example, to assess the effectiveness of mechanical equipment proposed for demining and to reduce the risk to the evaluation team and equipment, surrogate mines were developed that react like real mines but without the explosive content. The surrogate mines were developed for the CCMAT by two Canadian companies and will be used in a state-of-the-art test site to evaluate mine clearance equipment. A trial in

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(Above) A Hi-fidelity Reproduction PMA-2 Mine and the real thing.

(Right) A military surgeon inspects the Frangible Surrogate Leg to determine the extent of blast injury.

