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SeedQuest® News section

Collecting germplasm can literally be a minefield

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A troupe of globetrotters has just returned from a mission to Tajikistan where they collected exotic germplasm to improve Australian cereal and grain legume crops from near the *landmine laden northern boarder with Afghanistan*, among other places.

In the 20 years he spent with the famous Russian Vavilov Institute, mission interpreter and logistics expert, Sergey Shuvalov had not previously accessed some of the areas surveyed this August by an international team supported by the [Australian Centre for International Agricultural Research \(ACIAR\)](#), [United States Department of Agriculture](#) and [Grains Research and Development Corporation \(GRDC\)](#).

According to Mr Shuvalov, Tajikistan mission participants, Drs Farqhot Kasymov and Tosh Narzullov were responsible for negotiating the team's access to areas many veteran collectors only dreamt of visiting.

After assembling in Dushanbe on August 2, the team, led by Dr Ken Street of the [International Centre for Agricultural Research in Dry Areas \(ICARDA\)](#), spent more than two weeks in Tajikistan collecting land race seeds from fields, harvest bundles, roadside wilds, orchards, threshing room floors and cottage gardens in remote mountain villages.

This land race germplasm could contain hardy genes which, when crossed into modern crops, would provide extra resilience under stressful conditions, such as drought, saline landscapes and hostile soils.

While many believed there was no soil more hostile than one with a land mine in it, it was the calcareous infertility of Tajikistan which produced the seeds of interest.

So tough were the land race varieties that local growers retained them in favour of modern varieties provided as part of international aid. The modern varieties often faltered badly on marginal soils, leading to further hardship for farmers with few means to survive failed crops.

Growers and the Federal Government have supported many international collection missions through the GRDC, but in association with ACIAR, this tour penetrated previously inaccessible parts of the globe to capture some of the world's most robust germplasm.

The process was not always easy. Early in the mission, a valve timing shaft broke and one of the cars was towed 10 km along mountainous roads by the surviving vehicle to a service centre where mechanics worked around the clock to have the car restored for the next afternoon.

It is hoped reward for effort will come as the strong Tajikistan qualities flow into local breeding programs.

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