



with grain yield of 2.7, 2.8 and 4.1 t/ha, respectively, have been advanced to National Yield Trial. In this paper, pathogen identification attempts, knowledge and management gaps are discussed.

WS42: Screening faba bean (*Vicia faba* L.) germplasm for resistance to persistently aphid transmitted viruses

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Faba bean (*Vicia faba* L.) is an important, high protein food and feed crop in many countries mainly in Central and West Asia and North Africa (CWANA), East Africa and East Asia. The crop is affected by a number of virus diseases, the most important are those persistently transmitted by aphids such as Faba bean necrotic yellows virus (FBNYV) and Bean leaf roll virus (BLRV). Virus disease management can be achieved through a combination of several approaches, but genetic resistance offers the most economical control option in the long term. A reliable screening methodology is essential to identify sources of virus resistance and incorporate into improved cultivars. Around 2000 faba bean accessions from a wide genetic background were evaluated at ICARDA during last two decades, using artificial FBNYV and BLRV inoculation with viruliferous *Acyrtosiphon pisum* (Harris) aphids. Faba bean genotypes were evaluated on the basis of virus disease incidence, severity of symptoms, virus concentration and yield losses. Different resistance mechanisms were postulated: (i) Resistance to initial infection, (ii) Slow virus multiplication, and (iii) Slow virus movement through plant. Repeated inoculation and continued re-selection for 5 -7 growing seasons led to the development of 15 resistant faba bean genotypes to BLRV and 27 resistant genotypes to FBNYV. Evaluation of the BLRV resistant genotypes in CWANA were also effective against the local Australian BLRV strains. The most adapted sources were originated from Yunnan, China, and have been extensively used in the Australian faba bean breeding program. New varieties have been developed that combined BLRV resistance with good adaptation to local growing conditions. Inheritance studies will be initiated to study variation in resistance genes and different resistance mechanisms involved in the virus resistance. Detailed information on the screening methodology and most promising virus-resistant faba bean lines will be presented.