



FODDER OATS: www.fodderoats.net
A successful project spawned by the
Seed and Seed Technology Help Group of
IAMFE / IAU

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SUMMARY (ABSTRACT)

Oats (*Avena sativa*⁶) are an important, yet under utilized source of forage and fodder in developing countries, used variously for milk and meat production and feeding draft animals. It may be fed green, dried and used as oaten hay, or wilted and made into silage / balage. Multiple cuts are usually taken, after which part or all of the crop may be saved for seed. So far, this crop has been passed over by globally coordinated crop improvement programmes of the CGIAR. Instead, global leadership in the developing world has come from domestic crop improvement programmes within temperate and continental regions of developed countries. This has been made possible by the high degree of agro-ecological overlap between crop improvement programmes in these areas and cool season / winter lowland climates plus summer highland climates in sub-tropical and tropical ecologies.



In these activities, the New Zealand oat programme has emerged as a leader, closely linked with North America and Europe where oats have been grown for grain since the early centuries of the Christian era. Oats were introduced into the Indian sub-continent during the British imperial era. New Zealand broad leaf oat cultivars were introduced to the Himalayan Hindu Kush region thirty years ago. Since then field testing and evaluation has shown that “broad leaved” cultivars originating from New Zealand perform well along the full length of the Himalayan Hindu Kush chain stretching from Afghanistan to Myanmar and into China as well as into the adjacent lowlands. The same cultivars have also proven widely adapted in Central and South America and Africa.



New Zealand broad leaved fodder oats are pivotal in Nepalese environmental conservation and rehabilitation projects for enabling farmers to change from free grazing to stall feeding / zero grazing including moving away from goats, cows and yaks (including cow/yak and *visa versa* hybrids) to buffalo which are more efficient when stall feed and the meat can be eaten within a Hindu society. During 2000 in support of this work, a group of Nepali and New Zealand

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⁶ As implied by the literal use of “oats” in this article.

scientists got together and started a cool-season fodder oat network (www.fodderoats.net) under SEMEC (the New Zealand / Australian Branch of IAMFE) and then the IAMFE / IAU Seed and Seed Technology Help Group, encouraged by an Austrian colleague from Wintersteiger, who was supplying / servicing the New Zealand Oat programme's Oyjord plot equipment⁷.



Firstly, a global paper was prepared and presented at the 6th International Oat Conference held at Lincoln University



(New Zealand) in 2000 to launch the idea (Stevens et.al. 2000). This led to an invitation from the FAO for one of the group to attend a FAO conference in Bhutan (Armstrong 2002a,b) and then for the group to draft two major articles for a FAO global position paper on fodder oats (Stevens et.al. 2004 and Armstrong et.al. 2004). Out of which, the Himalayan – Hindu Kush fodder oat network based in Nepal was started. The Nepalese part has subsequently been taken over, and is to be continued by the New Zealand Aid Programme (from 2007 inward) as described in this poster.

This shows in a practical way, how IAMFE can function as a spawning ground for invaluable projects which reach far beyond its basic mandate for assisting with the mechanization of field experimentation.

REFERENCES

Stevens, E J, K W Armstrong, H.J. Bezar, W B Griffin and J G Hampton. 2004. Chapter II - Fodder Oats: An Overview. Fodder Oats: a world overview. Edited by J M Suttie and S G Reynolds. Plant Production and Protection Series No. 33. Food and Agricultural Organisation of the United Nations, Rome. ISBN 92-5-105243-3. <http://www.fao.org/docrep/008/y5765e/y5765e06.htm>

Armstrong, K.W. J. de Ruiter, H. Bezar. 2004. Chapter X – Fodder Oats: Fodder Oats in New Zealand and Australia - History, Production and Potential. Fodder Oats: a world overview. Edited by J M Suttie and S G Reynolds. Plant Production and Protection Series No. 33. Food and Agricultural Organisation of the United Nations, Rome. ISBN 92-5-105243-3. <http://www.fao.org/docrep/008/y5765e/y5765e0e.htm>

Armstrong K.W. 2002a. Fodder Oats: An Overview. Fifth TAPAFON (Temperate Asia Pasture and Fodder Network) Meeting (30th. April to 4th May 2002). Renewable Natural Resources Research Center, Bajo (Wangdue-Bhutan).

Armstrong K.W. 2002b. Fodder Oats: “How trials might be initiated in the Himalayan Region. Fifth TAPAFON (Temperate Asia Pasture and Fodder Network) Meeting (30th. April to 4th May 2002). Renewable Natural Resources Research Center, Bajo (Wangdue-Bhutan).

Stevens, E.J., Wright, D.S.C., Pariyar, D., Shrestha, K.K., Munakarmi, P.B., Mistra, C.K., Muhammad, D., Han, J. 2000. The importance of oats in resource-poor environments. Proceedings of the 6TH International Oat Conference, Christchurch New Zealand, November 2000. Pp. 74.

⁷ Which included an Oyjord-Schou planter that reached New Zealand in 1975