AZIZ NURBEKOV

MANUAL ON CONSERVATION AGRICULTURE PRACTICES IN UZBEKISTAN

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TASHKENT - 2008

ACKNOWLEDGEMENTS

This Manual has been put together with the objective of assisting actions by the diverse groups of human beings who intervene in the conservation of the natural resources, particularly soil and water resources and in the context of each continent, country, region or zone. The Manual is based on world practice on conservation agriculture and the results of project named "Sustainable agricultural practices in the drought affected region of Karakalpakstan", supported by the Food and Agricultural Organization of the United Nations (FAO) through a FAO/TCP project in Uzbekistan (FAO/TCP/UZB/3102), and implemented by the Ministry of Agriculture and Water Resources (MAWR) of Uzbekistan from October 2004 to September 2007.

I am very thankful to Dr. Fawzi Taher, specialist on crop production and plant protection, Sub regional office FAO, Ankara, for his valuable suggestions on the draft report and for financial support to publish this manual. I am also very much obliged to Dr. Theodor Frederich, main specialist on Agriculture and food technologies of the Department on rural supporting system, FAO, for supporting and scientific leadership as well as for granting access for publishing the Manual. I am also thankful to Dr. M. Suleymenov, ex-deputy regional coordinator of ICARDA-CAC for his leadership during implementation of the project and for valuable suggestions on preparing of the Manual. I would like to mention of close cooperation with Dr. Rakhimjon Ikramov and Ms. Malika Ikramova (SANIIRI), whose sincere efforts made it possible to complete the project in time. Also, the excellent cooperation received from E. Kurbanbayev, R. Koshekov, B. Mambetnazarov, B. Aybergenov and N. Nurjanov is gratefully acknowledged.

I also would like to thank Dr. Raj Paroda, the ex-Regional Coordinator and Head, Program Facilitation Unit (PFU) of the CGIAR Program for Central Asia and the Caucasus (CAC) for his leadership and guidance to get LoA from FAO Sub regional office to publish this manual. I am very much obliged to Dr. Surendra Benival, ex-Regional Coordinator and Head, Program Facilitation Unit (PFU) of the CGIAR Program for Central Asia and the Caucasus (CAC) for arrangement of valuable suggestions on formation of the Manual. Grateful thanks are also due to Dr. Christopher Martius, Regional Coordinator, ICARDA-CAC and PFU-CGIAR-CAC and Head, PFU, for his active interest in the publishing and finalizing this Manual. Similarly, suggestions of Dr. Raj Gupta, Coordinator of the Sustainable Land Management Research (SLMR) Project are very much appreciated.

I would like to thank "ABU MATBUOT-CONSULT" LLC for consulting on preparation of the Manual for publishing as well as translations from English into Uzbek, Russian and Karakalpak languages.

I firmly believe that the results of this project would be very useful in improving soil productivity and agricultural production in Uzbekistan. It has been published in four languages (English, Russian, Uzbek and Karakalpak) for the benefit of wider audience.

Finally, I would like to thank all the Government officials and farmers associated with the project activities for their very active sincere participation.

Aziz Nurbekov

FOREWORD

Conservation agriculture is one of the most promising land use options that have been developed in our times. It is more an approach than a technology, as it consists in a variable and varying array of techniques that aim at minimizing soil disturbance, soil water and nutrient losses, and that preserve many of the ecological functions a natural soil has to offer in a natural ecosystem. Conservation agriculture has many proven benefits and it covers millions of hectares in South and North America, as well as in parts of Asia.

Conservation agriculture rests on three major principles: minimal disturbance of the soil, the health and productivity of which is at the basis of every farming operation; permanent soil cover with plant residues or living crops in order to reduce water loss, erosion, and protect the soil from harsh climate extremes; and the diversity of crops in time (rotations) and space.

Conservation agriculture also has economic benefits to the farmers who apply it. Generally, an immediate cost reduction due to decreased farming and machinery operations can be felt right after the introduction of the technology. This is important for poor farmers – for any farmer! - in times of steeply rising costs of fossil energy sources. Saving fuel also helps improving the carbon balance of land use.

Whether or not the yields will increase with the introduction of conservation agriculture depends on a wide variety of factors, and generally the effect is not that immediate, as the natural soil fertility will build up only slowly. But if correctly managed, a few years of conservation agriculture will lead to similar yields as before, and often the yields will be even higher.

Conservation agriculture is therefore also an important land use option that should not be lost on the farmers in Central Asia, and it is therefore a pleasure for us to introduce this book to the reader. It is a manual that represents proven technologies for the introduction of conservation agriculture. The book is a result of the project "Sustainable agricultural practices in the drought affected region of Karakalpakstan" and comes at a timely moment, as farmers in countries of Central Asia and the South Caucasus region are now becoming increasingly aware of conservation agriculture as a new, promising technology. However, introducing conservation agriculture often requires the change of a mindset: Plowing is too deeply enrooted in many farmer's perception of "good land management" practice in order for it to be abandoned lightly. It is therefore important that scientists and farmers collaborate in developing and demonstrating the benefits of this approach to the farmers. This manual will help introducing the concept. We wish wide distribution to this booklet!

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FAO - Food and Agricultural Organization of the United Nations

ICARDA - International Center for Agricultural Research in the Dry Areas

Recommended Citation: A. Nurbekov. "MANUAL ON CONSERVATION AGRICULTURE PRACTICES IN UZBEKISTAN". Tashkent, Uzbekistan, 2008. P. 40.

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