<table>
<thead>
<tr>
<th>Title:</th>
<th>Enhancement Of Barley (<em>Hordeum vulgare</em> L.) Productivity through Improved Crop Management Practices in the Semi-arid Highlands of Northern Ethiopia</th>
</tr>
</thead>
</table>
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| Purpose: | To enhance barley yield in the semi-arid highlands of northern Ethiopia through integrated crop management practices so as to contribute in the efforts of national food security program |
| Project Summary: | Barley (*Hordeum vulgare*) is among the important cereal crops cultivated annually in 2.6 million ha of land in Ethiopia. However, its productivity is low (1.6 ton ha\(^{-1}\)) compared to the attainable yield (5.3 ton ha\(^{-1}\)) due to water stress; low soil fertility; crop losses by weeds, insect pests and diseases; the use of low yielding local barley cultivars, and use of traditional cultivation methods. Enhancing crop productivity generally contributes to national food self-sufficiency and food security. Regional and national crop production can be increased by expanding the cultivation area and/or by enhancing crop productivity. Despite both options being feasible in Ethiopia, focusing on practices that improve crop productivity is the preferred alternative particularly in the Tigray region, northern Ethiopia. This project |
The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) will train three masters’ students with the intention of improving barley yield productivity through their research undertaking. Soil water, soil fertility and weed managements, and improved field management practices that optimize nutrient and water use efficiency got the focus in this proposed research project.

**Key words:** Barley productivity, Mekelle University

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<th>Country and Specific Location</th>
<th>Ethiopia: Adigudom in the Tigray region.</th>
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| Participating institutions: | 1. Tigray Regional Bureau of Agriculture and Natural Resources (Ethiopia)  
2. Rural Development and Agricultural Extension, Mekelle University (Ethiopia) |
| Start Date:                 | 1st July, 2015                          |
| End Date                    | 30th July, 2017                         |
| Budget                      | USD 59,997                               |
Berhanu Abrha Asegu (PhD)

Berhanu Abrha Asegu is an Assistant Professor in irrigation agronomy in the Department of Crop and Horticultural Sciences at Mekelle University (Ethiopia). His main responsibilities are teaching, research and engagement in community services. As an instructor in the department, teaches irrigation agronomy and drainage; crop modeling and simulation; dryland farming and water management. Dr. Berhanu holds a PhD in Bioscience Engineering from KU University of Leuven (Belgium). He holds MSc. in Plant Protection and BSc. in Plant Sciences from Alemaya University (Ethiopia). Prior to joining Mekelle University, Dr. Berhanu served as a researcher in sugarcane agronomy for 5 years and as head of plant health clinic in the Tigray Regional Bureau of Agriculture and Natural Resources for 8 years. Besides, heading the plant health clinic, he was also involved in teaching and research in grain storage pest (mainly insects and rodents) management. Upon joining Mekelle University (Ethiopia) in 2005, Dr. Berhanu served as (i) Coordinator/ Deputy Director of Distance and Continuing Education for the Faculty of Dryland Agriculture and Natural Resources; (ii) Principal investigator of Parthenium project, which was implemented by Mekelle University in collaboration with Virginia Tech State University, USA; (iii) Team leader of the More Crop per Drop project within Mekelle University (MU-Ethiopia) and the Institutional University Cooperation (IUC-Belgium) grand project from January, 2007 to June 30, 2008. Based on the field research, Dr. Berhanu has contributed in the publication of papers in international journals, proceedings and books some of which are freely available on-line.
Selected Publications


