

# Events

## IPI Events

### November 2015

**Report of the 2<sup>nd</sup> IPI-Ministry of Agriculture and Natural Resources-Hawassa University-Ethiopian ATA Joint Symposium entitled “The Role of Potassium in Balanced Fertilization”, 24-26 November 2015, Hawassa, Ethiopia**

#### About the symposium

The 2<sup>nd</sup> IPI Symposium on “The Role of Potassium in Balanced Fertilization” took place on 24-25 November 2015 at Hawassa University in the Southern Nations, Nationalities, and Peoples’ Regional State, Ethiopia. Fifty experts and students in soil research from Ethiopia, Israel, Kenya, South Africa, Tanzania and Vietnam gathered to share knowledge, ideas and expertise to inspire agricultural development in sub-Saharan Africa (SSA). IPI symposium partners were: The Ethiopian Agricultural Transformation Agency (ATA); the Federal Democratic Republic of Ethiopia’s Ministry of Agriculture; and Hawassa University.

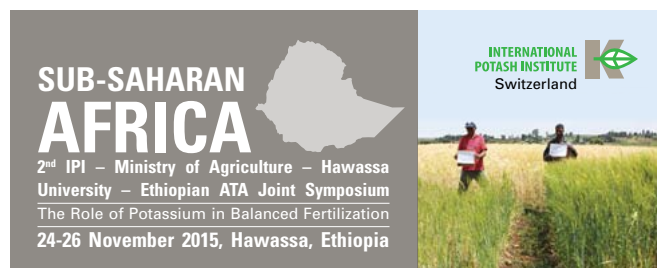


Symposium participants at Hawassa University. Photo by IPI.

Sessions included: The Role of Fertilizer and its Value Chain in SSA; The Role of Potassium in Soil and Plant Systems in Eastern Africa; Evaluation of Soil Potassium Fertility; and, Balanced Nutrition for Increased Productivity. As part of the event, international participants were also shown the fruits of Ethiopian farmers’ use of potassium fertilizer during two field visits in Meki and Bushofti, Oromia Region, Ethiopia.

#### Context

The role of potassium in balanced fertilization and its impact on crop productivity and quality is gaining increasing attention from agronomists and plant nutritionists. This is particularly relevant in SSA where soils are nutrient depleted, and fertilizer use and agricultural productivity remains the lowest in the world.



Ethiopia is currently implementing its second five-year Growth and Transformation Plan (2016-2020) in which agricultural productivity is expected to increase to 40.6 million tonnes from the current level of 27 million tonnes. The Ethiopian Ministry of Agriculture is now distributing potash fertilizers to needy farmers and is developing its domestic custom-made fertilizer blending capabilities. This is based on extensive digital soil fertility mapping being carried out as part of the Ethiopian Soil Information Service (EthioSIS).

#### Testimonials

*“The symposium brought together international expertise, which encouraged participants to rethink and redesign their research and develop approaches for balanced fertilization including potassium. It has built momentum in Ethiopia and Eastern Africa - it’s no longer business as usual.”*

Professor Tekalign Mamo, Programme Leader, EthioSIS  
(Former State Adviser to the Minister of Agriculture, Ethiopia for 12 years)

*“The use of potassium in soil is such a crucial topic. It is an honour for our university - the top in Ethiopia - to host such an important meeting and put the spotlight rightly on potassium.”*

Professor Yosef Mamo, President, Hawassa University

*“Science is the fundamental building block for agricultural productivity. Agriculture is knowledge-intensive. It requires that we look at issues and validate research again, again and again. We have to take this knowledge and share it. At the end of the day, farmers, and improving their valuable work, is our goal.”*

Hillel Magen, Director, IPI

*“It is a privilege to be here and see successes in Ethiopia. Seeing is believing. This is the case for farmers using potash when they see improvements in what they grow. It’s the same for us too, and our global industry; improving human health and people’s quality of life is at the heart of everything we do.”*

Dani Chen, Executive Vice President, ICL



Prof. Yosef Mamo, President, Hawassa University. Photo by IPI.



Final panel at the symposium. Photo by IPI.

*“It is clear that crops need potassium. Especially in light of erratic rainfall and moisture stress, potash is effective for farmers. Without potassium, maize yields for example can be 70% lower - completely uneconomical for farmers.”*

Dr. Mart Farina, Adviser, Omnia Fertilizer, South Africa

*“If you have information about characteristics of soil you can tailor your fertilizer needs specifically to grow more, and better quality produce.”*

Dr. Tran Minh Tien, Deputy Director General, Soils and Fertilizers Research Institute (SFRI), Vietnam

#### Declaration

The **Declaration of the sub-Saharan Africa, 2<sup>nd</sup> IPI Symposium on ‘The Role of Potassium in Balanced Fertilization’** is a result of the 2<sup>nd</sup> International Potash Institute (IPI), Ministry of Agriculture and Natural Resources of the Federal Republic of Ethiopia, Ethiopian Agricultural Transformation Agency and Hawassa University joint symposium held on 24-25 November 2015 in Hawassa, Ethiopia. The declaration is directed to sub-Saharan Africa’s policy makers, academics, legislators, research institutions, NGOs, public and private sectors and relevant ministries.

The participants of this joint sub-Saharan Africa symposium include representatives from Kenya, Tanzania and Ethiopia cutting across private, research and higher learning institutions, and distinguished scientists in soil fertility management, agricultural and natural resources disciplines. Together, we recognize that:

- Nutrient depletion is severe in Ethiopia, Kenya, Tanzania and across the sub-Saharan Africa (SSA) region.
- Balanced crop nutrition is key to attaining potential yields and sustainable crop productivity in Ethiopia, Kenya, Tanzania and SSA.

- Fertilizer usage in SSA is the lowest in the world and, unlike the rest of the world, SSA countries have concentrated on N and P fertilization and neglected other key nutrients including K.
- Most SSA countries rely on blanket fertilizer recommendations that do not reflect varying soil fertility characteristics, specific conditions on the ground, or the actual nutrient requirements of crops.
- Potassium has been misconstrued to be sufficient in Ethiopia, Kenya, and Tanzania.
- Soil mapping (including soil fertility mapping) is key in delineating nutrient needs for different soil types and crops across SSA countries.
- The current generation is obliged to maintain soil fertility for both current and future generations.
- Caring for and protecting soils against degradation and nutrient depletion is cheaper than rehabilitation after serious land degradation.
- In most SSA countries, soil as a resource has not been given enough emphasis by policy bodies and relevant stakeholders.
- A shared soil database on soil research and information is non-existent in the SSA region.
- Soil salinity is becoming a challenge to sustainable agricultural production. This is a result of emphasis on development and intensification of irrigation schemes without parallel emphasis on reclamations measures in smallholder farming systems.
- Soil acidity is increasingly a challenge in some SSA countries limiting nutrient availability, crop response to fertilizers and fertilizer use efficiency, including potash fertilizers.
- Continuously monitoring soil fertility and implementing balanced fertilizer advisory systems are key components for improved crop production and productivity.

- Agricultural research is pertinent for developing balanced fertilizer recommendations, soil fertility improvements, rehabilitation of degraded lands and eventually, quality and yield improvements.
- Balanced fertilizer use has a direct relationship with and impact on sustainable environment, food security, human and livestock health.
- Educational institutions have a key role in creating awareness and imparting knowledge on soil fertility; ensuring that the curriculum is relevant to current needs.

As a result of the symposium discussions we, the participants, declare that:

1. Policy, research, education, capacity building and extension services should focus on balanced fertilization and integrated soil and water management for sustainable agricultural production and productivity.
2. We believe that integrated soil fertility management (ISFM) is the approach that SSA countries should follow to improve soil fertility and attain sustainable food self-sufficiency.
3. There is a need to reconsider fertilizer recommendations in the region that reflect the varying soil fertility status and crop needs towards balanced nutrient management.
4. Fertilizer recommendations should be based on soil tests, crop response data and economic analysis.
5. Soil fertility and fertilizer research should be conducted on representative locations and on a long-term basis.
6. Liming, used to address soil acidity, is a first step to soil fertility management in reclaiming acidic soils.
7. Knowledge management, synergy and coordination between Ethiopia, Kenya and Tanzania must be initiated to share and assign responsibilities to work on holistic soil fertility and management research.
8. The Soil Science Society of East Africa (SSSEA), the Ethiopian Soil Science Society (ESSS) and others, should work closely together as platforms to generate shared soil fertility and nutrient management research for exchanging knowledge and experiences.
9. Like Ethiopia, other countries in the region should develop their own soil fertility atlas of agricultural lands for balanced nutrient recommendations.
10. We believe that developing a soil information database and system in the region is critically important for knowledge storage, sharing and maintaining sustainable soil fertility information to contribute to better decision and/or policy formulation, recommendations and guideline development.
11. Equally, we believe that SSA governments and international collaborators should think about establishing an apex or umbrella body that backstops soil issues in individual countries.
12. Transforming soil fertility management requires support from soil testing services. Hence, service delivery by various institutions/organizations needs coordination, testing exchange programs for quality control, guidance and capacity building.
13. We recommend that educational institutions at all levels should revise their curriculum to include current soil fertility needs to reflect the importance of balanced fertilization to shape and guide the current and next generation towards maintaining good soil fertility to nourish the global population.
14. We recommend the development of country-based critical soil levels for potassium.
15. Citizens of SSA should have access to relevant and timely soil resource information, as well as soil and water testing facilities.
16. We recommend that SSA countries without specialized soil research or soil resource institutions should establish them to ensure sustainable management systems in their countries.
17. International institutions engaged in fertilizer production and trade should allocate funds to support local fertilizer initiatives, such as that being done by IPI.
18. SSA countries should promote custom-made fertilizers that will satisfy soil and crop needs.
19. The initiative taken by the 68<sup>th</sup> UN General Assembly to declare 2015 as International Year of Soils and December 5<sup>th</sup> as World Soil Day should be adopted by all stakeholders and include the need for balanced fertilization, including potassium.
20. Regional bodies such as the AU, EAC, COMESA and NEPAD should prioritize soil fertility and balanced fertilization in their programs aimed at enhancing agricultural growth in SSA.
21. IPI's initiative to bring together soil fertility experts, researchers, development experts and international institutions to discuss potassium should be adopted by other similar scientific institutions and panels.

Please see the presented papers on the IPI website at: [Papers and Presentations](#).

This report also appears on the IPI website at:  
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