

# Linking ATVET to value chain development: collaboration between Holeta and Maichew Colleges and the HortiLIFE project in Ethiopia

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## Introduction

Holeta Polytechnic College (HPTC) in Oromia Regional State and Maichew Agricultural Technical and Vocational Education and Training College (MATVETC) in Tigray Regional State, were both established by the Federal government of Ethiopia, and are now owned and operating under the respective State TVET Bureau, which in turn are governed by the Federal Ministry of Science and Higher Education. Both colleges have strong agricultural programmes.

HPTC was originally established in 1975<sup>2</sup> as Holeta Farmers Training Center with 3-6-month training programmes for farmers. It was upgraded to an ATVET College in 2001, with a main focus on training “development agents” (DAs) – agricultural extension agents located at “kebele” (parish) level – over a nine-month period. In 2018, it was further upgraded to a Polytechnic College, now offering training from levels I-V in agricultural and also non-agricultural fields. HPTC also now functions as a satellite campus of the Federal TVET Institute (FTVETI) to train ATVET instructors in agro-processing and agricultural fields at BSc level. The aspiration of HPTC is to become a leading institute in East Africa and eventually upgrade to a vocational university, keeping a focus on practically oriented training. With 31 hectares of land, and surrounded by commercial agriculture, agro-processing industries and research centers, HPTC is particularly well-located to provide training in the field of agricultural production and agro-processing,

MATVETC was established in 2001, also with the primary mandate to train DAs. Located on 17 hectares of land used, with a further 25 hectares being obtained mainly for income generation off-campus, the college has about 36 classrooms (including 2 “smart classrooms” with projector and computer access), main auditorium, two laboratories and two dormitories. The seventy-three instructors (27 level A; 42 level B and 4 level C) and 13 farm technicians, in animal science, crop science, veterinary medicine, business and agricultural cooperatives, are mostly graduates from Ethiopian universities or MATVETC itself. MATVETC offers training up to level IV in crop production, livestock production, horticulture production and marketing, natural resource management, animal health and cooperative production and marketing, in programmes lasting up to 30 months. MATVETC normally graduates about 300-400 persons per year – although some 400 are delayed in 2020 because of Covid-19. As with HPTC, MATVETC also offers short courses of 1-3 weeks for youths, women, farmers, according to identified needs. In the medium term, MATVETC aims to become a model agricultural polytechnic college and extend its curricula to level V.

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<sup>2</sup> Dates are given using the Western calendar (not Ethiopian calendar).

### *Local collaboration and partnerships*

Both HPTC and MATVETC collaborate extensively with local and international partners.

MATVETC, for example, currently has collaborative agreements (MoUs) with about 45 stakeholders, including agribusiness companies and farms, universities, local government, NGOs and external agencies. Agribusinesses (such as Bokra Union, Valverde Food Processing PLC and Raya Beer), and private farms (such as Amanuel Horti-Farm, Simur Horti-farm, Desta Horti-Farm etc.), provide opportunities for student practical work and internships. Universities (such as Raya, Mekelle, and Adigrat Universities in Tigray Region) provide assistance in technical areas such as livestock and animal health and provide opportunities for MATVETC internships, as well as benefit themselves from use the MATVETC farm as a site for practical work by their own students, a seeds source for forage establishment and material support for land preparation. Twenty-three local governmental offices, such as Woreda (district) offices of Rural and Agricultural Development, Micro and Small Enterprise, Women's Affairs, Sport and Youth Affairs, etc., have their staff trained through short courses, and provide financing for students, as well as internships. All these partners benefit from being able to identify potential staff recruits from interns. As a general principle, MATVETC meets with such partners four times in a year, to evaluate the success of these MOU agreements and share feedback.

Similarly, HPTC collaborates closely with local private companies, government offices, the Holeta Research Centre and nearby universities such as Ambo. The College Vocational Guidance and Counseling Department undertakes training needs assessments, identifies opportunities for cooperative training with these partners, and organizes trainees' data. It facilitates a College-Industry Forum twice a year, chaired by the Holeta town Mayor who is also the Chairperson of the College Board. In addition, the Industry Advisory Board at HPTC discusses skills requirements with industry, trainers and other concerned bodies to identify gaps in existing occupational standards (OS) and report back to the Ethiopian Federal TVET Agency, which is responsible for establishing and review of OS at a national level. College instructors then develop curricula for these OS, with approval of the curricula being the responsibility of the College.

### *Externally supported projects*

Projects with external financing have supported HPTC and MATVETC in terms of institutional development, infrastructure and equipment, capacity building of staff, etc. HPTC has benefitted especially from support from Netherlands Nuffic (NICHE ETH146, 2012-2017; and OKP-EAR104104, 2019-2021; OKP-ETH10019, 2019-2021), and currently from the World Bank (East Africa Skills for Transformation and Regional Integration Project – EASTRIP). MATVETC has been supported by the Canadian government through the Agricultural Transformation Through Stronger Vocational Education (ATTSVE, 2014-2019) Project. Both colleges have benefited from German (KfW) support to TVET in Ethiopia.

### *Collaboration with SNV and HortiLIFE*

One collaboration involving both Colleges is that with the Horticultural Livelihoods, Innovation and Food safety in Ethiopia (Horti-LIFE) Project, financed by the Netherlands Government and implemented by SNV and Ministry of Agriculture working in partnership. The project, now in its

second phase, aims to increase the involvement of some 100,000 smallholders in horticulture by improving productivity, food safety and diversity, access to market and service provision, and also improving horticultural education at vocational and graduate levels. Working in Amhara, Oromia, Tigray and the Southern Nations Nationalities and Peoples regions, the project is partnering with 10 ATVETs in Ethiopia, as well as four universities, two research institutes and 60 commercial service providers.

Of particular benefit to HTPC and MATVETC are the opportunities for practical training that Horti-LIFE affords. Ethiopian TVET policy states that the TVET training should be 70% practical and 30% theoretical but, in reality, this emphasis on practice is difficult to apply due to the shortage of resources and appropriate materials, the lack of improved technologies and the lack of technical training of instructors themselves. A key activity introduced by Horti-LIFE are “student plots” on the college farms, which replicate commercial production plots of the main horticultural crops, and which are integrated into both regular and short-term training. Home garden technology, which can be easily applied in smaller plots and by a range of household types, has also been introduced.

To facilitate the student plots, the project has donated improved seeds and fruit seedlings, infrastructure such as water tanks and drip irrigation, equipment including laptops, handbooks, PH meters, soil augers, chemicals and knapsack sprayers, fertilizers and pesticides, personal protective clothing and the necessary hand tools which are typically used by the private sector. The project has also provided technical training for instructors and general ideology for management staff. Horti-LIFE has also provided technical training and support to assist college instructors with the preparation of standardized student learning guides (also referred to as Teacher Trainer Learning Materials - TTLM) in English, which have now been translated into Amharic, Afan Oromo and Tigrinya, printed and circulated to 9 of the Colleges in the project to enable students to understand and learn more easily.

With the materials provided, trainers and trainees are able to actively practice all aspects from site selection to marketing of the products and calculation of costs and income generated. Students and instructors are also encouraged to consider the contribution that fruit and vegetable crops can make to farm income, household food security and dietary diversity. The student plots have also increased female participation in practical work, improved the confidence and general satisfaction of students who happily and freely discuss in their work in the field. Second year trainees share their experience and practical skills with first year trainees. All short training and regular training students trained in student plots are assessed by an external body in national assessment at the end of training, and the results of this show a remarkable improvement in the performance of the two colleges.

The student plots also serve as a means of sharing experience, demonstration and extension with farmers, small and medium enterprises, trainers and managers from other colleges, college Board members, NGOs and other projects (such as the Nuffic OKP project “Bright Future in Agriculture”, JHPIEGO, etc.). The HortiLIFE project has enabled visits by trainees and trainers to local farms, horticultural enterprises and Farmer Field Schools implemented by the project. As a specific example of this type of outreach activity, trainers at HTPC are expected to serve farmers and small and medium enterprises (SMEs) during 4 hours per week, for which there is

no fee and the College provides the transportation. This service is considered as part of the regular work of the trainer, who are attached to specific farmers and/or SMEs, giving service on technical skills and technology transfer, entrepreneurial skills, and KAIZEN<sup>3</sup> application. Trainers at HTPC have provided such services to SMEs such as *Riqichaa* and *Walqixummaa*, (organic vegetable producers), and their members of also visit HTPC to learn practice at the student plots. In MATVETC, students are temporarily attached to private farms (e.g. for 1-2-week periods), thus providing labour for the farms as well as gaining practical experience.

The approach has also been critical to developing entrepreneurial abilities of the trainees, the majority of whom are now expected to be self-employed after graduation, although many are still recruited as DAs. The income from sale of the products from the student plots and home gardens to surrounding communities and local markets goes to the Colleges and supports the Ethiopian Government TVET strategy of supplementing government budget through income generating activities.

Because the students have gained more hands-on skills through the student plots, they are more attractive as interns for local farms and companies where they can undergo cooperative training (usually for 2-month periods). The Horti-LIFE project has provided financial support for visits to farms and private agro-enterprises by instructors, extension instructors and management staff, giving them exposure to the real “world of work”.

Farms and agro-enterprises have also got a chance to select experts with better skill and knowledge resulting from the time trainees spend as interns in cooperative training. MATVETC, for example, now has graduates in almost in all the horticulture farms in Raya Valley, but specifically in Desta and Amanuel Horticultural Farms, which now do not require to spend so much time on retraining graduates without the practical skills.

### **Summary**

Through the Horti-LIFE project, collaboration with SNV has enabled HTPC and MATVET colleges to effectively implement the 70% practical TVET strategy of the Ethiopian government. As well as provision of crucial equipment used in the horticultural sector, it has strengthened the practical and teaching skills of college instructors, improved organizational standards and curricula in the sector, enabled the development of improved learning materials, improved the learning outcomes for ATVET students and greatly improved collaboration between the colleges and horticultural producers and SMEs. The private sector now sees value in collaboration with the college and in implementing collaborative learning programmes, gaining new technology and a better-skilled labour force with an improved work ethic. Students who have benefited from the new and more practical and participatory approach to training supported by Horti-LIFE have greater practical skill, confidence and ability to apply learning to the workplace. These students are more able to provide relevant advice for farmers, and/or have the motivation and skills base to become successful entrepreneurs.

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<sup>3</sup> “KAIZEN” is a customer-oriented system of continual improvement of business activities and processes.