

Arabica Coffee (*Coffea arabica* L.) Local Landrace Development Strategy in its Center of Origin and Diversity

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SUMMARY

Arabica coffee (*Coffea arabica* L.) breeding and selection methods applied every where to improve production, productivity and quality are generally the same. However, the application of these methods may vary from country to country depending on the amount of genetic variability available, ecological conditions and research focus or prevailing production constraints of the country. Ethiopia is the center of origin and diversity of arabica coffee. The country is ecologically very diverse and coffees grown under these environments are different in quality, disease resistance, yield potential and many other traits. Development of breeding strategy that fits to these conditions is of paramount importance to exploit all the available advantages. In the past, the interest was to develop varieties that have wider adaptation and distribute to all coffee growing areas. It was, however, realized that distribution of such limited varieties to all coffee growing areas adulterates the typical quality of each specific locality or region, manifested poor adaptation and less preference by the local farmers compared to their respective local cultivars. A new breeding strategy, known as '*Local Coffee Landrace Development Program*', was designed to alleviate these problems. The new approach is aimed at development of varieties for each specific agro-ecology using the respective local landraces and this is elaborated in the text. The Collection of local landraces and establishments of seven research centers (Jimma, Agaro, Gera, Tepi, Awada, Haru and Mechara) that represent different agro-ecological zones of the major coffee growing areas have greatly facilitated the implementation and effectiveness of the new program. Currently, landraces roughly amounting to 1900 accessions from Harerge, 350 from Sidamo, 590 from West Wollega, and 200 from Limmu have been collected and established at the research centers available in the respective areas. Systematic evaluation of some part of the accessions in a crash program resulted in the identification of over 26 promising selections for three agro-ecologies in quite short time (five years). The selections were advanced to verification trial to confirm their performance before recommending for release as pure-line varieties for each agro-ecology. The implication of the new breeding strategy in promoting market oriented research and specialty coffee, the significance of hybrid development for increased yield and productivity and the focus of future breeding are discussed.