Recent studies of indigenous farming systems in Amazonia point to remarkable agrobiodiversity in situ, but overlook a key contributing factor – the availability and exchange of crop planting material (e.g., seeds, suckers, cuttings, etc.) among traditional farmers. This paper reports on research over the past five years on the nature and origins of crop diversity across and within traditional communities of river people (ribere os) in the Peruvian Amazon. Extensive networks of informal exchange in agricultural planting stock are identified that facilitate the regional/local re-distribution of plant germplasm, especially for vegetatively propagating cultivars, between upland (‘source’) areas and the seasonally inundated floodplains (‘sinks’). Differential access to planting stock is found to be a key factor in the building and maintenance of agrobiodiversity among traditional communities, for subsistence security among lowland farmers, and for market specialization among farmers near urban centres in the upper Amazon. Findings point to the urgent need for a systematic assessment of the geographic and socio-cultural patterns of crop/varietal diversity in Amazonia with particular attention to the transmission of planting stock through informal networks in the basin. Implications are discussed for agrobiodiversity conservation and agricultural development in rural Amazonia.