A vertical coproduct technology simultaneously produces multiple outputs that differ along a rankable quality metric. Coproduct manufacturers often sell products through a distributor. We examine a setting in which a manufacturer sells vertically differentiated coproducts through a self-interested distributor to quality-sensitive end customers. The manufacturer determines its production, product line design, and wholesale prices. The distributor determines its purchase quantities and retail prices. In traditional product-line design, products can be produced independently of each other and higher-quality products have higher production costs. This literature established that the length of the product line (i.e., difference between highest and lowest qualities) is greater in an indirect channel than in a direct channel. Coproducts cannot be produced independently of each other. Among other findings, we establish that this interdependency causes the opposite channel effect: for co-products, the length of the product line is smaller in an indirect channel than in a direct channel.