

Coffee Blending and Sales

The Cali Coffee Company (CCC) blends four component beans into three final blends of coffee. One is sold to luxury hotels, another to restaurants and the third to supermarkets for store-labeled brands. The company has four reliable bean suppliers: Columbian Abundo, Peruvian Calmado, Brazilian Maximo, and Chilean Saboro. The following table summarizes the precise recipes for the final coffee blends, and the wholesale price per pound of the final blends. The percentages indicate the fraction of each component to be used in each blend.

component	Hotel	Restaurant	Market	cost/lbs(\$)	weekly availability (lbs)
Abundo	20%	35%	10%	0.60	40,000
Colmado	40%	15%	35%	0.80	25,000
Maximo	15%	20%	40%	0.55	20,000
Saboro	25%	30%	15%	0.70	45,000
Wholesale price/lb (\$)	2.25	2.50	2.40		

The processing plant can handle no more than 100,000 pounds per week. There is no problems in selling the final blends, although the marketing department has sold delivery contracts that require minimum production levels of 10,000, 25,000, and 30,000 pounds, respectively, for Hotel, Restaurant, and Market blends. CCC wishes to maximize their weekly profit.