Several new products are launched every day in the functional food market. Probiotics are live microorganisms intentionally added to the food and prebiotics are food ingredients that favor the growth of beneficial bacteria in the body. The hydrosoluble soy extract (HSE) contains natural oligosaccharides such as raffinose and stachyose which are considered prebiotics and can be an alternative when incorporated in beverages especially for people who have allergies or lactose intolerance. Bocaiuva flour (BF) is an excellent source of energy, fiber and vitamin A. The objective of this study was to develop a drink containing soybean Bocaiuva flour and \textit{Lactobacillus acidophilus} in symbiosis. There was an experimental planning $3^2$ containing different concentrations of HSE (8\%, 10\%, 12\%), BF (1\%, 3\%, 5\%) and \textit{Lactobacillus acidophilus}. There was no statistical difference between treatments for the analysis of sensory data in the hedonic scale of 9 points. Therefore three formulations were selected containing most concentration of BF: F3 (HSE 8\% to 5\% BF), F6 (HSE 10\% to 5\% BF) and F9 (HSE 12\% to 5\% BF). The acceptance rate was above 70\% for F3. During the 28 days of storage the mixtures showed a cell count in accordance with the law ($> 10^7$ CFU / ml) and pH values near 3.80. Under the Brazilian law, all these treatments can be considered a source of dietary ($> 3\, g/100\, g$) and rich in vitamin A for children 1-9 years ($> 15\%\, RDI$).