

Single Cell Proteins (SCP):

Single-cell proteins (SCP) are the dried cells of microorganism, which are used as protein supplement in human foods or animal feeds. Microorganisms like algae, fungi, yeast and bacteria, utilize inexpensive feedstocks and wastes as sources of carbon and energy for growth. These waste products can be transformed into biomass, protein concentrate or amino acids by certain microbial proteases.

With increase in population and worldwide protein shortage necessitated the use of microbial biomass as food and feed. These microbial proteins provide an ideal alternative to conventional food source. Although SCP have high nutritive value due to higher protein, vitamin, essential amino acids and lipid content yet these could not replace the conventional protein sources due to their high nucleic acid content and slower in digestibility. These may be considered as foreign material by body, which may subsequently results into allergic reactions. Yeast was the first microorganism whose importance as animal feed supplement was recognized almost a century ago in Institut für Gärungsgewerbe in Berlin. During World War I, Germany replaced half of imported protein sources by yeast. Pruteen was the first commercial single cell protein used as animal feed additive.(p43,44,54).