

THE LAYMAN'S GUIDE TO

GS-70 AND GS-48 (CYTOKIN CONTAINING PRODUCTS)

PHYSIOLOGICAL EFFECTS OF CYTOKIN

1. The major function of cytokinins in plants is to promote cell division. Plants produce some of their own cytokinin. GS-48 is used as a seed treatment because the increased levels on the seed will promote lateral root development in the young seedling. Early in a plants life the internally produced cytokinin is depleted and externally applied cytokinin is necessary for continued rapid growth.
2. Cytokinins have been shown to promote cell expansion. Increased leaf surface area results in an increase in photosynthesis and consequently chlorophyll production.
3. Cytokinins promote lateral bud break and help to overcome apical dominance. The results of this phenomenon are increased blooms and fruit set. Cytokinins initiate sink (reservoirs) mechanisms at the lateral buds, which promote the transport of nutrients, vitamins, minerals, and other growth substances which will stimulate the growth of that lateral bud. Cytokinins have been shown to delay or prevent leaf senescence (death). They do this by helping to maintain the integrity of the cell membranes. The longer the leaves stay healthy the higher the level of chlorophyll production will be. The ability of cytokinins to promote nutrient translocation in plants is responsible for increased plant metabolism, which results in faster maturity.
6. Some vegetable crops benefit from applications of cytokinins because of the delayed leaf senescence resulting in longer shelf life and reduced rot. The crops are cabbage, lettuce, cauliflower, asparagus, broccoli, celery, Brussels sprouts and other vegetables such as endive, escarole, mustard greens, spinach, radish, carrots, parsley and green onion.