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BLACK PEPPER CULTIVATION:
USEFUL FACTS
Black Pepper Cultivation: Useful Facts

Climatic Conditions
Black pepper (Piper nigrum L.) originates from tropical, warm, humid latitudes, where temperatures of 77°F and 80 -120 inches annual rainfall predominate. Evenly distributed rainfall is ideal. Supplemental irrigation is necessary in dry, low-rainfall areas. Due to its tropical climate and adequate rainfall, pepper can be grown throughout the year in Micronesia.

Soil Characteristics
Black pepper can be grown on a wide range of soil types, but best results are obtained on deep, well drained soils with good water holding capacity. The best soil characteristics are sandy loam clay to clay loam with adequate essential plant nutrients and high organic content. Suitable soil pH is between 5.0 to 6.5. A slope not exceeding 10-15° is recommended for better soil conservation, easier harvesting and farm management.

Field Preparation
Existing vegetation is turned under with a moldboard or disc plow, or by spading. Most soils benefit from adding compost at this stage. During cultivation, phosphate fertilizer can also be added if required. After turning, leave the soil for a few days to allow for decomposition, and then break soil clods by harrowing or rototing, or with a hoe or rake in small gardens. After the soil has been pulverized, the surface should be smoothed in preparation for black pepper planting. Black pepper can be planted on ridges, in furrows, or on flat ground.

Preparation of Planting Materials
Traditionally black pepper has been propagated through cuttings that are prepared from main plants. The cuttings consist of the upper 5-7 nodes segments. Selected planting materials should come from varieties that are disease and pest resistant, vigorous and high yielding, with good productivity with respect to the final product. In the recent years, owing to the advantages of disease free planting material along with uniformity in growth and higher yields, the use of tissue cultured plantlets as the planting material for black pepper has become increasingly popular among the farmers.

Standards and Planting
Traditionally in Micronesia, the trunks of the tree fern (Cyathea nigricans) are used as living supports for commercial black pepper vines. Considering the extremely limited availability of traditional tree fern supports and their very short lifespan, non-living supports such as reinforced cement-concrete standards are a good alternative. Standards should be planted well before planting black pepper at a depth of 2.0-3.0 feet. The planting pits should have a depth of 1.5 feet and a radius of at least 1.5 feet from the standard. Prior to planting, the soil should be amended adequately with organic fertilizers such as compost. Disease-free seedlings should be planted in prepared pits at the onset of a rainy day or in the evening. Young vines should be tied loosely to the support and shaded with suitable plant material.

Processing, Drying and Storage
Separated green pepper should be washed in clean water and should be soaked for 1 to 2 minutes in water of 194°F temperature to eliminate contaminants. Soaking in hot water would also facilitate drying and improve the appearance of the dried peppercorns. Black peppercorns should be dried to a moisture level of 10% for long storage.

Texture and Color
Different harvesting times and processing techniques could result in various colors and textures of peppercorns such as green, black or white peppercorns.