POTENTIAL METHYL BROMIDE ALTERNATIVES IN SOIL FUMIGATION

PART 1: **APPLICATION OF CONYZA FLORIBUNDA EXTRACTIVES TO CONTROL SOIL PATHOGENS IN TOMATO FIELDS**

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This is a continuation of our work in search of alternatives to Methyl Bromide problem. This contribution looks at the application of extractives from Natural Products. Our approach is based on rich African Traditional Knowledge disease control and treatment in both humans and animals.

Methanolic extracts of the leaves of *Conyza Floribunda* (Asteraceae) has been found to exhibit activity against phytopathogenic fungi-*Fusarium oxysporum* in vitro. The crude extract was subjected to bioassay-guided fractionation using the disc assay. This afforded two known compounds: 1 H-cycloprop(e) azule-7-o 1 decahydro- 1, 1,7-trimethyl-4- methylene (CPDI) and 24-Ethyl c-hrolesta-5,22-diene-3-ol (CPD2). These compounds were identified on the basis of spectroscopic techniques.

CPDI showed the greatest activity in vitro against *F. Oxysporum* with minimum inhibitory concentration (MIC) of < 62.5m1g/ml. The activity of each compound was tested against other selected soil pathogens. Green house efficacy trials of the crude extracts against tomato wilt incited by *F. Oxysporum* was very interesting. It was noted that although single pure compounds were not so effective, the crude extracts provided complete protection to tomatoes growing in Green house. Obviously synergism effect is at work here. Further more, *C. floribunda* is a common weed. Work is in progress to identify the synergist factor and carry out field trials to test the effectiveness of the extracts.