VIROSOFT ^{CP4} TECHNICAL SHEET

STRONG, STABLE, EFFICIENT

BioTEPP Inc. has developed a reengeneered new **Virosoft^{CP4}**, a biological insecticide based on the granulovirus of the codling moth.

A DEPENDABLE AND STABLE BIOLOGICAL INSECTICIDE PROTECTING FRUITS AGAINST CODLING MOTH.

1.- Highly concentrated. As specified on the label, the new **Virosoft^{CP4}** suspension contains 4 x 10^{13} occlusion bodies per liter. Compared to all other products on the market, **Virosoft^{CP4} has the highest concentration of viral bodies of them all, thus increasing significantly it's efficacy.**

2.- Highly stable. Biotests have recently been done, both in United States (USDA Research Center in Yakima and the Washington University Research Center) and in Canada (Agriculture and Agri-Food Canada in British Columbia and Quebec Research Centers), to evaluate the stability and effectiveness of the new **Virosoft^{CP4}** in controlling the codling moth larvae.

Results showed **Virosoft^{CP4}**'s high stability and efficiency.

In laboratory tests, **Virosoft^{CP4}** stored at 35° C (95°F) for two weeks and diluted at 1:1000 and 1:000 000 provoked 100% mortality of neonate codling moth larvae. Furthermore, **Virosoft^{CP4},** stored for four weeks at temperatures of 25°C (77°F) and of 35°C (95°F), still diluted at 1:1000 and at 1:100 000 provoked respectively a 100% and a 93% mortality level of neonates.

Virosoft^{CP4}, diluted for spraying, is highly stable and efficient.

3.- Highly efficient. Different tests were undertaken in the field in United States by Dr. J. Brunner, Entomology Director at the Washington State University and by Dr. L. Lacey, Director of the Yakima USDA Laboratories and in Canada by Dr. J. Cossentine of the Pacific Agri-food Research Center in Summerland, British Columbia, and by Dr. C. Vincent of the Horticultural Research and Development Center in St-Jean-sur-Richelieu, Quebec, Canada.

Generally, results show:

- **A high codling moth larvae mortality.**
- **A considerable codling moth population reduction.** For example, the count of adult moths trapped in control plots both after first and second generation were as high as 270. In plots treated with **Virosoft^{CP4}**, the count of captured adults were as low as 3 to 30 after the first generation and only 0.5 to 4.5 after the second generation. **A more than 98% codling moth population reduction.**
- **An efficient fruit protection against codling moth.** During the same tests, compared to the untreated plots, **Virosoft^{CP4}** protected 50% to 66% more fruits. (Three additional to the usual four applications of **Virosoft^{CP4}** gave an even higher protection.)
- **A very significant residual activity of Virosoft^{CP4}** against codling moth of up to 14 days after spraying.

Thus, the new Virosoft^{CP4} bio-pesticide offers an efficacy that compares to chemical insecticides without the related potential problems. The insecticidal potency of the **product is evaluated for each production batch.**

Furthermore, to warrant it's high potency, Virosoft^{CP4} will now be sent in a frozen suspension, ready to be mixed, for the protection of apples, pears, plums, and walnuts against codling moths. When received, the best conditions to insure its stability and morbidity strength are that it be **kept frozen or at one (1) degree Celsius (thirty-four (34) degrees Farhenheit).**

The **new Virosoft^{CP4}** , a purely natural product, has the OMRI certification (bti-3087). It can be applied up until the time of harvest and the delay for re-entry into the fields after a treatment is of only four hours.

DIRECTIONS FOR VIROSOFT^{CP4} USE:

- This microbial insecticide contains *Cydia pomonella* granulovirus. Viral occlusion bodies must be ingested by codling moth larvae to be effective.

- **Virosoft^{CP4}** application should be timed so that early-instar larvae on the surface of the leaf or fruit come in contact with the granulovirus before entering the fruit. This product is to be applied by ground equipment only.

- For each application: **250ml (3.2 fl. oz)** of **Virosoft^{CP4}** will treat 2.5 acres (one hectare). It's about 10^{13} occlusions bodies per 2.5 acres.

- **Applications** should be made in sufficient volume of water to ensure thorough coverage fo the fruits and leaves.

- For better results, 6 to 7 applications of **Virosoft^{CP4}** are recommended. (One application a week).

- **Make the first Virosoft^{CP4} application at 210 degree-days (F) after biofix** as determined by first consistent moth catch in pheromone trap.

- **Apply diluted Virosoft^{CP4} with jet or conventional sprayers just prior or at egg hatching and thereafter, another 5 to 6 times in seven to ten day intervals** depending on temperature.

- **Virosoft^{CP4}** can be applied with stickers like NU-Film, UV protectants, and with other pest control products.

- **It is recommended** that the viral insecticides be applied in late afternoon or on a cloudy day to avoid direct exposure to sunlight.

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