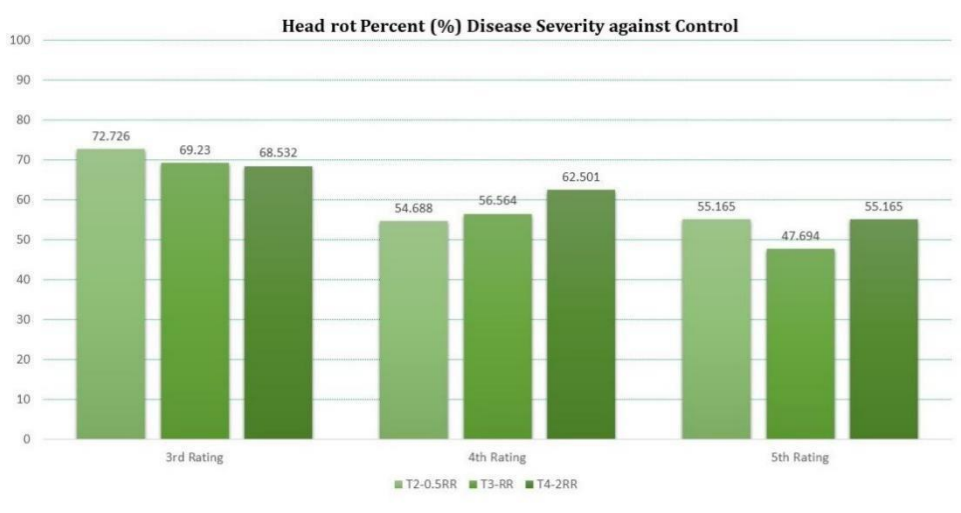
Title	**EFFICACY OF ENVIRO ULTRA-PK ON HEADROT *(Sclerotinia sclerotiorum)* OF CABBAGE**
Introduction **-Product** **-Target Pests** **-Economic relevance (statistical data)**	Cabbage is locally known as "repolyo" grown for its firm, compact, round to flat heads. This belongs to the "cole" crops family. Cabbage ranks as one of the most economically important vegetable crops in the highlands. During the second quarter of 2022, production of cabbage was recorded at 24.44 thousand metric tons. It was -3.3 percent lower than the 25.27 thousand metric tons output in the same period of 2021(PSA, 2022). The major contributor in cabbage production for this second quarter of 2022 was CAR, which has 19.29 thousand metric tons or 78.9 percent share to the country' total output (PSA ,2022). Among the varieties of cabbage, 'Scorpio' variety is the most preferred by local growers because of its high demand among consumers (Domingo, SN et.al 2020) and harvest is approximately 27.25 tons per hectare (Ugali et. al., 2020). Cabbage production is affected by plant disease like head rot or Sclerotinia rot, caused by *Sclerotinia sclerotiorum*, the fungus can cause serious losses in the field and storage (Dillard, 1987). It is important that in any disease control program, inclusion of an effective fungicide be incorporated as a component in any disease management strategies. ENVIRO ULTRA-PK is a broad-spectrum fungicide that contains the following elements: Rock potassium phosphate, calcium phosphate, soapwort (*Saponaria*) and plant extracts. It is a fungicide that can be used against head rot of cabbage to improve its production in the region and is compatible with Organic Agriculture (OA) and Good Agricultural Practices (GAP) being promoted by the government through the Department of Agriculture.
Results & Discussion	**1. Disease Severity**. The percent disease severity of the head rot of cabbage is indicated in Table 1. The head rot manifested at 60 days after transplanting and lasted up to 80 days. The average disease severity among the untreated cabbage was 39.30 %. Meanwhile, lowest average percent disease severity was recorded from 6.0 g/L of Enviro Ultra PK at 15.33% followed by 1.5g/li at 15.82%, then 3.0 g/L at 17.22%. The average disease severity rating in all Enviro Ultra PK treated cabbage plants is lower than control by 23.17%.

Table 1. Head rot percent (%) disease severity

Treatments	Dose rate	1st Rating 40 DAT	2nd Rating 50 DAT	3rd Rating 60DAT	4th Rating 70 DAT	5th Rating 80 DAT
T1-Control	no fungicide spray	NI	NI	31.778	35.556	50.556
T2-Ultra PK	1.5 g/li (0.5RR)	NI	NI	8.667	16.111	22.667
T3-Ultra PK	3.0 g/li(RR)	NI	NI	9.778	15.444	26.444
T4-Ultra PK	6.0 g/li (2RR)	NI	NI	10.000	13.333	22.667

RR- recommended rate
DAT - days after transplanting

2. **Percent Disease Control**. The percent disease control for the head rot of cabbage is shown in *figure* below. The application of Enviro Ultra PK in varying rates is effective against the head rot of cabbage. The highest percent efficacy was observed in 6.0 g/L of Enviro Ultra-PK , 62.07% followed by 1.5 g/L at 60.85% and 3.0 g/L at 57.83%. Overall, the average percent efficacy on disease control of all treated cabbage plants with the Enviro Ultra-PK is 60.25%.



3. **Yield**. The yield expressed in tons per hectare shows that all cabbages treated with the Enviro ULTRA PK recorded better quality (first class) heads as compared with the control. The highest yield was obtained from 1.5 g/L of Enviro Ultra PK at 13.2 t/ha followed by 3.0 g/li at 10.4 t/ha, and 6.0g/li at 9.8 t/ha. The lowest yield was recorded from the control at 8.40 t/ha.

Conclusion

1. The Enviro Ultra PK was able to reduce the disease severity by an average of 23.17%.
2. The Enviro Ultra PK was able to meet the percent efficacy standard, ≥ 50 percent in the PNS/BAFS 182:2016.
3. The cabbage plants treated with Enviro Ultra PK have higher yield than the control.

Researchers and Company Profile	**BAFS CERTIFIED RESEARCHER** Aurora Ferrer-Pinon, a retired professor of Benguet State University, is a BAFS Certified Researcher per Special Order No. 065 series of 2022. **OUR COMPANY** Enviro Scope Synergy Inc. is a pioneering Filipino company aiming to change the notion of how food is produced. We believe that sustainable food, enough to feed a growing population, can be produced naturally through natural processes and natural inputs. We offer the "organic solution" to the country's food production concerns, veering away from the use of destructive chemicals and unnatural methodologies. Our organic products will ensure the health of the whole Filipino nation, preserve our environment, and build a healthier community for future generations.
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Annex

-Photo Documentation

Figure 1; The effects of the varying rates of Enviro Ultra PK on cabbage heads: T1-control; T2-Ultra PK at 1.5g/; T3-Ultra PK at 3.0g/L; and T4-Ultra PK at 6.0g/L