SUSTAINABLE MOINA sp. MASS CULTIVATION ON CHLORELLA sp. MEDIA WITH ROTIFERA / BRACHIONUS sp. COMPETITORS KEMENTERINAN DAW PROTECTION OF THE PROTECTION OF CONTROL MANAGEMENT

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Mass cultivation of *Moina* sp. has overcome dependence on imported products such as brine shrimp and tubifex worms which come from wild catches and not available throughout the year. However, in the implementation of cultivation, there is a main factor causing harvest failure because of the competitor organism namely Brachionus sp.

Chlorella sp. and Moina sp. mass production conducted on outdoor area with the fertilizer composition in Table 1. The Brachionus sp. as competitor organism which controlled by using 0.25 – 0.50 ppt of salt in the *Moina* sp. cultivation media has been proven to be able to eradicate and inhibit the hatching of Brachionus sp. eggs without inhibiting Moina sp. and Chlorella sp. development.



sp. as media through innovation in controlling Rotifera / Brachionus sp. as a competitors and the technology innovation mass cultivation of Chlorella sp. in the open areas (2x10⁷ cell mL⁻¹ abundance) throughout the year without carrying out pure culture in laboratory has multiple production yields (harvest between 2- 4 kg per 3000 L media yield per 5-7 days cultivation) and reduced the limiting factor for harvest failure due to Rotifera / Brachionus sp.

The Moina sp. mass production by using Chlorella

A live/fresh or frozen *Moina* sp. (content 65,90 % of proteins) can be used all of the time as nursery food for Patin, catfish, snakehead, gouramy, etc in hatcheries and ponds. The using of *Moina* sp. can increase the uniformity of fish larva size and minimize the risk of fish disease attack thereby increasing the survival rate up to 80%.

Brachionus sp

Table 1. Compotition of *Moina* sp. dan *Chlorella* sp. cultivation fertilizer



	Cultivation		
Component	Chlorella sp. (g 1000 L ⁻¹)	<i>Moina</i> sp. (g 1000L ⁻¹)	Remark
Urea	1000	100	
TSP	250	25	
Salt	-	250-500	<u> </u>
Dolomite	100	100	
Fish meal/trash fish/shrimp	100	100	±45% of protein
Soybean meal	100	100	±32% of protein
Rice bran	200	100	±8% of protein
Chlorella sp.	200 L	50-200 L	Min. 1x10 ⁶ cell mL ⁻¹ of density
Moina sp.	-	50-200	Min. 100 ind L ⁻¹ of density

Moina sp. with Brachionus sp. competitors