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PIE Ozonation®

Ozone Aquaculture / Agriculture

In Hong Kong, the AFCD of HKSAR has used our PIE Ozonation in their aquaculture testing site at Fanling. In most of modern countries, the fish farming using ozone for aeration to achieve 2 functions: increase the dissolved oxygen and ORP value.

Compared with other chemicals, ozone is the most safe to use in aquaculture since ozone can apply directly on food and drinking water according to FDA.

Ozone dissolved in water will form ozonated water which can apply in irrigation.

The merits of ozonated water include:

1. Increase water infiltration

Ozonated water will oxidize the organic matter coatings on clay particles thus changing their surface charges and cause them to flocculate and form larger particles. The larger sized particles of clay could improve water infiltration by preventing clay dispersion.

2. Increase oxygen content

Ozone makes larger clay particles and oxygen can diffuse deeper into the roots which helps the growth of the plant.

3. Increase disease resistance

The natural disinfection power of ozone kills most of bacteria and makes plant growth healthier.

4. Reduce need for fertilizers

Ozonation creates nitric acid which could be a source of nitrogen (nutrient) for plant growth.

5. Ozone improve the growth of the plant

Ozone will oxidize soil organic matter and plant residues, thus releasing essential plant nutrient and improve the growth of plant.

How to use Ozonated Water for Irrigation ?

Simple installation by just connected the supply water to the Ozone machine. The outcome water would become ozonated water. Ozone is generated from air and no need of chemical replenishment.

There are no farms in city, how to use Ozonated Water for Irrigation?
Yes. There are no more farms in city. But city needs green-zone.

Golf course	**Football field**	**Camp site**	**Public garden**
Private garden	**Organic farm**	**School**	**Hospital**
Hotel plant	**Flower farm**	**Zoo**	**Theme Park**

Green agriculture uses Ozonated water

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臭氧水產養殖 / 農業

『派儀臭氧』已應用於香港漁護署 (AFCD of HKSAR)， 位於粉嶺的實驗漁場。 臭氧可應用於海產養殖業，將水的溶解氧（DO ）和 ORP值提升 。

相比其他化學品， 使用於海產養殖業，臭氧是最安全，也獲FDA批准。

臭氧溶於水中，成為『臭氧水』，可應用於農業灌溉，優點如下：

1. **將黏土顆粒增大，改善疏水，使水份深入泥土**
   臭氧能將黏土表面的有機物電荷改變，使黏土結成較大顆粒，讓水份滲入至植物根部。
2. **增強泥土氧份**
   耕種需常翻土，讓空氣進入土壤，有助植物生長。臭氧能使泥土較大顆粒，有助植物根部吸收更多氧氣。缺氧的泥土，易生害蟲和疾病。
3. **增強抗病**
   除上述原因，臭氧有天然殺菌本能，減少植物對農藥倚賴，增強抗病能力。
4. **輸入氮，增加氮肥**
   以空氣製取臭氧，會同時使空氣中的氮，化成 NOX，溶解在水中，便成為微弱的硝酸。硝酸溶解在泥土中，便產生有價值的氮肥，助長植物。
5. **分解植物，提供腐植質養份**
   臭氧能有效氧化泥土中的枯草、落葉，釋出腐植質，滋養泥土。

如何使用臭氧水灌溉?

只要將水喉，接駁在臭氧機，臭氧會隨水流產生的負壓，進入水中，出來便是臭氧水，可直接使用。臭氧的原料來自空氣，不用添加任何化學品。

城市沒有耕地，為何使用臭氧水灌溉?

對！城市沒有耕種地，但城市亦有不少綠化區

哥爾夫球場	足球場	渡假營	市政公園
私人公園	有機農場	學校	醫院
酒店綠化區	花卉農場	動物園	主題公園

使用天然臭氧水，進入環保耕作的新世代