EM Technology® For Better Life

Syntropy Malaysia Sdn Bhd

Our Experience in Anti-biotic Free Broiler Farming

Our first application of EM Technology was at the broiler farm in Kota Tinggi, Johor. At the end of 2003 PPKJBS (South Johor Farmers Organization) agreed with us to test EM Technology at one of their 6 huts at Smangar, Kota Tinggi.

The result of our first harvest was as follows:

(Period of our trial) 6 March 2003 ~ 15 April 2003

(Number of broilers) 4,950

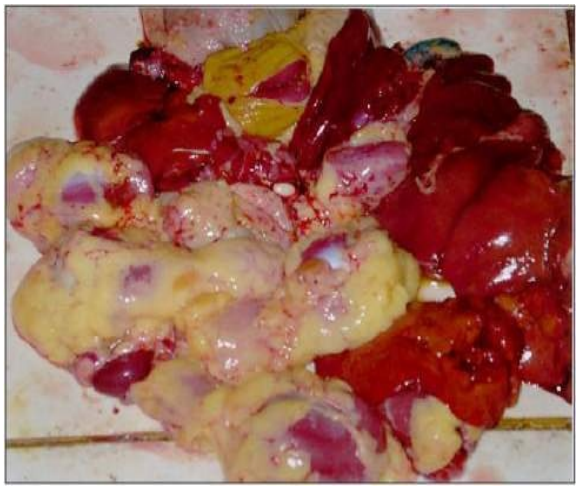
(Mortality) 2.83 %

(FCR) 1.71

(Feed) Factory feed without anti-biotic

(Average weight) 2.24 kg

(Other remarks) Bokashi was mixed with wood chips as bed and EMAS was applied everyday. EMAS was mixed with water at a ratio 1:100 and sprayed to the entire hut everyday until harvest. EM feed additive was mixed with the feed at 3 % and EM1 was mixed with drinking water at 1: 2,000~5,000. We observed that foul odor and flies reduced substantially.



Without EM

With EM

Upon harvest we went to a slaughterhouse which was operated by PPKJBS and above photos were taken. What we observed were:

(1) Once chicken body is open we usually feel foul odor but we did not feel so with EM chicken.
(2) Fat of EM chicken was half compared with ordinary chicken.
(3) When EM chicken was cooked we tasted as if it was a rural chicken.
(4) When soup was made with EM chicken it was very sweet without using sugar.
(5) We analysed cholesterol of EM chicken as well to find that cholesterol in EM chicken was only 1/3 compared with ordinary chickens.

Based on the good result PPKJBS agreed to use EM at all the huts at Smangar after our first trial.

We also sent the followings to Japan to check the level of subtle energy (Hado - 波動) by LFA (Life Field Analyzer). This technology can detect subtle energy and classify the level between - 20 ~ + 20.

- feather of ordinary chicken + 6
- feather of EM chicken + 19
- feed with anti-biotic + 7
- feed without anti-biotic + 9
- Bokashi feed + 20

The level of our healthy body is around +15 and if it shows only +2~+3, it means we may die anytime. The ordinary chicken with a level of only + 6 must be very sick. Our EM fermented Bokashi feed achieved full mark of + 20. EM chicken just

missed 1 point from the full mark and therefore this kind of food should have a medicinal value. On the other hand, if we keep eating any food with low level of subtle energy, we will definitely fall sick. As long as we eat only safe food without any chemicals we will not be sick anymore. Food will work as medicine !

Definitation	Standard Level	EM Method				
		Round 1	Round 2	Round 3	Round 4	Round 5
Hut no.	------	1	5	1	2	1
Research date	-----	6/3/03 ~ 15/4/03	26/5/03 ~ 5/7/03	4/8/03 ~ 13/9/03	16/11/03 ~ 30/11/03	22/12/03 ~ 30/1/04
Harvest age	41	41	41	40	46	42
DOC quantity (bird)	-----	4,950	5,500	5,500	5,000	5,000
Harvest quantity (bird)	-----	4,790	5,390	5,390	4,780	4,910
Dead quantity (bird)	-----	140	60	51	203	84
Remove quantity (bird)	-----	20	50	59	17	6
% Dead	**5%**	**2.83**	**1.09**	**0.93**	**4.06**	**1.68**
% Remove	-----	0.40	0.91	1.07	0.34	0.12
Mortality Rate (%Dead + %Remove)	5%	3.23	2.00	2.00	4.40	1.80
Total weight (kg)	-----	10,706.2	11,600.2	11,197.9	11,507.5	10,057.5
Average weight (kg)	2.00 kg	2.24	2.15	2.08	2.41	2.05
Feed quantity(kg)	-----	18,315	17,850	18,200	18,900	16,800
Bokashi quantity(kg)	-----	785	805	817	660	820
F.C.R(feed only)	**2.00**	**1.71**	**1.54**	**1.63**	**1.64**	**1.67**
F.C.R(feed+bokashi)	-----	1.78	1.61	1.70	1.70	1.75

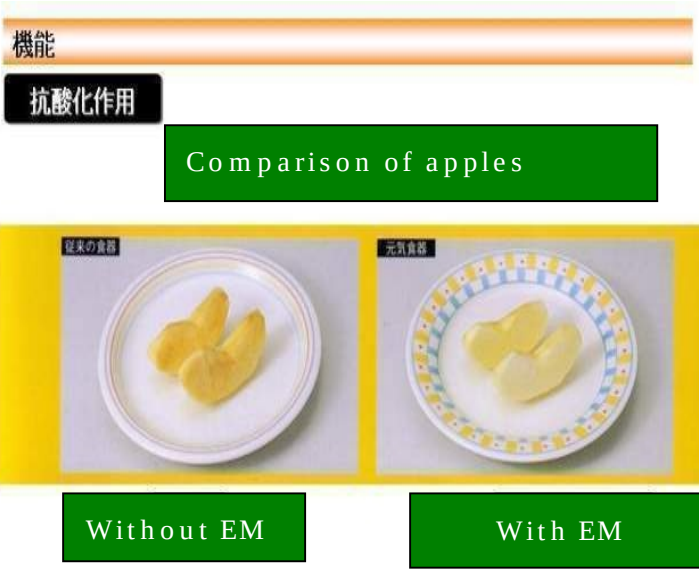
(Remark)

Among the above categories "Remove" means "Removal of some chickens which stopped growing". Some of the chickens we receive from the supplier showed very slow growth. Since they still keep eating the feed usually farm owners will remove those chickens from the huts. Therefore real "Mortality" should be only those who died. We gave bokashi feed to the chickens as feed additive and also mixed it with wood chips for fermentation of the bed. Therefore, in order for us to calculate real FCR we should add only bokashi as feed additive.

Below is other interesting observations of EM chicken farming.

- Usually mortality rate is 8~10 % and FCR is 1.9~2.0. This means EM chickens will eat less feed by about 15 %. Since feed occupies 70 % of the total cost we can save at least 10 % of the total operational cost.
- After the wood chips are fermented chickens always feel warm and therefore baby chicks do not need to gather together. They will spread everywhere inside the huts.

- We did not use any anti-biotic at all during our involvement and yet the results were better than conventional methods. We also believe that no vaccination is required but we did not insist it to them at that time.
- This farm is "open house" system but what we could achieve was comparable to "close system" or even better than that.
- In the case of the conventional chicken farming method usually more numbers of chickens die at the 2nd half stage. This is because chickens can not tolerate hot temperature and after the 2nd half stage they have more feathers and feel too hot. However we found that in the case of EM method, while total mortality reduced significantly, more chickens died at the 1st half stage compared with the 2nd half. Once chickens have grown big they should be much stronger and therefore they should not die so easily. Problems are the stress due to overcrowded condition and bad environment such as foul odor coupled with chemicals/drugs given with the feed. EM can improve their health condition much better and therefore they do not die so much even at the 2nd half of the stage.
- After harvest these chickens are to be brought to a slaughterhouse by a lorry and the journey takes 1.5 hours. According to the manager of the farm always 0.5 % of chickens died before on the way there. Interestingly, after EM was applied NO chicken died. This could be another big cost down. This is another evidence that EM chickens are really very tough.
- At the slaughterhouse after the work is over they washed the facility with water mixed with EM. A few months later they found no foul odor, less number of flies/mosquitoes/cockroaches and the stench from the sewage plant reduced significantly with much less sludge.
- Potential of large cost down was explained already but we believe much more profit can be enjoyed if we know how to sell EM chicken at higher price. Since we do not need to use any chemicals/drugs/anti-biotic and the taste becomes much better we should be able to sell them as a high value healthy products. We assume that people will be happy to pay even 30 % higher for such safe and healthy food.
- Production cost of agricultural products in Malaysia is much higher that neighboring countries like Indonesia, Thailand and China and therefore we should not fight against them in terms of price. We should fight in terms of safety and quality. Once we can produce such good quality of food we are able to make Malaysia a big food exporter in the world.
- Shelf life of organic food produced by EM can last much longer than before thanks to antioxidants produced by EM as shown in the photo below. This can help shop owners and exporter a lot. Moreover, eating healthy food will improve the health of the consumers. Government can reduce a lot of budget of medical expenses for the Malaysian citizens.



Double Deck System

Conventional System

This is a typical chicken hut. Chickens are kept at upper floor and the dung at the ground.

Proposed New System

Since EM can take care of the dung we can utilize the ground as the place to keep additional chickens. We do not need to remove the dung at the upper floor until harvest. We can increase the productivity with minimum cost.