Enagic Kangen Rice Project
Enagic還原米計畫

Chapter 1

Complete Documentation of Safe and Reliable "Electrolyzed Water Rice Farming"
安心安全的"電解水稻耕"全紀錄

井戸俊博さん
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During his birthday party held on March 17, CEO Hironari Ohshiro made an astonishing announcement, "This year, Enagic is embarking on a new beginning by introducing Kangen Water into the field of rice farming." From electrolyzed water produced by the Leveluk machines to Kangen Ukon, the company is planning to make further contributions in promoting a healthy lifestyle by implementing a safe and reliable method of rice farming. For this purpose alone, Enagic has developed an electrolyzed water generator specifically for agricultural use.

The company was motivated to branch out into the field of agriculture when acidic electrolyzed water was approved and specified as "a designated harmless agricultural chemical" by the Ministry of Agriculture, Forestry and Fisheries and the Ministry of the Environment in March of 2014. Designated harmless agricultural chemicals are defined as, "those that are, based on their raw materials, clearly unlikely to be harmful to crops, etc., humans, livestock, and aquatic animals and plants." This means that the Japanese government has recognized that acidic electrolyzed water has inhibiting effects on bacteria while remaining harmless to humans, animals and the environment. Following the approval, acidic electrolyzed water was officially given the name, hypochlorous acid water, by the government.

Ido Family in Charge of Rice Farming in Kagawa Prefecture

Over the 11 years since first applying for the approval of acidic electrolyzed water, 2,900 applications for other chemicals were submitted, of which only 5, including acidic electrolyzed water, were approved by the government. The Japanese Electrolyzed Water Association, which Enagic is the main member of, was finally able to secure an approval, after 11 long years of answering diligently and sincerely to continuous requests for data and documents made by both ministries.

In charge of applying Enagic's agricultural electrolyzed water generator to the cultivation of "Enagic Kangen Rice" are full-time rice farmers, Toshihiro, 73, and son, Tetsuya Ido, 48, of Miki Town, Kagawa in the Shikoku district. The father and son team has a wealth of experience in the area of rice farming. In the up-coming issues of E-Friends, we will continue to follow and report on every stage of the Enagic Kangen Rice production, from the disinfecting of seed rice, rice-planting and growth progress to the final stages of harvest, milling and marketing.

大城會長在自己3月17日的生日慶祝派對招呼曾發表，「今年要讓ENAGIC的還元水稻耕正式的開始。」從LEVELUK生成的電解水和還元薑黃以促進健康，到安心安全的稻耕，讓邁向健康的道路可以更上一層樓。就因為如此，ENAGIC開發了農業用的電解水生成器。

ENAGIC開始邁入農業領域的動機是，2014年3月農林水產省、環境省認可、指定電解水為「特定農藥」。所謂的「特定農藥」就是「以原料為基準，目前所知對人畜甚至水產動植物沒有危害的東西，並獲得農林水產大臣、環境大臣來指定。」

也就是說，酸性電解水不僅對包含人類和動物等，所有環境沒有危害，並且在對細菌的防治效果上，獲得了國家的認同。在役所也把酸性電解水，命名為「電解次亞鹽素酸水」。

香川縣的井戶父子來負責稻作

從申請已經過了11年的歲月，在2,900種類的申請物質中到現在，被認可的物質包含酸性電解水在內，只有5種。以ENAGIC為中心的「一般社團法人日本電解水協會」從申請到認可，花費了11年的時間，對於農林水產省、環境省提出的各式各樣的數據要求，這邊也是抱持著誠心且秉持著毅力，最後終於獲得認可。

使用ENAGIC所開發的農業用電解水生成裝置，來栽培「ENAGIC還原米」的，是四國香川縣三木町的米作專業農家-井戶俊博先生(73歲)和兒子的哲也先生(48歲)，2人的稻作經驗都非常的豐富。之後會在本雜誌上，報導「ENAGIC還原米」從水稻種子的消毒開始、插秧、稻子的生長狀況、到最後的收成、碾米、開始販賣的全部流程。

Enagic Kangen Rice Project
Enagic還原米計畫

Chapter 2

Kangen Rice Farming Begins with Disinfecting Seeds in Acidic Electrolyzed Water
稻耕的開始，是用酸性電解水洗淨稻米種子！

With the end of the cherry blossom season, planting time for the "Enagic Kangen Rice" has arrived in the plains of Sanuki in Shikoku.

From this month's issue of E-Friends and on, we will be reporting on the progress of the Enagic Kangen Rice farming using electrolyzed water, which will be conducted by Ido Nousan, nousan meaning "agriculture." We will be following the steps of rice seed disinfecting, germination, growth and transplanting.

The first set of seedlings was planted on April 10th. This will be followed by 9 more sets over the course of 3 months, ending in early July, with short intervals in between.

In early August, the month following the completion of the transplanting, the first set of crops will be harvested and readied for purchase in September, as the safe and reliable Enagic Kangen Rice – Sanuki Koshi Hikari.

Ido Nousan representative, Toshihiro Ido, used acidic electrolyzed water through the entire process of disinfecting, from the time they are just rice seeds until they develop into seedlings. Compared to rice plants that were disinfected with agricultural chemicals (germicides, pesticides), those treated with strong electrolyzed water appear to grow much more steadily and spread roots more firmly, a promising start that will help the growth of each crop after planting.

In the next chapter of the series, we will be reporting on the observation of the planted seedlings and their growth.

在櫻花飄落的季節，也是四國讚岐平原迎來種植「ENAGIC還原米」的季節。從本月份的期刊開始，將會介紹井戶農產(香川縣)實際使用電解水種植「ENAGIC還原米」的過程，具體來說就是稻作種子的消毒、苗的發芽、生長、插秧這樣的階段。

實際上第一次的插秧，已經在4月10日實施了。從現在到7月初為止，分成10次，且中間間隔時間來插秧。在所有的插秧作業完成之後的隔月下旬，收成第一次插秧的稻子，9月就有安心安全又好吃的「讚岐越光ENAGIC還原米」送到各位的餐桌上。

井戶農產的負責人井戶俊博表示，從稻作種子的消毒開始，到插秧用的苗都是用酸性電解水消毒。和噴灑農藥的消毒方式(殺菌劑、殺蟲劑)相比生長和根部的生長都比較好，也很期待插秧之後的生長狀況。

下期的期刊，將會報告插秧之後的生長狀況。

The preparation process of Kangen rice planting 到插秧為止的作業工程

Rice seeds are disinfected in a tank filled with acidic electrolyzed water.
在水槽儲存酸性電解水，消毒稻作種子。

To speed up the germination process, rice seeds are kept in a heated room called *muro*.
被稱作MURO的暖房，用來促進稻作種子發芽。

Seedlings are again treated with acidic electrolyzed water after a couple centimeters of growth.
生長約幾公分後，再度使用酸性電解水消毒。

Rice seedlings are nurtured after being moved from a *muro* to a greenhouse.
從MURO移到溫室，繼續讓稻苗生長。

Transplanting of the seedlings grown in the greenhouse (first planting on April 10).
從溫室移出，開始插秧。(4月10日第一次的插秧作業。)

Leveluk Super 501 at Full Throttle! Seedlings Steadily Growing in "Electrolyzed Water Farming"

Leveluk Super501完全運轉！順利的栽培「還原水耕作」的稻穗

Super 501 installed in the workshop next to the water storage tank.
在設有儲水槽的工作間的SUPER501

Conducted by Ido Agriculture, transplantation of the "Electrolyzed Water Farming" in Kanagawa Prefecture was in full swing in the month of May. In rice farming, one of the most important processes is the rice seed disinfection. For the cleaning and disinfecting of the rice seeds, the Leveluk SD Super 501 was kicked into top gear as it generated acidic electrolyzed water, a "Designated Harmless Agricultural Chemical" approved by the Ministry of Agriculture, Forestry and Fisheries and Ministry of the Environment for its sterilizing power and its harmless effects on the human body and the environment.

Although the height of transplanting season is in May, Ido Agriculture began transplanting on April 10 (nearly a month earlier than the rice paddy using agricultural chemicals), and they will continue until the beginning of July. The father and son team, Toshihiro and Tetsuya Ido, rushed about the wide paddy fields working hard at transplantation.

To find out about the condition of the first set of seedlings after 40 days, I visited the site in Late May. All of the seedlings in the paddy reserved for regular observation (Paddy A), grew to around 30 cm tall. Since these seedlings were raised to around 12 cm in a greenhouse seedbed before transplanting, it would mean that these seedlings grew 20 cm in approximately 40 days. It seems they are growing steadily and without any issues.

In the other farmer's paddy, which is using agricultural chemicals (Paddy B), the seedlings transplanted during the Japanese holidays in early May were also observed to be growing taller. However, it is the distance between each seedling which is particularly interesting. It was obvious that Paddy A was much more sparsely planted than Paddy B. This indicates that more were able to be planted in Paddy B, because the seedlings were placed closer together. I was told that, although it is too early to tell now, as the plants grow thicker, the difference in the "fullness" of the 2 paddies will become evident. Also, the widely spaced and more sparsely planted Paddy A will grow to be more abundant than the closely spaced Paddy B. Unlike rice seeds disinfected with agrochemicals, there was no damage found in the rice seeds disinfected with electrolyzed water. Because of this, the seedlings will be able to grow into strong rice plants. We shall see the proof of this claim in 2 month's time.

香川縣的井戶農產進行的「電解水稻耕」也在五月的時候，進入了插秧的階段，稻子茂盛的樣子，也呈現了出來。在這之前的使用酸性電解水的稻作種子的洗淨、消毒，都是由LEVELUK SUPER501來生產的。

和「使用農藥的水田」相比，早了將近一個月，從4月10號開始，到7月初為止，順利的進行插秧的作業，不過最茂盛的果然還是5月的時候。井戶農產的井戶俊博先生和井戶哲也先生父子在廣大的稻田裡來回努力的插秧。

現在第一批插秧的稻子，在經過40天的成長之後，變成什麼樣子了呢?在5月底去確認了一下。重新在定點觀測的水田(以下稱A田)觀測後，稻子大約生長到30公分左右。稻苗事先在溫室裡栽培到12公分，在40天裡生長了將近20公分，生長狀況非常的順利。

5月連休時插秧，其他農家使用農藥的稻田(假設為B田)的稻穗也成長了不少，但是其稻子的間隔有很明顯的差異。A田稻子和稻子的間隔，較B田寬。也就是說，B田的稻子間隔，比A田窄(稻子的株數較多)。從外觀目前還不容易分辨，但是稻子將會比較茂盛，看起來也將比較濃密。間隔較寬的A田的稻穗，將會比間隔較窄的B田，看來更為「豐盛」。兩個月之後，我們將會證明此事。

The "Enagic Kangen Rice Field" sign for the site of Paddy A created for regular observation.
標記著Enagic還原米農田的測定用A田

Rice plants growing steadily in Paddy A.
順利生長的A田稻株

A large sign put up on the work shed to appeal to neighboring farmers.
作業小屋的看板, 吸引附近農家

Chapter 4

Comparing Paddies Using Agrochemicals and Electrolyzed Water

使用農藥的稻田和活用電解水的稻田比較看看

The Leveluk Super 501 unit that generates acidic electrolyzed water for disinfecting rice seeds
Leveluk Super501產生的酸性電解水用於消毒稻米種子

The Enagic Kangen Rice Project series, which started with the April issue, is now in its 4th chapter. Up until now, we have been reporting on the progress of the "Electrolyzed Water Rice Farming" made by Ido Agriculture in Kagawa Prefecture, and in this month's issue we report on the condition of the rice paddies in early June.

First, let's go over the basics of the electrolyzed water rice farming. With the approval of acidic electrolyzed water as a "designated harmless agricultural chemical" by the Ministry of Agriculture, Forestry and Fisheries and the Ministry of the Environment in March of 2014, Enagic began its work in the field of agriculture. The fact that acidic electrolyzed water was proven to be harmless to humans, livestock, aquatic animals and plants and even to the environment, while at the same time being a deterrent against bacteria, led to the actualization of electrolyzed water rice farming.

Before transplantation, the rice plants undergo a series of disinfecting processes throughout the stages from seeds to seedlings, only using acidic electrolyzed water generated by the Leveluk unit and without using any agricultural chemicals. Since the start of the farming on April 10, these processes have been implemented before each transplanting. The first set of plants have now grown to be as tall as 50 cm. When comparing Paddy A (using electrolyzed water) to Paddy B (using agrochemicals), both transplanted in early May, it is obvious to see, even after a month's time, that Paddy A is low in density and is sparsely planted. This will change in time as the rice in Paddy A will grow thickly, sufficiently filling out the paddy. It can be said that this is the biggest advantage of rice farming with electrolyzed water.

4月份月刊開始的ENAGIC還原米計畫，到7月份已經迎來了第4次的連載。在這段時間，從4月開始，每個月一次去香川縣的井戶農產，為「電解水稻作」取材，這次向各位報告6月初稻田的狀況。

在這之前，重新先向各位簡單的說明電解水稻作。2014年3月由農林水產省和環境省，指定、認可酸性電解水為「指定無害農藥」，ENAGIC進入了農業領域。酸性電解水對人和水生動植物還有環境沒有危害，更可以進一步的消毒對抗細菌，被認定為具有農藥效果，而具體的進行電解水稻作的計畫。

從稻種的到插秧的苗的過程都不使用農藥，而只使用LEVELUK生成的酸性電解水來消毒，4月10日第一批插秧以來，重複以上的過程。現在第一批的稻子已經生成到大約50公分了。另外，同是5月連休時插秧的電解水稻田(A田)和噴灑農藥的稻田(B田)比較看看，一個月之後，A田比B田明顯的密度比較低(不茂盛)雖然是如此，但是A田之後會慢慢地越長越茂盛。這正是電解水稻作的一個特徵。

Rice transplanted in April has grown nearly 50 cm tall.
4月份插秧的稻穗生長了近50公分

Paddy A (left) is sparsely planted compared to Paddy B, in which agrochemicals are used(both transplanted in May).
A田(左)和噴灑農藥的B田相比，稻穗的密度較低(兩邊都是5月連休時插秧的稻子)

Chapter 5

Kangen Rice Steadily Growing in Chemical-free Paddy Full of Weeds

在不使用農藥，長滿雜草的稻田裡，生長茂盛的還原米

The paddies of Kangen Rice cultivated by Ido Agriculture are located on the outskirts of Takamatsu City, Kagawa. Although this year's increased rainfall and lack of sun caused some unease among the local farmers, the high temperatures and humidity brought on by the end of the rainy season spurred on the growth of the rice plants, assisting in making up the leeway. This climate change not only boosted the growth of the rice plants but also the weeds in the paddies.

Chemical-free Paddy A (left) is abundant with weeds, while no weeds are found in Paddy B.
沒有使用農藥的關係雜草(前面的部分)茂盛的生長著的A田，和完全沒有雜草的B田

When observing Paddy B, in which agrochemicals are being used, weeds are nowhere to be found. On the other hand, Paddy A, using only electrolyzed water is abundant with weeds, as it does not contain any types of chemicals (weed killer). This can be considered more proof of the safety of electrolyzed water farming.

Also during this visit, I decided to pay closer attention to the stems and roots of the plants in each paddy. Around twenty stems were collected from Paddy A, while forty or so stems were collected from Paddy B, presenting a major difference between the paddies. Sparsely planted Paddy A does not require the use of chemicals, as its well-ventilated environment helps to control the spread of harmful insects. A further look into both paddies shows that the number of roots is greater in Paddy A than in Paddy B. Much more effort was needed to pull out the rice plants from Paddy A. Both facts provide evidence that the plants in Paddy A are firmly rooted, creating a strong foundation for the plants' growth.

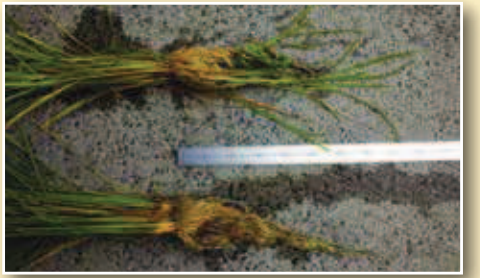
When comparing the height of the plants in the paddies, the plants in Paddy B were found to be slightly taller. The growth of the plants in Paddy A were intentionally suppressed by suspending the irrigation process and draining out the paddy for a selected period of time in order to reduce damage caused by wind. If everything goes according to plan, the first harvest arrived in mid-August. The days when safe and worry-free Kangen Rice can be enjoyed at the dinner table is fast-approaching.

正在種植還原米的井戶農產的水田，在香川縣松高市的近郊。今年下雨天比較多，日照時間較短，成為農家擔心的一個點。但是梅雨季來臨，強烈的日照和高溫多雨的天氣終於到來，就好像要把落後的進度補回來一樣，稻穗的生長速度變得非常快。但是也不是只有好事發生，稻田裡雜草的生長速度，完全不輸給稻子。

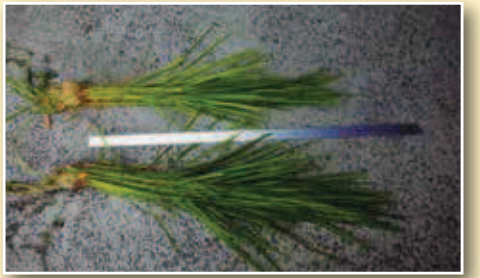
但是一般水田(B田)完全看不到雜草的影子，只有稻子漂亮的生長在水田裡。另一方面，電解水稻作的水田(A田)因為沒有使用農藥(除草劑)，田裡的雜草相當得茂盛。這也可以算是一種安全性的證明吧！

這次的取材，特別注目在「莖」和「根」上面。檢查莖的部分，這次從A田取得的樣本大約有20根的莖，B田取得的樣本大約有40根左右的莖，有非常大的差別。也就是說因為A田沒有那樣的茂密，所以通風比較好，可以抑制蟲的生長，不須使用農藥。再來檢查根的部分，A田比B田有更多的根，根是生長的基礎，這正是根好好的生長的證據。另外拔除A田的稻子比拔除B田的稻子，需要更多的力氣。

另一方面，B田稻子的高度稍微高一點，因為A田在一定的時間沒有引水進去，就算乾涸，抑制了稻子的生長，但是這樣也減少了風害。依照目前的狀況，A田地一次的收割大約會落在8月中旬。安心安全的還原米就算要上桌了。



Weeds are entangled in the roots from Paddy A (above), while roots from Paddy B are free of weeds.
A田稻子的根部(上)，纏繞著雜草，下面B田稻子根部沒有雜草。



25 stems were collected from Paddy A (above), all short in height, while the 41 stems collected from Paddy B were taller.
上面A田稻子的莖較短，約25根。B田稻子的莖較長，約41根。

Chapter 6

"Kangen Rice" Growing Tall Even under Abnormal Climate

在異常天候下依然生長著稻穗的『還原米』

Although it may almost seem a bit trite to say, we are experiencing abnormal weather lately. Up until the end of July, fine weather continued on with a blazing sun and rising temperatures. After the Bon Holidays (July13~16), however, the weather became unstable, as sunshine was rarely seen and long spells of rain, severe storms and typhoons hit the islands of Japan. Thanks to clear skies preceding the Bon Holidays, we had been reaping slightly more than the past years' harvests, but now the situation has turned cloudy.

Due to the unusually inclement weather, the harvest has been running behind schedule. When I visited the farms in Kagawa Prefecture at the end of September, the rice plants in most of the paddies still remained green and had yet to turn golden. This was also the case for rice paddies owned by Ido Agriculture, both in the Kangen Rice paddies, which use electrolyzed water, and in the normal rice paddies using agricultural chemicals.

This is not to say that none of the crops were able to be harvested. A portion of the normal rice paddies has already been harvested and when compared to the crops from the Kangen Rice plants which were harvested in August, there does not seem to be any differences in size. The biggest difference was that the process of weeding, which was indispensable during the harvesting of the Kangen Rice, reported in last month's issue, was unnecessary in the harvest of the normal paddies. This time-and-effort-consuming task can be eliminated as there are no weeds found in normal rice paddies. However, what should not be ignored is the fact that this "efficiency" is achieved only by taking the great risk of using agricultural chemicals.

I would also like to add that during this visit, I was amazed to discover the hidden powers of rice plants. From the stubbles in one of Ido Agriculture's paddies harvested in August, new stalks of rice plants were growing tall, producing a second crop in the same paddy. As double cropping is not commonly practiced in Japan, I was surprised to witness the amazing potential the rice plants possessed. In next month's issue, I will report on the comparison between the last stages of harvesting the rice plants farmed using electrolyzed water and the ones using agrochemicals.

Kangen rice plants grow among weeds and even under abnormal weather.
被雜草包圍，在異常天候下也伸展的稻穗的還原米

Rice plants grow without weeds in the normal rice paddy.
完全看不見雜草的『一般田地』的稻穗

Weeding is omitted in the harvesting of a normal rice paddy.
不須進行除雜草的『一般田地』，進行收割的景象

Kangen rice growing from stubble, after only a month and a half since the first harvest.
在收割之後，只花了一個半月又從斷枝的部分，長出稻穗的還原米

目前正處於氣候異常的狀況。7月中，日照當頭，氣溫上升，天氣非常的好，但是過了盂蘭盆節之後，天氣變得越來越奇怪了。持續的長時雨、集中豪雨，颱風使的日照時間縮短。今年作物的生長在盂蘭盆之前都是與往年相同判定良好，異常天氣如果持續下去的話恐生變數。

因為異常氣候，收割的時間也往後延。在9月下旬去現場取材時，幾乎所有的田地都還是青色的，還沒有轉變為黃澄澄的顏色，井戶農產用還原水種植中的「還原米」也是，使用農藥的「一般田地」也是一樣的狀況。

雖然是如此，但是也不是完全沒有進行收割的作業。「一般田地」有一部分的農地，已經收割了，那些稻子的尺寸，和8月份收割的『還原米』沒有明顯的差別。不過有一點有明顯差別之處。8月的「還原米」的收割，在9月號刊介紹的時候，有提到還原米收割的時候，必須要「除雜草」，但是「一般田地」完全不需要這進行除雜草。一般田地並不會長雜草，因此這樣耗時間的作業完全可以省略。但是使用農藥是需要背負一定的風險的，在『效率』的背後，這件事不可忘記。

當作是雜談，這次要跟大家說的是「稻子」被隱藏起來的能力。8月份進行收割的井戶農產的其中一畝田，從斷枝生長出來新的枝枒，並且長出了稻穗。在日本，基本上不進行二期稻作的，但是稻子的潛力真的是令人驚訝。下回的月刊，將會進入最終的收割階段，希望能比較電解水稻作和一般稻作的稻穗的差別。

Increasing Safety and Reliability in Agriculture and Fisheries Industry with Wider Use of Electrolyzed Water

電解水的多用途，讓漁農業的安心安全更上一層樓

電解水使用の稲作開始
農業用電解水生成装置を開発
ecoと健康で差別化を図る

Nouson News (Oct. 3 issue) featuring Enagic in the fields of agriculture and fisheries.
Enagic進軍農漁業領域，在周刊【農村新聞】以特集的方式報導。(圖)

In Japan, autumn is said to be the "season of harvest" and in fact, is the harvesting time for many kinds of grains, fruits and vegetables. Rice is especially important in Japan, and the word housaku, which only has the literal translation of "good harvest" in English, automatically indicates the good harvest of rice in Japanese. As we have been reporting in the Enagic Kangen Rice Project series, in Kagawa Prefecture, the rice farming conducted by Ido Agriculture using electrolyzed water generated from the Leveluk is well under way. In this issue of E-Friends (see P.8), we report on the proceedings of harvest just before its final stage.

Just recently, a specialized journal in the field of agriculture, Nouson News (Farming Village News), devoted a large portion of page space in its October 3 issue to report on Enagic's electrolyzed water rice farming. In an interview, CEO Hironari Ohshiro was asked about his reasons for entering the field of agriculture. The CEO first referred to the fact that acidic electrolyzed water received a government approval as a "Designated Harmless Agricultural Chemical," and said, "With the use of electrolyzed water expanding ever-further, I hope that the synergistic effect of electrolyzed water in farming and in general use can provide a positive impact on the sales of the Leveluk," expressing his high hopes for the project.

The journal also touched on the ukon and mango farms and the livestock facility in Sedake, Nago, which are owned by Enagic. The three facilities all use electrolyzed water in their production, from the use of Kangen Water as drinking water for cattle to strong acidic electrolyzed water for the disinfection of the ukon roots, indicating Enagic's full-fledged expansion into the agriculture and livestock industries. Enagic is also involved in the culturing of Japanese tiger prawn in Uruma City. Kangen Water is mixed with the food for the prawns, and to assure product safety, the prawns are immersed in a mixture of seawater and Kangen Water just before delivery.

The expansion of the business into the different fields of agriculture, fisheries and livestock not only helps to broaden the use of electrolyzed water, but also assists in providing safe and worry-free products.

在日本，秋天是「成熟的季節」，實際上各式各樣的穀物、水果、蔬菜的收穫季節。其中對日本人來說，米是一個很特別的存在，說到「豐收」就會自動的想到「米的收穫很好」。在本雜誌的連載新聞『Enagic還原米計畫』中，如每回所刊的報導一樣，使用LeveLuk所生產的電解水來種植的香川縣井戶農產正在進行著「還原水稻作」。這個月的報導(參閱8P)，這個計畫正準備進入最後的收割階段了。

這時農業領域的專門報紙『農業新聞』(10月3日刊)以3分之1的版面，介紹了電解水稻作。在大城會長的專訪中，記者詢問進入農業領域的原因。會長表示，理由是因為酸性電解水被認可為特定農藥，「在電解水的用途增加之後，在農業、飲食上的相乘效果，希望能幫助LeveLuk的銷售。」話語中透漏著期待。

在同一版面上，介紹到薑黃和芒果到牛的養殖場。不管是哪個，都是在沖繩縣名護市瀨嵩運作中的Enagic設施，並且使用電解水以進軍農產畜牧業領域的決心。具體來說，就是讓牛喝還原水，薑黃的塊根使用強酸性電解水消毒這樣的情況。不只是如此，在宇流麻市也進行著蝦子的養殖。在這裡，使用還原水混入飼料給蝦子吃，在出貨的時候，使用一半還原水和一半海水混合，為了增加安全性而多下了一到功夫。

就這樣，進軍農漁畜牧業，不只是因為電解水的使用用途更多了而已，更因為要找到確保食品的安心安全方法。

Enagic's prawn culture farm in Uruma City will make its first delivery in October.
10月開始出貨，位於宇流麻市的Enagic蝦子養殖場

The livestock facility (left) and ukon field in Sedake, Nago City.
名護市瀨嵩的畜產設施(左)及薑黃田

Chapter 8

Zero Detection of 250 Agrochemicals! Electrolyzed Water Rice Farming Pioneers Field of Agroecology

農藥檢查250項目，全部為0！ 未來“生態農業”的先驅，電解水稻作

The final stage of harvesting has finally arrived in the rice fields of Ido Agriculture. The Kangen paddy using electrolyzed water (photo ①) and normal paddy using agochemicals (photo ②) were compared just before harvesting. When viewing the photos below, the difference is quite apparent, as the “weeds” which are abundant in paddy ① (tall plants called millets) are not found in paddy ②. No weeds are able to grow in the normal paddy, as large amounts of pesticides and chemical fertilizers are used. The Kangen paddy, filled with weeds, proves how safe and reliable electrolyzed rice farming is.

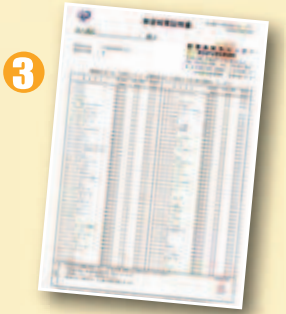
The safety of electrolyzed rice farming has also been proven by science. The rice harvested in September underwent a series of testing at the Environmental Research Center (Ibaraki Prefecture) and has received an all clear in 250 items of agricultural chemicals, including DDT, as they were “undetected” during testing (photo ③). This electrolyzed water rice farming that is free of pesticide residue, is an advanced farming system that is in line with the future standard of agroecology.

After the harvest, Ido Agriculture uses a special machine to hull the rice, separating it into brown rice and husk. When it has been screened for quality and is rid of waste and other foreign substances, it is put through a drying process, reducing the moisture level to approximately fifteen percent. Then, the brown rice is packed in one-ton bags and is sent to the milling and packaging company.

The milling and packaging company, Kuriya (Kagawa Prefecture), is a long-established company that has been in business for 134 years. The Kangen Rice is milled, screened, weighed, packaged and vacuum-sealed there before reaching the consumers. In fact, Kuriya is so thorough in their sanitation management that they also use electrolyzed water in the process of sanitizing and disinfecting the facility (photo ④). The Kangen Rice created by the “electrolyzed water trio” of Ido Agriculture (production), Kuriya (milling and packaging) and the maker of electrolyzed water generators, Enagic (sales), will be available for sale around the world starting this year.

Most of the weeds found in the Kangen paddy are millets.
在「還原田」裡茂盛生長的，大多是比較高的小米

No weeds can be found in the normal paddy using agrochemicals.
使用農藥，完全看不到雜草的「一般田」



Kuriya's packaging machine is disinfected with electrolyzed water.
用電解水消毒的Kuriya的包裝機械

A test result of “undetected” fills up the report made by the Environmental Research Center.
『環境研究中心』的檢查結果為農藥「無檢出」

終於進入最後收成的階段。在收割之前，一般的農田和井戶農產的電解水稻作的農田比較看看。上面圖片的①是還原農田，②是一般農田。可以明顯地看到，圖①有但圖②沒有的「雜草」(比較高的植物為「小米」)，非常茂盛的生長著。一般農田使用了大量的農藥、化學肥料，自然而然的雜草無法生存。還原田正好相反。雜草茂盛的還原田的電解水稻作，正是個安心安全的證明。

另一個安全性的證明，正是科學。9月份收割下來的還原米，送去『環境研究中心』(茨城縣)檢查，包括DDT等250項農藥檢測，結果都沒有檢測出農藥來，圖③沒有農藥殘留的電解水稻作，正是未來「生態農業」的先驅。

收成的還原米，首先用井戶農產的機械進行所謂把稻殼去除的礱穀過程，優良米和不良米的篩選，雜質異物的去除之後，在乾燥使還原米水分在15%左右，再把胚芽米用一噸裝的袋子裝起來，送到精米、包裝業者那邊去。

米廠的Kuriya(公司)(香川縣)是創業134年的老舖。在這裡進行還原米的磨米、篩選、計量、填充、真空包裝，之後就是送到我們手中的商品。其實Kuriya也是使用電解水，徹底消毒、殺菌機械實施衛生管理的公司(圖片④)。生產者(井戶農產)、精米和包裝業者(Kuriya)還有電解水生成器製造業者的Enagic。由「電解水三重奏」所以製造出來的還原米，今年開始將在世界上販售。