

I Learn Dialectics and Grow Bigger Crops

by YAO SHIH-CHANG

Leader of the Unity Brigade of the Nanwang People's Commune, Penglai County, Shantung Province

I AM a peasant who only had four years of schooling, but in the last few years, thanks to the guidance of our local Party organization, I too have taken up the study of Chairman Mao's works. This study, especially of the philosophical writings such as *On Practice* and *On Contradiction*, has opened my eyes to the fact that we working people should and can study Chairman Mao's works; and, furthermore, we are quite capable of applying what we have learnt—and to good effect too.

I have been making various kinds of scientific experiments on our farm ever since 1953. I had some successes, but I also had quite a few hard lessons. The one that hit me hardest was in the spring of 1958. That was a dry season and when the time came to sow the peanuts we were faced by a big problem: How to ensure full sprouting of the seedlings? I had heard that another village in our commune was using a new method for planting; what they called "planting in deep furrows with a thin covering layer of soil." This was said to be suitable for dry weather planting. Without giving it sufficiently careful study, I gave the word that our brigade should popularize this method.

The fact was that in our brigade we grew peanuts on poor land and for this reason, planted them rather closely in rows 0.4 metres apart. So it came about that

in ploughing a deep furrow for one row, we were actually throwing soil on to the row just sown. The result was we were "planting in deep furrows with a thick covering layer of soil." That year we suffered a big drop in peanut yields. This made everybody in our brigade unhappy. Some even charged: "That Yao Shih-chang was responsible for our poverty."

Science Is Honest, Solid Knowledge

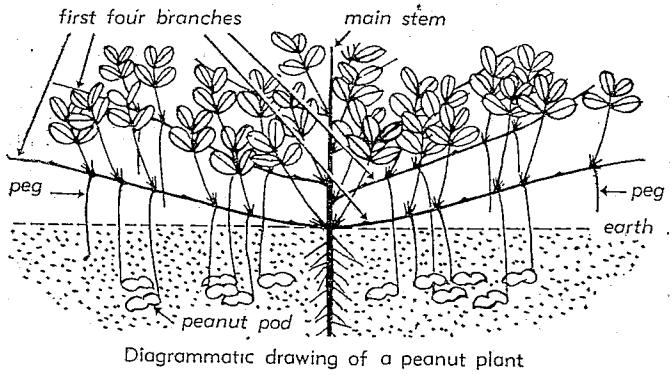
Was this criticism justified? I had to acknowledge the truth of it, especially after seriously considering Chairman Mao's words. In his article *Reform Our Study*, he writes: "Marxism-Leninism is a science, and science means honest, solid knowledge; there is no room for playing tricks. Let us, then, be honest." I pondered this passage a long time and finally came to see my problem. That new method was invented by other people. I myself had no clear idea of its principles, nor had I made it part of my own experience. Thinking I had hit on a short cut, I right away gave the order to popularize this method in our brigade. Was this an "honest" attitude? Wasn't it "playing tricks"? Since I was responsible for the decrease in production, others of course had the right to blame me. From now on, you had better do as Chairman Mao advises, I told myself, and "Be honest!"

But how? Chairman Mao has said: "To take such an attitude is to seek truth from facts. 'Facts' are all the things that exist objectively, 'truth' means their internal relations, that is, the laws governing them, and 'to seek' means to study." I underlined this passage several times lest I forget it.

I studied further and figured out that if my efforts were to bear fruit, besides having the right attitude, I would have to follow two other pieces of advice. For one thing, Chairman Mao said: "Whoever wants to know a thing has no way of doing so except by coming into contact with it, that is, by living (practising) in its environment." And "If you want knowledge, you must take part in the practice of changing reality. If you want to know the taste of a pear, you must change the pear by eating it yourself." In my case, to master the techniques of growing peanuts, I would have to come into contact with peanuts, live in their environment, change them and learn to know them inside out.

The second piece of advice was: "This dialectical world outlook teaches us primarily how to observe and analyse the movement of opposites in different things and, on the basis of such analysis, to indicate the methods for resolving contradictions." In my case, I had to know how to observe and analyse the problems arising during the process of growth of peanuts, and through practice, try to discover the laws governing their growth and seek solutions for those problems.

Having arrived at these conclusions, I went into action right away. I picked out two peanut plants for special study. Besides daily inspections, I went to see them three times each night. I kept a detailed record of their growth: I put a label on each flower complete with information regarding the time of flowering, the developing of the peg from the base of the withered flower, the thrusting of the peg into the ground and the developing of the pod of peanuts from the tip of the peg. I also noted down the number of pods on a stalk. I worked in this way for more than 50 days and nights, rain or shine, without interruption. Sometimes, I even slept by the side of these two plants.



Diagrammatic drawing of a peanut plant

From this study and observation, I found that the first two pairs of branches, that is, those which grew first after the emergence of the main stem, bore the greatest number of pods. These were the earliest to develop, flower, and bear fruit, and their pods were substantial and full. I found that the development and

growth of these four branches had a very direct and decisive bearing on the yield. Our failure in 1958 resulted largely from the extra soil thrown over the seeds in the deep furrows. Those thick layers of soil retarded development of these four branches and even caused some to wither.

Remembering Chairman Mao's words "Discover the truth through practice, and again through practice verify and develop the truth," the next year I conducted a roughly similar experiment to verify the laws I had discovered. That experiment not only proved my findings to be true, but also gave me the added knowledge that the main stem did not bear any fruit and that its too swift or flourishing growth would affect the yield adversely.

Research Means Solving Contradictions

After having mastered these laws governing the growth of peanuts, the next thing was to apply this knowledge to production. I learnt from *On Contradiction* that contradiction exists in everything and at all times. So if we wish to make good use of our knowledge of the laws of peanut cultivation we must analyse and resolve the contradictions which arise in the raising of peanuts.

Take seed-time for instance. If the seeds are sown too late, yields suffer because of the shortened period of growth. If sown too early, yields likewise suffer, because the soil temperature is not high enough to ensure good sprouting and emergence of the seedlings. Here lies a contradiction.

After making a careful analysis of local conditions and the laws of the growth of peanuts, we found out how to resolve this contradiction. The key is to seize the appropriate time to plant by shock work, that is, in the period May 5-18 when soil temperatures remain stable around 14-15°C.

With this contradiction solved, another one came to the fore, that between sparse and close planting. If the planting is too dense, the plants will not grow well and this causes a drop in yields and total output; when the plants are widely spaced, each plant, individually, bears a larger number of pods, but since there are fewer plants, total output is also low. In the past we thought that the best thing would be to plant closely on fertile soil and sparsely on poor soil. But practice showed that on fertile soil there is such a thriving growth of foliage that sunshine is kept from the ground and this makes it difficult for the peanuts underground to grow well. On the other hand, sparse planting on poor soil helped each individual plant to produce more nuts, but taking the plot as a whole, the total output was low. Repeated experiments have led us to the conclusion that the key to resolving this contradiction lies in proper handling of the relationship between the individual plant and the community of plants. We solved this contradiction by planting 9,000 clusters on each mu of poor sandy land, 5,000 to 6,000 on fertile soil and 7,000 on medium quality soil.

... My attention was then drawn to another contradiction. My investigations showed that the first pair of branches generally produced 60 to 70 per cent of the pods on a single plant. Therefore, we shall increase the yield if we can make these two stalks grow and develop well, flower and bear fruit as early as might be. Shallow planting helps early flowering but this cannot guarantee luxuriant sprouting of the seedlings; on the other hand, deep planting helps the seeds to grow into strong seedlings but retards growth of the branches. Here lies the contradiction.

After three years of experimentation, we evolved a new method of cultivation: we planted deep and then at an early stage removed the earth around the seedlings to facilitate early growth of the first two branches. Doing this has two other positive results. It prevents the main stem from shooting up too quickly and removes all weeds from around the base of the seedling. This method brought about 10-23 per cent increases in our peanut yield.

At present, I am conducting a new experiment to solve the contradiction between the main stem and branches. I found that when the main stem grows too quickly, this impairs the growth of the other stalks. Nipping off the tip of the main stem at a certain stage may help, but it is still too early as yet to draw any fast conclusions. But since we have discovered this contradiction, I am sure we can solve it one way or another.

There is no end to contradiction; nor is there any end to our scientific research. My own experience has brought me to this conclusion. I will continue with my study of Chairman Mao's works as well as my scientific experiments. I am determined to get to the bottom of one "secret" after another in our productive work, to unravel one contradiction after another and gain one success after another in my scientific experiments for the cause of socialism.

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