

From: Tadeusz Niesiobedzki <tadeusz@indoor-group.com.pl>
To: "Norman Uphoff" <ntu1@cornell.edu>
Subject: SRI
Date: Fri, 3 Dec 2004 20:44:10 +0100

Dear Sir,

Last week I read a lot of your articles about SRI from the web with great interest and appreciation for your engagement into this problem. I am also experimenting with low seed rates of wheat on my farm located in the northern part of Poland, with some good results. This autumn I drilled one field with 30 kg of wheat/ha, and now it looks too dense, as the average tillering is now 30 tillers/plant with 40 plants/sq.m.

It is shocking that with SRI you can get such high yields without N fertilization. Looking at the possible reasons of that phenomenon, I would like to draw your attention to the role of weeding operation. It may be that this cultivation aerates the soil and affects the supply abundance of oxygen and nitrogen not only to roots, but -- what may be more important -- to microflora in the upper soil layer. [note: we have already been considering this effect]

On my farm I am producing a lot of compost. It is common, that after the aeration the temperature in the compost rises rapidly, indicating flourishing activity of bacteria. What is needed is moisture, aeration and organic matter. The same process may happen after weeding with SRI practice.

That would mean, that the number of bacteria grows exponentially after weeding, fixing nitrogen from the atmosphere easily, as the upper layer of the soil is well aerated and moisturized. As soon as those bacteria die (after the oxygen is used), the nitrogen is ready available to the rice roots. Thus, weeding may play a role similar to N-fertilization in conventional practice. That may explain the higher yields with more weedings.

In your article "Greatly increased rice yields from changing management practices," I can't find Figure 1 and Figure 2. Would you mind to send me those figures by E-mail? My address is as follows:
tadeusz@indoor.com.pl

Thank you in advance

Best regards

Tadeusz Niesiobedzki

From: Tadeusz Niesiobedzki <tadeusz@indoor.com.pl>
To: "Norman Uphoff" <ntu1@cornell.edu>
Subject: SRI
Date: Tue, 7 Dec 2004 12:50:20 +0100

Dear Norman,

Many thanks for your e-mail. I found it very interesting. The picture [sent of a SRI rice plant from Cambodia] is really impressing. I am attaching a picture of winter wheat with approx. 40 tillers each from my farm. Such plants I found 2 years ago in a place where we had made a mistake and I went with the seed drill switched off for some 100 m. Some seeds that remained in its pipes were drilled, but the density of plants was only about 1/sq.m. What was exciting for me was that each one had at least 20 pretty long and heavy tillers. That was the first time I realized that each seed of wheat has this huge potential to produce more than 10 times as many grains as conventionally.

This year for the first time I started with the very low seed rate of 30 kg/ha, and already the average of 40 plants/sq.m. has about 30 tillers/plant. This will give an huge amount of 1200 tillers for sq.m.

To reduce the amount of tillers, I would like to adapt the method of cultivation as by a few farmers in Madagaskar who are not transplanting, but are broadcasting seeds or plants across the field and then using the weeding operation as a means to control the number of shoots.

On that part of the field I would like to go with a weeder across the rows [perpendicularly] in the spring. The question is: what percentage of plants should remain if I need about 450 shoots/m for good yield. There is usually some tillering in the spring, but spring tillers are less competitive and usually die off later in the season.

Probably I will do two treatments; first leaving half of the plants, and second, leaving just one-third of them, i.e., about 13 plants/sq.m. which will be close to that in the rice fields in Madagascar.

If you have any suggestions, please do not hesitate to send them to me. I am also attaching a picture of this field after the dormancy period has come. I will keep you informed about the progress of what I am doing with this experiment.

Best regards

Tadeusz