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Timing is crucial in rice farming in Sahel

text: Albert Sikkema / Photo: Michiel de Vries 9:44u 1 March 2011 - Rice farmers in Senegal will get a much bigger harvest if they sow at the right time. Rice plants are easily affected by the Sahel climate, typified by big temperature swings.

This finding comes from the research work by PhD student Michiel de Vries. He sowed rice seeds throughout the year in two test fields belonging to the Africa Rice Center in Senegal and noted down the harvests. His field study shows that the best months for sowing are February and August.

Harvest losses

Temperatures in the dry Sahel terrain vary enormously from more than forty degrees Celsius in summer (May, June) to 10 degrees in winter. Rice growers who sow in the spring have to do so before 15 March, propounds De Vries. After this date, each day of delay will result in a harvest loss of 140 kilogrammes per hectare. Timing also applies when sowing after the summer. If farmers sow in September instead of in August, the returns can decrease from six to one ton of rice per hectare. 'When it gets too cold, the flowers become sterile and can no longer form grains', adds De Vries.

Don't sow

In practice, the rice farmers do know that the sowing time matters, but it has never been made known to them that the effects can be so big. De Vries: 'Sometimes, there are delays in sowing because land preparation work is not ready or because fertilisers or bank loans are given too late. The farmers then sow at a later date. What I'm saying is this: from a certain date onwards, it's better not to sow at all, because that will incur losses.' The information service department of the Senegalese government will now inform the farmers about this.

Stable yield

De Vries carried out the tests using four rice varieties which are already being grown in Senegal, and a cross between an African and an Asian rice variety developed by the Africa Rice Center. The last, already introduced in Gambia and Burkina Faso, gives the most stable yield. The research carried out will help to raise production. Senegal currently imports eighty percent of the rice it needs.

Rice growers have an average of one hectare of land each along the Senegal River. They practise irrigation. In [an earlier research project](#), De Vries came up with an advice on how to save twenty to forty percent of irrigation water using an alternative irrigation technique which does not lower the harvest. He will obtain his PhD degree under the Plant Production Systems Group.



People at work on a rice field in Senegal.

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