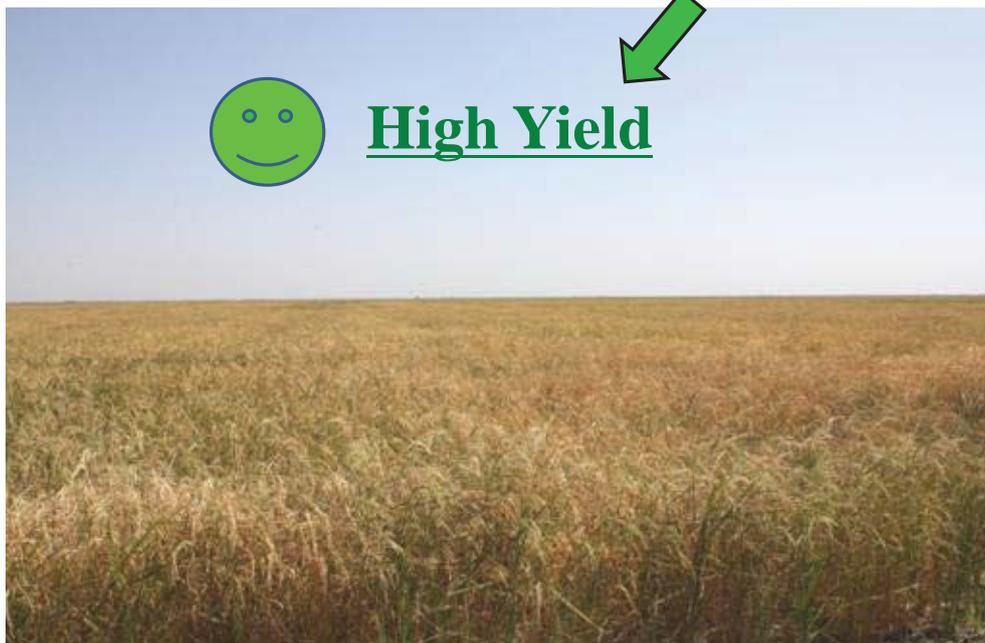


⑤ Effective Weed Control



Because of weakness of rice compared to weed on absorbing nutrient and water from soil, rice growth could be very much retarded by the growth of weeds.

Effective Weed Control → Without Weeds





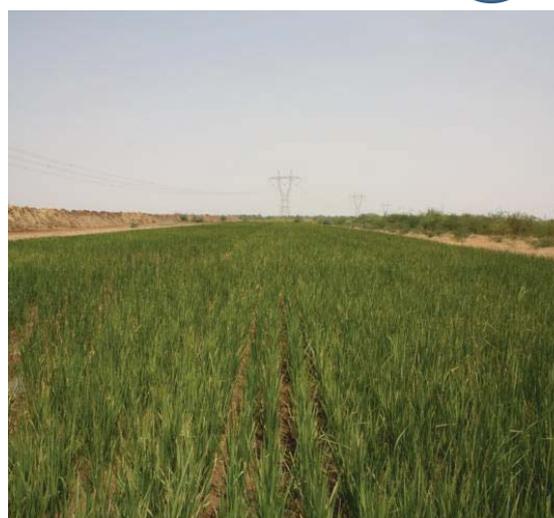
Weed Control (1 month after sowing)



Weeds cover up the field ! Appropriate weed control !



Weed Control (Heading stage)



A lot of weeds !

No weeds !

Field must be cleaned before this stage to avoid competition !

Weed control is the main decisive factor of yield !



Please keep in your mind on weed control ;

- **Weeds are stronger than rice in terms of absorbing nutrient and water from soil. In case weeds and rice grow altogether in the same field, only weeds can grow but rice cannot grow at all eventually. It means that weeds can become bigger and bigger, but rice cannot grow properly and the fields will be covered by weeds.**
- **Implementing appropriate weed treatment such as pre-irrigation, plowing, ridging as well as cleaning field before sowing is vital importance.**
- **Proper application of pre-emergence type herbicide and sufficient weeding at necessary time in one month after sowing are also indispensable.**
- **If clean condition is maintained up to heading stage, rice can avoid competition on water and nutrient and it realize high yield.**
- **Removing weeds before flowering is important to limit weeds next season.**

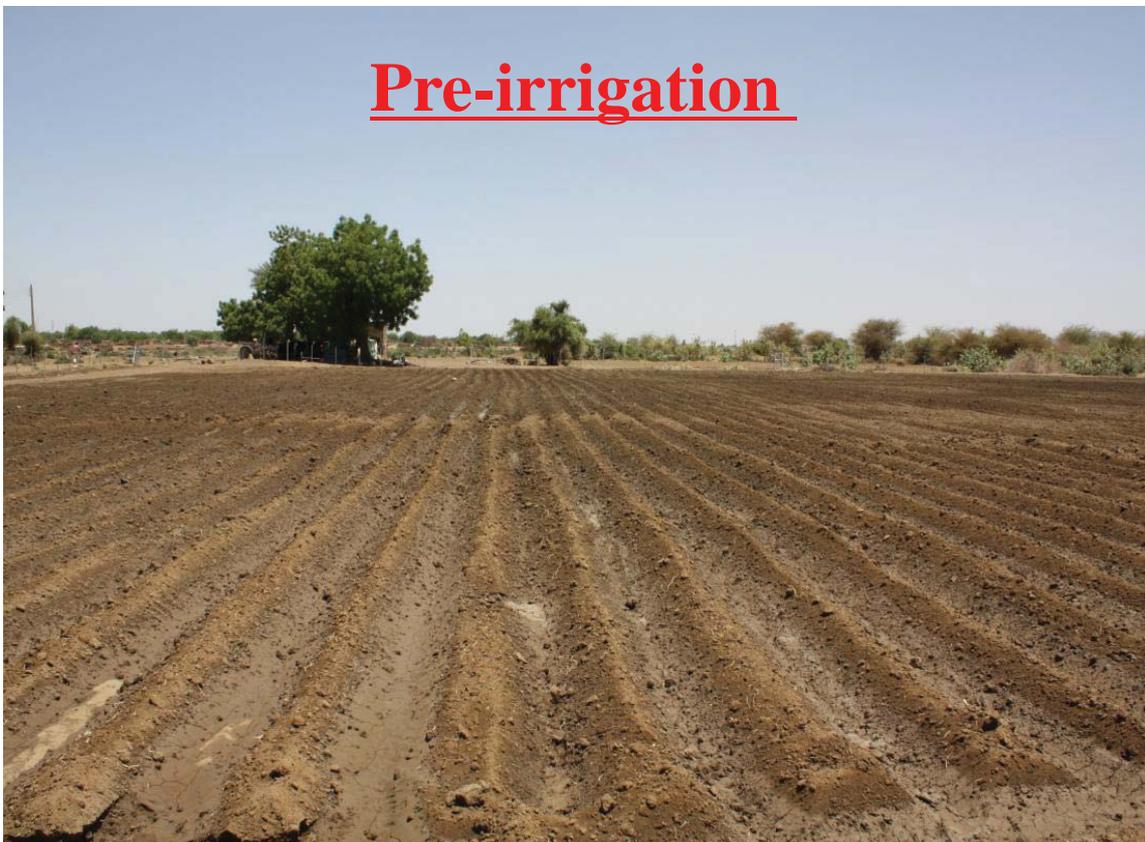
Weed Control Methods

- Preventive, Cultural control
 - Land preparation, Pre-irrigation before sowing, Crop rotation, Plant spacing, etc
- Mechanical control
 - Hand weeding (hand, hand hoe, etc)
- Chemical (herbicide) control
 - Selective herbicide
 - Non selective herbicide
 - Pre-emergence (ex, Pendimethalin)
 - Post-emergence (ex, 2,4-D)



Type, Amount, Concentration, Time should be considered

Weed control method (1)



Weed control method (2)

Mechanical control Hand weeding (hand, hand hoe, etc)



Weed control method (3)

Chemical (herbicide) control Application of herbicide





**PendiMight 500EC
(Pendimethalin)
(Pre-emergence type)
(dosage: 1.5L/fed)**

**Follow exactly
the instruction of
product (herbicide) !**





If you do not follow ...



**Herbicide injury
(Phytotoxicity)**

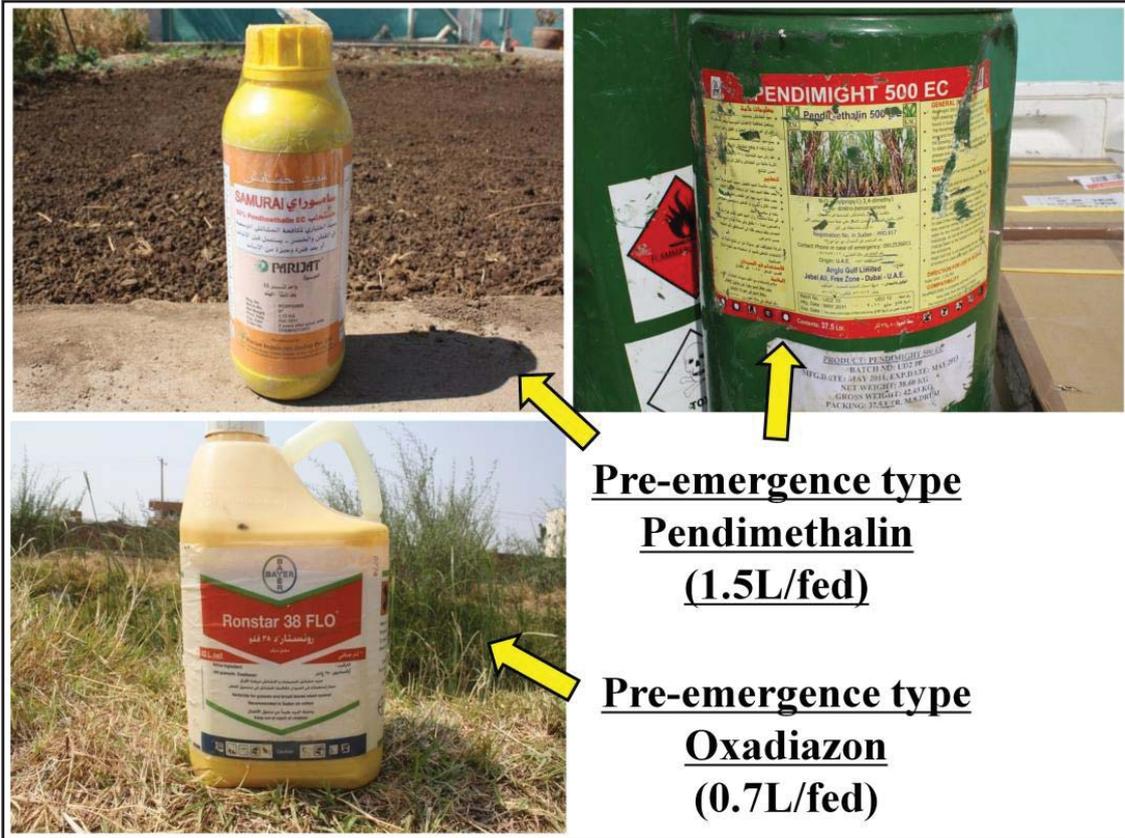
**Symptom of
herbicide injury
(Phytotoxicity)**



**No rice plants due to
improper application
of herbicide !**




Pre-emergence type

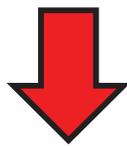
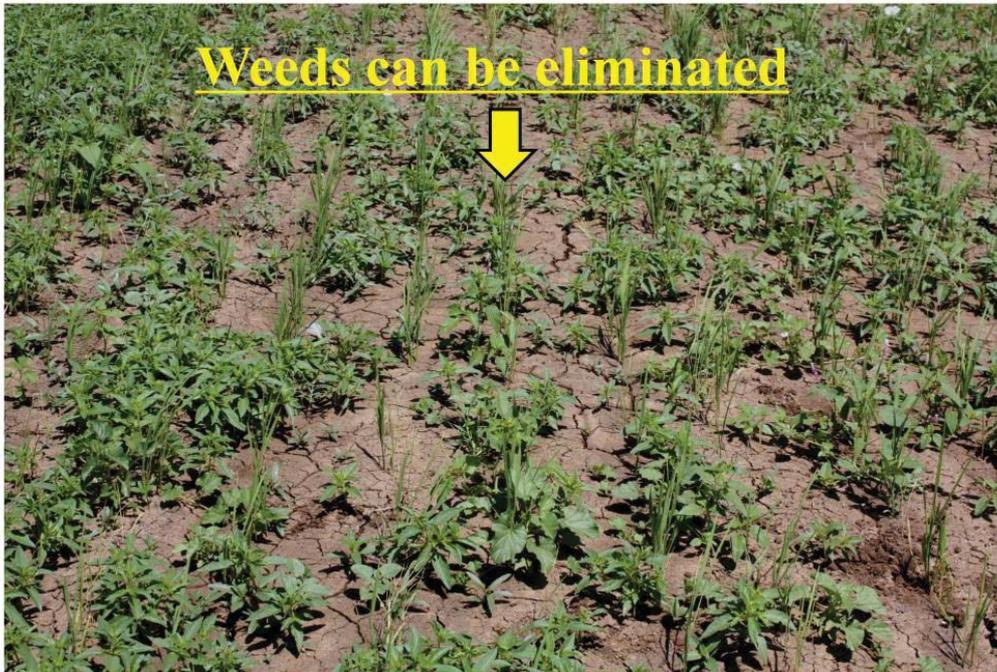


Post-emergence type



Please start weeding at early stage !

Weed control at early stage is essential

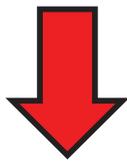


If you do not start weeding...



Weed control is difficult at this stage

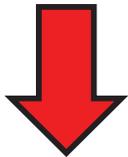




If you do not start weeding yet ...



Weed control is more difficult at this stage



And, eventually...



Weeds cover up the field



No Yield



Weed Control Trial at the field of MoA, Gezira in 2013
(T-1[Treatment -1] = No Weed Control)

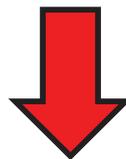


We must do our best to develop effective weed control method.
At present, number of weeding operation is not key point.
The most important point is whether there are weeds or not.

**The photo indicates that without weed control,
rice can not be obtained at all !**



**The number of weeding operation
is not key point.**



**The most important point is
whether there are weeds or not !**

Intensive weeding is indispensable on weed control !



**Intensive weeding operation is :
for example,**



3 persons × 10 days



30 persons × 1 day

**Intensive weeding enables removing weeds completely
in a short time and conducting next operation timely !**

4th Day	3rd Day	2nd Day	1st Day

It takes 4 days = Poor operation



2nd Day		1st Day	

It takes 2 days = Fair operation



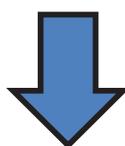
	1st Day		

It takes 1 day = Good operation !

Yield result of weed control trial in 2013

The Yield Result of Weed Control Trial

	R			Unit: kg/ha	Weeding Control
	1	2	3	Ave.	
T 1	98	1037	1991	1042	Control
2	3208	9564	9691	7488	Herbicide (Pre-emergence) +Herbicide (Post-e)
3	2195	8304	8465	6321	Herbicide (Pre-e) +Hand weeding (42DAS)
4	6775	8623	6201	7180	Herbicide (Pre-e) +Hand weed. (42DAS+56DAS)
5	2907	3771	10105	5594	Hand weeding (21DAS)
6	2585	6624	7977	5729	Hand weed. (21DAS+30DAS)
7	6569	10966	10978	9504	Hand weeding (21DAS+30DAS+56DAS)
8	2059	7580	10838	6826	Hand weed. (21DAS+30DAS) +Herbicide (Post-e)



Recommendation

- Hand weeding of 3times is most effective from yield (9.5t/ha) and statistical analysis (1%).
- Utilizing herbicide is indispensable in large scale field. Application of herbicide is effective from yield and statistical analysis (5%).
- As a result, application of pre-emergence herbicide is effective and even if herbicide is not utilized, by 2times hand weeding during one month after sowing, weeds can be removed and allows later weeding easier.
- **The important point is that application of herbicide must be done at optimum time, in proper amount and concentration. This information is imperative for farmers for good control. And, to implement weeding at early stage is important so that weeds can be eliminated easily. If clean condition is maintained up to heading stage, rice can avoid competition on water and nutrient and it realize high yield. Removing weeds before flowering is important to limit weeds next season.**