

Irrigation Scheduling for Potato at Level Barind Tract

(Published in October, 1993)

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b) Abstract

An experiment was conducted at Level Barind Tract to find out the effects of date and frequency of irrigation on a high yielding variety of potato during the winter season of 1989-90. The effects of five different irrigation treatments ; no-irrigation, 1-irrigation at 15 days after emergence (DAE), 2-irrigations at 15 and 30 DAE, 3-irrigations at 15, 30 and 45 DAE and 4-irrigations at 15, 30, 45 and 60 DAE were studied. The crop receiving 2 to 4 irrigations gave identical tuber yield. Highest tuber yield (26.82 t/ha.) was obtained from 4-irrigations at 15, 30, 45 and 60 DAE. Economically, 2-irrigations at 15 and 30 DAE and 3-irrigations at 15, 30, and 45 DAE were found more profitable. Though 2-irrigations gave highest ratio of additional benefit and extra cost (13.59), but the net return (Tk. 20,203) was lower. The net return was high (Tk. 24,318/ha) with 3-irrigations where the ratio of additional benefit and extra cost (11.67) was also relatively higher.

c) Conclusion

From the result, it appeared that the ratio of "additional benefit and extra cost" was the highest with 2-irrigations followed by 3-irrigations. Again, these two treatments gave statistically identical yield with 4-irrigations. Hence, 2 or 3-irrigations appear to be beneficial for potato production. Further, net return with 3-irrigations was highest with comparatively higher

ratio of additional benefit and extra cost. Hence, 3-irrigations can be considered best. Considering the highest net return with comparatively higher ratio of "additional benefit and extra cost" and general agro-climatic situation of Level Barind Tract 3-irrigations at 15, 30 and 45 days after emergence can be suggested for economic production of potato.

