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**To:** Committee for Hand-Labor Mobilization:  
Helmand Drainage Project

Date: Feb 22, 1977

**From:** Richard B. Scott, DP

**Subject:** Proposal for Incentive Pay for Hand Laborers

The present situation relative to production levels of hand labor for the Helmand Drainage Project does not look good. The negative elements involved: (1.) laborers are not working at acceptable production rates (leaning on shovels), (2.) field supervisors are not doing their jobs of keeping laborers busy, and (3.) laborers working under the experimental system on the first on-farm drain in the second construction block of Nad-i-Ali do not understand the system under which they are working and thus, are not motivated. Casual observation suggests that the laborers are not likely to average even one cubic meter per man per day, an unacceptable production figure for Nad-i-Ali soils.

A superficial answer to the problem situation would be to add more supervisors. The supervisors per laborer rate is not high. But effective supervision of these rural laborers involves specific talents which the present supervisors appear to lack. Additional bodies are not the answer.

Some sort of system of incentive pay for the workers seems necessary at the present time, given HAVA's apparent bureaucratic difficulties with establishing small-scale contracting and piece-work system of payment. I have outlined below a system of incentive pay which should have no more bureaucratic difficulties than are presently encountered with the daily wage system. The proposed system is for a variable daily wage, depending on average daily production figures for a group of men. I have briefly outlined two different plans based on different wage rates. The laborers, if the system is carefully explained to them, are not likely to reject the plan and it is to their advantage.

The plan as outlined is based on reasonable production expectations for the Nad-i-Ali area. For the system to be used in all project areas, the production levels would have to be changed from one area to the next depending on soil types and type of drain being constructed. The specific example plan is for the construction of one on-farm drain in the second construction block of Nad-i-Ali. To implement the system, work crews would have to be established and blocks of works laid out which would allow the workers to be paid either every week, or every two weeks.

PRODUCTION RATE SCALE FOR NAD-I-ALI : (TO COMPLETE ONE DRAIN)

Drain Length: 175 meters  
Earth to be Excavated: 217 m<sup>3</sup>

Rate	No. of Man Days	With Crews of:		
		10 men	15 men	20 men
1. 1 m <sup>3</sup> /day	217	21.7 days	14.5 days	10.8 days
2. 1.5 m <sup>3</sup> /day	144.6	14.5 "	9.6 "	7.2 "
3. 2 m <sup>3</sup> /day	108.5	10.9 "	7.2 "	5.4 "

INCENTIVE PLAN #1 (50-55-60 afs per day)

For the purpose of illustration, 15-man work crews are used in calculations.

	# of Men		# of Days (rounded)		Afs/Day	=	Cost of Drain (Afs)	
1 m <sup>3</sup> (Minimum Work)	15	x	14.5	x	50	=	10,875	<u>Maximum Cost</u>
	15	x	14.0	x	50	=	10,500	
	15	x	15.0	x	50	=	11,250	
1.5m <sup>3</sup>	15	x	9.6	x	55	=	7,920	
	15	x	9.0	x	55	=	8,250	
	15	x	10.0	x	55	=	7,425	
2 m <sup>3</sup> (Maximum Work)	15	x	7.2	x	60	=	6,480	<u>Minimum Costs</u>
	15	x	7.0	x	60	=	6,300	
	15	x	8.0	x	60	=	7,200	

Simply stated, if a work crew of 15 men averaged 1 m<sup>3</sup> per day in completing the drain, they would each receive the usual 50 afs per day pay. If a crew averaged 1.5m<sup>3</sup> each member would receive 55 afs, and if they averaged 2 m<sup>3</sup>, each would get

60 afs per day. Maximum production,  $2 \text{ m}^3$ , would increase each laborer's weekly wage from 300 to 360 afs -- or 20 percent. The cost for the drain would be reduced from 10,500 (rounded) to 6,300 afs. A savings of 4,200 afs per drain -- or about 40 percent of project costs if excavation was done at the  $1 \text{ m}^3$  rate.

INCENTIVE PLAN #2 (50-60-70 afs per day)

If the wage rate were raised to 50-60-70 afs for the same production, the results would be:

	<u># of Men</u>		<u># of Days (Rounded)</u>		<u>Afs/ Day</u>		<u>Cost of Drain (Afs)</u>
$1 \text{ m}^3$	15	x	14	x	50	=	10,500
$1.5 \text{ m}^3$	15	x	10	x	60	=	9,000
$2 \text{ m}^3$	15	x	7	x	70	=	7,350

This would be an increase in pay of 120 afs to 420 afs per week to each laborer (40 percent), and a savings of 3,150 afs per drain -- or 30 percent of project costs at maximum production rates of  $2 \text{ m}^3$  per man per day.

These are very simple plans and have several advantages over the present daily wage system although bureaucratically they are basically the same. Such a system eliminates the need for effective field supervision, which apparently is very scarce. There would be need only for project personnel to lay out the drain alignments and supervise construction specifications. It would add an incentive for greater production, presently missing, and give more money to those who would work harder. It would save the project a fairly high percentage of what the drains are probably now costing. The assumption is that higher pay as an incentive will result in higher production --- an assumption to be tested.

The size and organization of the work crews would require experimentation. The larger the crew (50 to 60 men), the easier it would be to administer the paperwork and units of work on the ground. But the larger crews would also have the disadvantage of having to deal with the problem of absenteeism, lower average daily production resulting from absenteeism, and lower incentive payments. The large work crews would not have the social pressures and cohesiveness of small groups.

Smaller work crews of 10 to 15, self-organized, could result in more cooperative units, probably greater production, and higher incentive pay but would be more difficult, at least more time consuming, to administer. In short, this is only the briefest outline of what would be a relatively complex administrative task, but in the long run probably a more efficient system than what we are presently using.

As with all past recommendations, if this proposal or some variation of this proposal is considered for implementation, even on an experimental basis, I would be happy to be involved at any level . . . . or stage of development . . . . initial discussions and further explanation, planning or field implementation (to insure field application duplicates original concept).

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