QUALITY CONTROL MANAGEMENT

ACTIVITY CHART

Before incoming of stocks:

a) Godown should be cleaned and sprayed with DDVP 76% EC solution in the ratio of (1: 150) at the rate of 3 ltrs solution per 100 square metre surface area of the godown.

b) Uniform standard stack pattern (30 ft × 20 ft) should be followed. No stack should be Constructed more than 20 layers high and should not contain more than 150 MT rice. *(150 MT)*

c) Stacks should be built up in a scientific manner so that alleyways and gangways are maintained. Alley ways maintained in between stack to stack and stack to wall is 2.5 ft. Gang ways i.e. 4 ft. Wide space is to be left for free access of labour.

During storing period:

a) During storing period, the godown should be opened daily for proper aeration of the stocks except in rainy & high moist days to dissipate heat given out by respiratory action of the grains and to change the ecology in order to disturb the insect growth & development. The stocks should be brushed properly at least once in each week. The stocks should be classified once in each fortnight to verify the intensity of infestation by pests and chemical treatment should be arranged accordingly.

Classification is explained in terms of 'Clear', 'Few' and 'Heavy' depending upon the number of live insects noticed in 500 gms. of representative sample drawn from the peripheral layer of a stack. Sampling has to be done covering all sides of a stack in a cross manner.

TABLE 1.

Classification	No of Insect present
Clear	Indicates the presence of no live insects (major or minor) per 500 gm of representative sample drawn.
Few	Presence of live insects (major or minor) up to two in number per 500 gm of representative sample drawn.
Heavy	The live insects major or minor are more than two per 500 gm of representative sample drawn.

b) The stocks should be sprayed with Malathion 50% EC solution (1:100 ratio) once in each fortnight. Three litres of such solution should be sprayed over 100 square metre surface area.

c) The alleways , gangways and walls are to be sprayed with DDVP 76% EC solution in the ratio of (1: 150) once in each 21 days. Three litres of such solution should be sprayed over 100 square metre surface area as well as air charging.

d) If the intensity of infestation is heavy , the stock must be sprayed with Deltamethrine 2.5% w.p. solution (120 gms to be dissolved in 3 litre water and be sprayed over 100 square metre surface area) once in three months.

e) If the stocks are heavily infested with pests including khapra, the same must be fumigated with Aluminium phosphide tablets (9 gms per MT) by covering the stacks with polythene covers once In three months. After polithine cover the stacks are made air tight by the mud plastering/ Sand Snake (double row) to retain maximum of the gas molicules liberate. The fumigated covers should be removed after 5 to 7 days.

f) After chemical treatment as aforesaid, the bags of rice should be brushed properly. In case of treatment with Deltamethrine 2.5 % w.p. the stock should be brushed only before delivery.

g) Alleways, gangways should be cleaned properly and loose grains should be refilled in gunny bags. Empty gunny register must be kept in the godown to write down the number of empty gunny used in refilling of loose grains.

h) Stack cards in each stack should be properly maintained and displayed in each stack indicating therein the date of arrival of stocks nature of date wise treatment done.

i) Stack wise categorisation must be made once in a fortnight and categorisation register should be maintained.

Categorisation: It is a method to assess the quality in order to plan for early liquidation of food grains during storage. Rice is categorised as A, B, C & D based on the percentage of damaged and discoloured grains present. The percentage of damaged & discoloured grains limits in rice are decided by analysis(Weight). It is stated that the representative samples (500 gm) to be obtained from each stack of rice and from such samples, representative samples of 20(twenty) grams as per BIS method of analysis : IS:4333(Part I) – 1967, to be scooped out for analysis of damaged & discoloured grain of rice. The samples will be categorised as A,B,C and D in terms of percentage of damaged and discoloured grains present in the 20(twenty) grams of representative samples as per following table:

TABLE-2.   G.O.No. 8697–FS   dt: 28.11.96.

Commodity (Rice)	Category	Percentage of damaged grain	Percentage of discoloured grain	Remarks
Parboiled/ Raw	A	Up to 3 %	Up to 3%	Issuable stock for delivery
Parboiled/ Raw	B	Above 3% up to 4%	Above 3% up to 5%	Issuable stock for delivery
Parboiled/ Raw	C	Above 4% up to 5%	Above 5% up to 7%	Issuable stock for delivery
Parboiled/ Raw	D	Stock shows appreciable quantity of loose bran (more than 0.5%) or giving unpleasant smell.		Non-issuable & needs upgradation to come under issuable Condition

j) In case of presence of rodents, rodent control measures to be undertaken.