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APPLICATION OF MALNUTRITION DUE TO IMBALANCED FEED

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ABSTRACT
Your body needs a variety of nutrients, and in certain amounts, to maintain its tissues and its many functions. Malnutrition happens when the nutrients it gets don't meet these needs. You can be malnourished from an overall lack of nutrients, or you may have an abundance of some kinds of nutrients but lack other kinds. Even the lack of a single vitamin or mineral can have serious health consequences for your body. On the other hand, having an excess of nutrients can also cause problems. In its broadest sense, malnutrition can affect anyone. Lack of knowledge of nutrition, lack of access to a variety of foods, sedentary modern lifestyles and economic disadvantages are all common contributors to malnutrition. Certain populations are more at risk of certain types of malnutrition.

KEYWORDS: Malnutrition, Dissemination, Live stock, Minerals, Nutrition.

INTRODUCTION

On the basis of result of survey study and analysis of feed resources following shortcoming have been observed from nutrition point of view:-

1) Low production of animals is on account of imbalanced / under feeding of protein, energy and mineral nutrients to the animals.
2) Provision of green is very low in the diet of animals.
3) Poor quality crop residue fed like wheat straw, bajra straw form the principle roughage4 portion of the diet of animals are fed as such in spite of the fact that these practically contain 0% digestible crude protein and very low about 2.5 Kcal/g digestible energy.
4) Mineral supplementation is not in practice at any physiological stage of life and can be attributed as one of the major causes of low reproduction and production performance of animals. Infect productive animals are required to supplement minerals over and above dietary availability.
5) Formulation of balanced concentrate mixture and ration is not at all in practice.

Corrective measures

1) Awareness regarding adequate balanced nutrition to the various categories of animals based on physiological needs. For this, package of practices, ensure adequate balanced feeding of various categories of animals as per their physiological need will be prepared and disseminated to farmers for its use to enhance productivity of animals (Appendix - 3)
2) Awareness regarding importance and provision pf green to the animals in the diet will be attempted as rearing of animals on green is more economical and practical then rearing on straw and concentrate ration.
3) Improvement of poor quality crop residues wheat straw and bajra straw prior to its feeding to the animals. For this, a package of practice regarding improvement of poor quality what straw and bajra kadbi using physical and chemical treatment suitable at farmers level will be prepared and disseminated.
4) Preparation of various combinations of balanced concentrate mixtures using locally available ingredients and their use in the balanced feeding of animals. Incorporation of mineral mixture @ 2% and iodized salt @ 1% in diet of animals and increase in mineral mixture supplementation @ 3% in high (15 kg or above milk / day) producing animals.

Appendix- 2

Availablity of major trace elements in common Feed and Fodder given to livestock in zone (Iiia)

Code No.	SAMPLE	Fe(ppm)	Zn(ppm)	Cu(ppm)	Mn(ppm)	Mo(ppm)
R-1	Jowar straw	30	31	14	84	1
R-2	Bajra straw	1140	33	11	127	2
R-3	Wheat straw	1820	12	10	96	5
R-4	Wheat straw	417	53	17	95	1
R-5	Wheat straw	1920	29	10	59	6
R-6	Wheat straw	1460	15	9	53	6
R-7	Wheat straw	502	22	10	62	7
R-8	Wheat straw	425	12	8	57	6
R-9	Wheat straw	146	15	8	72	3
R-10	Wheat straw	623	14	10	73	7
R-11	Wheat straw	556	23	11	79	12
R-12	Wheat straw	831	14	11	83	13
R-13	Wheat straw	1050	17	16	80	14
R-14	Wheat straw	540	32	17	74	15
R-15	Wheat straw	505	22	14	97	15
R-16	Wheat straw	508	16	15	109	14
R-17	Wheat straw	268	159	30	115	14
R-18	Wheat straw	69	20	13	90	18
R-19	Wheat straw	427	99	24	112	21
R-20	Wheat straw	227	17	12	75	15
R-21	Wheat straw	492	15	12	74	15
R-22	Wheat straw	296	16	15	86	23
R-23	Wheat straw	179	19	13	89	23
R-24	Wheat straw	389	23	12	73	19
R-25	Wheat straw	1060	8	15	70	24
R-26	Wheat straw	328	12	11	89	22
R-27	Wheat straw	644	10	13	98	20
R-28	Wheat straw	319	9	11	80	22
R-29	Wheat straw	325	16	12	106	20
R-30	Wheat straw	371	12	9	78	20
R-31	Wheat straw	421	7	8	91	21
R-32	Wheat straw	158	11	8	92	20
R-33	Wheat straw	468	8	9	85	24
R-34	Wheat straw	323	4	5	77	23
R-35	Wheat straw	328	14	10	73	26
R-36	Wheat straw	488	14	10	87	16
R-37	Wheat straw	418	16	11	74	24
R-38	Wheat straw	296	12	10	85	29
R- 39	Wheat straw	362	12	8	85	27
R- 40	Wheat straw	413	10	14	86	23
R-41	Wheat straw	240	14	11	90	27
R-42	Wheat straw	30	16	11	88	33
R-43	Wheat straw	373	13	12	87	28
R-44	Wheat straw	329	8	10	87	31
R-45	Wheat straw	401	21	11	91	33
R-46	Wheat straw	500	17	24	104	22
R-47	Wheat straw	364	25	23	93	29
R-48	Guar Phalgati	981	11	10	61	1
R-49	Jai straw	766	7	7	82	3
R-50	Jai straw	788	34	12	72	10
R-51	Jai straw	775	18	12	72	9
R-52	Jai straw	957	17	13	88	13
R-53	Jai straw	889	17	14	75	8
R-54	Jai straw	729	14	14	89	18
R-55	Jai straw	655	18	11	81	20
R-56	Jai straw	956	17	23	88	31
C-57	Mixed Feed	673	23	17	103	11

C-58	Mixed Feed	380	33	38	109	19
C-59	Moth chara	550	25	9	166	29
C-60	Compound Feed	335	53	23	119	31
C-61	Compound Feed	66	52	15	109	30
C-62	Compound Feed	600	75	19	94	25
C-63	Compound Feed	646	36	19	149	30
C-64	Compound Feed	443	14	13	157	31
C-65	Compound Feed	584	44	18	173	28
C-66	Wheat bran	781	19	14	131	30
C-67	Wheat bran	391	11	16	142	32
C-68	Wheat bran	141	17	16	130	30
C-69	Wheat bran	159	16	12	135	31
C-70	Wheat bran	30	27	12	127	33
C-71	Wheat bran	938	36	10	111	37
C-72	Oil cake	236	28	14	84	29
C-73	Oil cake	779	5	15	88	29
C-74	Oil cake	221	6	18	93	31
C-75	Oil cake	537	14	18	111	33
C-76	Oil cake	514	14	12	141	29
C-77	Oil cake	231	26	11	89	26
C-78	Oil cake	266	34	12	103	35
C-79	Oil cake	313	30	16	86	31
C-80	Oil cake	246	16	13	87	40
C-81	Oil cake	529	31	7	94	38
C-82	Oil cake	559	28	1	121	34
C-83	Oil cake	1010	30	13	105	36
C-84	Oil cake	789	21	12	97	34
C-85	Oil cake+cotton	875	11	41	96	31
C-86	Oil cake+cotton	225	69	24	126	31
C-87	Oil cake+cotton	480	14	11	98	39
C-88	Oil cake+cotton	381	25	13	88	36
C-89	Oil cake+cotton	405	25	12	101	36
C-90	Oil cake+cotton	862	15	13	105	39
C-91	Oil cake+cotton	769	18	8	100	33
C-92	Oil cake+cotton	710	21	9	88	37
C-93	Oil cake+cotton	305	25	9	104	37
C-94	Cotton	1310	16	14	112	30
C-95	Cotton	757	7	9	84	33
C-96	Churi	692	28	15	125	34
C-97	Churi	37	5	3	133	31
C-98	Churi	706	4	8	117	33
C-99	Churi	803	20	12	109	34
C-100	Churi	1320	7	5	122	37
C-101	Churi	933	19	8	121	39
C-102	Cotton+oilcake+Com.feed	759	26	12	105	31
C-103	Cotton+oilcake+Com.feed	290	27	11	99	27
C-104	Methi	580	10	17	94	30
C-105	Methi	1880	6	11	85	33
C-106	Com.feed+oilcake	472	39	17	138	33
C-107	Oilcake+com.feed	301	30	17	125	38
C-108	Methi+oilcake	231	16	10	123	27
C-109	Churi+cotton	334	10	9	89	30
C-110	Cotton+oilcake+gur	772	34	18	132	30
C-111	Oilcake+churi	798	20	16	130	26
C-112	Oilcake+churi	732	1	0	73	30
C-113	Cotton + Methi	257	32	12	85	33
C-114	Methi+cotton+guar	452	15	15	87	30
C-115	Cotton+Com.feed	957	31	16	85	36

C-116	Cotton+Com.feed	606	70	3	119	40
C-117	Methi+cotton+oilcake	441	9	10	88	33
C-118	Com.feed+churi	507	34	16	125	40
C-119	Cotton+oilcake+bran	187	44	18	143	27

Appendix-3

Recommendations for balanced livestock feed

Protein sources: Legumes like guar, gram or channa, urad and khal

Carbohydrates sources: Nonleguminous crops like wheat, bajra, barley, jai, makka

Lipid / fat sources: Groundnut, til, mustard, cotton seed

Vitamin sources: Green fodder

Mineral mixture sources: Calcium, Phosphorus, Magnesium,
Manganese, Iron, Copper, Zink, Sulphur,
Sodium, Potassium, Cobalt and Molybdenum

Balanced ration for livestock:

- Khal - 15 parts as groundnut/mustard/cotton/til/sunflower-15kg.
- Churri -20 parts as moong/gran/guar/arhar/urad-20kg.
- Dalia -18 parts as barley/jai/bajra/makka/wheat-18kg.
- Chapad -45 parts as wheat/rice -45kg.
- Salt -1kg
- Mineral mixture -1kg

Total - 100kg (It provides 12-15% DCP)

Daily diet (balanced) of live stocks

Status of animal		**Dry fodder (kg)**	**Green fodder (kg)**	**Concentrate (kg)**
Milch	**cow**			
	buffalo	5-10	5-10	For body maintenance 2-2.5 kg + for every 2 lits. of milk -1kg
Pregnant milch				
		5-10	5-10	3-4 kg for body maintenance + for every 2 lits. of milk -1kg.
Pregnant but dry	cow			
	buffalo	5-10	5-10	1.5-2.0
Breeding bull	cow			
	buffalo	5-10	5-10	1.5-2.0
Working bull	Cow			
	buffalo	8-12	8-12	1.5-2.0
Young calf below 3 months of age	Mother's milk only			
Calf aging 3-6 months	Mother's milk, fodder and green fodder as required			
Calf /heifers 6 months to 3 years		2-5	2-5	0.5-2.0

Mineral mixture requirement of live stocks

(Daily requirement: gms)

Calcium - 16
Phosphorus - 11
Magnesium - 0.02%
Sulphur - 0.02%
Sodium - 0.02%
Potassium - 0.09%

Copper - 10ppm
Zinc - 80ppm
Manganese - 40ppm
Iron - 50ppm
Iodine - 0.6ppm
cobalt - 0.6ppm

Additional in milch-
Additional Calcium: 3.21 gm/liter of milk
Phosphorus: 1.98 gm/liter of milk

Package of practices suggested

Feeding management

1. Animal should be fed balanced ration which can be provide all the nutrients in proper quantities.
2. Animal should be fed ration in proportion to their production.
3. Milch animals should be essentially fed with adequate quantities of green fodder to exploit their milk production potential.
4. Side by side with the cultivation of routine crops places should be ear marked for growing fodder.

5. Intensive forage crop rotations incorporating high yielding fodder crops be undertaken.
6. Growing fodder trees such as ‘Subabul’ should be practicesed to meet the fodder requirements of animals especially in the area having limited or no irrigation facilities and uneven land.
7. Non convential feed like mango, seed kernel, tapical, babul pods, sl seed cake, Mahua cakes feed blocks enriched with urea, wheat straw and molasses should be used in paace of costly ingredients to be incorporated in the concentrate mixture.
8. To avoid nutritional deficiencies regular feeding of mineral mixture should be practiced.
9. Availability of clean and fresh water should be ensured.
10. Excess green fodder/grasses should be conserved or preserved in the form of hay or silage.
11. Wastage of fodder must be avoided by adopting chopping practices.

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