



FINAL REPORT - SUPPLEMENTARY-2

Recommended District-wise Mineral Mixture Formulations

Maharashtra State Government Sponsored Project

“Assessment of Mineral profile relationship of animals, soil, feeds and fodders in the State of Maharashtra for improvement of livestock production potential”

Submitted

by

Dr. D. H. Rekhate

Project Implementing Officer

Maharashtra Animal & Fishery Sciences University,
Futala road, Telangkhedi, Nagpur - 440 001

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fodders in the State of Maharashtra for improvement
of livestock production potential”**

CONTENTS

Recommended District-wise Mineral Mixture-Formulations

| Sr. No. | Name of District | Page No. |
|--------------------------|-------------------------|-----------------|
| Dr. BSKKV, Dapoli | | |
| 1 | Ratnagari | 2 |
| 2 | Sindhudurgh | 3 |
| MPKV, Rahuri | | |
| 3 | Ahmednagar | 4 |
| 4 | Jalgaon | 5 |
| 5 | Nasik | 6 |
| 6 | Nandurbar | 7 |
| 7 | Dhule | 8 |
| BVC, Mumbai | | |
| 8 | Raigad | 9 |
| 9 | Thane | 10 |
| KNPCOVS, Shirval | | |
| 10 | Pune | 11 |
| 11 | Solapur | 12 |
| 12 | Sangali | 13 |
| 13 | Satara | 14 |
| 14 | Kolhapur | 15 |
| COVAS, Udgir | | |
| 15 | Latur | 16 |
| 16 | Nanded | 17 |
| 17 | Osmanabad | 18 |

| Sr. No. | Name of District | Page No. |
|------------------------|-------------------------|-----------------|
| COVAS, Parbhani | | |
| 18 | Aurangabad | 19 |
| 19 | Jalana | 20 |
| 20 | Beed | 21 |
| 21 | Parbhani | 22 |
| 22 | Hingoli | 23 |
| NVC, Nagpur | | |
| 23 | Nagpur | 24 |
| 24 | Wardha | 25 |
| 25 | Bhandara | 26 |
| 26 | Gondia | 27 |
| 27 | Chandrapur | 28 |
| 28 | Gadchiroli | 29 |
| PGIVAS, Akola | | |
| 29 | Amravati | 30 |
| 30 | Washim | 31 |
| 31 | Akola | 32 |
| 32 | Yavatmal | 33 |
| 33 | Buldhana | 34 |

The District wise mineral mixture formulated is as per the BIS (1992) standards for cattle

BIS (1992) Formulation

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|----------------|--------------------|---------------------------------|
| 1 | CaCO ₃ | 17.4 |
| 2 | DCP | 48.65 |
| 3 | NaCl | 31.57 |
| 4 | FeSO ₄ | 2.00 |
| 5 | MnO | 1.58 |
| 6 | ZnSO ₄ | 0.75 |
| 7 | CuSO ₄ | 0.24 |
| 8 | CoSO ₄ | 0.042 |
| 9 | KI | 0.029 |
| 10 | NaF | 0.111 |
| | Total | 102.372 |

Element content in formulated mineral mixture

| Element | Content |
|----------------|----------------|
| Calcium | 18 |
| Phosphours | 9 |
| Magnesium | 5 |
| Salt | 22 |
| Iron | 0.4 |
| Iodine | 0.02 |
| Copper | 0.06 |
| Cobalt | 0.009 |
| Zinc | 0.30 |
| Fluorine | 0.05 |
| Sulfur | 0.4 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Mineral Profile of Blood Serum of Ratnagiri District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 5.87 | 2.13 | 26.56 |
| 2 | P | 4.5 mg/dl | 2.715 | 1.78 | 39.37 |
| 3 | Mg | 2 mg/dl | 1.56 | 0.44 | 22.00 |
| 4 | Fe | 1 ppm | 2.815 | 0 | 0 |
| 5 | Cu | 0.65 ppm | 0.85 | 0 | 0 |
| 6 | Zn | 0.5 ppm | 1.635 | 0 | 0 |

Recommended Area Specific Mineral mixture for Ratnagiri District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 22.346 |
| 2 | DCP | 62.787 |
| 3 | MgO | 9.133 |
| 4 | FeSO ₄ | 1.798 |
| 5 | MnSO ₄ | 2.982 |
| 6 | ZnSO ₄ | 0.674 |
| 7 | CuSO ₄ | 0.216 |
| 8 | CoSO ₄ | 0.039 |
| 9 | KI | 0.026 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 45 g/day

Mineral Profile of Blood Serum of Sindhudurg District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 6.00 | 2.00 | 24.94 |
| 2 | P | 4.5 mg/dl | 2.64 | 1.85 | 41.22 |
| 3 | Mg | 2 mg/dl | 1.75 | 0.25 | 12.50 |
| 4 | Fe | 1 ppm | 3.025 | 0 | 0 |
| 5 | Cu | 0.65 ppm | 0.93 | 0 | 0 |
| 6 | Zn | 0.5 ppm | 1.145 | 0 | |

Recommended Area Specific Mineral mixture for Sindhudurg District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 22.550 |
| 2 | DCP | 63.325 |
| 3 | MgO | 8.400 |
| 4 | FeSO ₄ | 1.795 |
| 5 | MnSO ₄ | 2.977 |
| 6 | ZnSO ₄ | 0.673 |
| 7 | CuSO ₄ | 0.215 |
| 8 | CoSO ₄ | 0.038 |
| 9 | KI | 0.026 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 45 g/day

Mineral Profile of Blood Serum of Ahmednagar District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 6.43 | 1.57 | 19.63 |
| 2 | P | 4 mg% | 3.46 | 0.54 | 13.50 |
| 3 | Mg | 1.9 mg% | 2.08 | 0 | 0 |
| 4 | Cu | 0.65 ppm | 0.81 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.71 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.07 | 0 | 0 |

Recommended Area Specific Mineral mixture for Ahmednagar District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 20.194 |
| 2 | DCP | 56.722 |
| 3 | NaCl | 16.705 |
| 4 | FeSO ₄ | 2.00 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Jalgaon District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 8.64 | 0 | 0 |
| 2 | P | 4 mg% | 4.61 | 0 | 0 |
| 3 | Mg | 1.9 mg% | 2.17 | 0 | 0 |
| 4 | Cu | 0.65 ppm | 0.73 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.58 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.12 | 0 | 0 |

Recommended Area Specific Mineral mixture for Jalgaon District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Nasik District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 8.21 | 0 | 0 |
| 2 | P | 4 mg% | 4.09 | 0 | 0 |
| 3 | Mg | 1.9 mg% | 2.16 | 0 | 0 |
| 4 | Cu | 0.65 ppm | 0.89 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.27 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.53 | 0 | 0 |

Recommended Area Specific Mineral mixture for Nasik District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Nandurbar District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 9.36 | 0 | 0 |
| 2 | P | 4 mg% | 4.53 | 0 | 0 |
| 3 | Mg | 1.9 mg% | 1.9 | 0 | 0 |
| 4 | Cu | 0.65 ppm | 1.15 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.57 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.09 | 0 | 0 |

Recommended Area Specific Mineral mixture for Nandurbar District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Dhule District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 8.05 | 0 | 0 |
| 2 | P | 4 mg% | 4.11 | 0 | 0 |
| 3 | Mg | 1.9 mg% | 1.7 | 0.20 | 10.53 |
| 4 | Cu | 0.65 ppm | 0.77 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.46 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.51 | 0 | 0 |

Recommended Area Specific Mineral mixture for Dhule District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | MgO | 9.200 |
| 4 | NaCl | 16.666 |
| 5 | FeSO ₄ | 2.000 |
| 6 | MnSO ₄ | 3.317 |
| 7 | ZnSO ₄ | 0.750 |
| 8 | CuSO ₄ | 0.240 |
| 9 | CoSO ₄ | 0.043 |
| 10 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Raigad District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 9.09 | 0 | 0 |
| 2 | P | 4.5 mg% | 5.23 | 0 | 0 |
| 3 | Mg | 30 ppm | 9.14 | 20.86 | 69.53 |
| 4 | Cu | 0.6 ppm | 1.99 | 0 | 0 |
| 5 | Fe | 1 ppm | 3.05 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 2.09 | 0 | 0 |

Recommended Area Specific Mineral mixture for Raigad District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | MgO | 14.109 |
| 4 | NaCl | 11.757 |
| 5 | FeSO ₄ | 2.000 |
| 6 | MnSO ₄ | 3.317 |
| 7 | ZnSO ₄ | 0.750 |
| 8 | CuSO ₄ | 0.240 |
| 9 | CoSO ₄ | 0.043 |
| 10 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Thane District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 9.11 | 0 | 0 |
| 2 | P | 4.5 mg% | 5.40 | 0 | 0 |
| 3 | Mg | 30 ppm | 11.08 | 18.92 | 63.07 |
| 4 | Cu | 0.6 ppm | 1.58 | 0 | 0 |
| 5 | Fe | 1 ppm | 2.73 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 2.04 | 0 | 0 |

Recommended Area Specific Mineral mixture for Thane District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | MgO | 13.580 |
| 4 | NaCl | 12.287 |
| 5 | FeSO ₄ | 2.000 |
| 6 | MnSO ₄ | 3.317 |
| 7 | ZnSO ₄ | 0.750 |
| 8 | CuSO ₄ | 0.240 |
| 9 | CoSO ₄ | 0.043 |
| 10 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Pune District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 9.90 | 0 | 0 |
| 2 | P | 4.5 mg% | 4.36 | 0.14 | 3.11 |
| 3 | Mg | 2 mg% | 3.43 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 1.19 | 0 | 0 |
| 5 | Fe | 1 ppm | 3.92 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 0.96 | 0 | 0 |

Recommended Area Specific Mineral mixture for Pune District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 18.366 |
| 2 | DCP | 51.556 |
| 3 | NaCl | 23.700 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Solapur District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 9.23 | 0 | 0 |
| 2 | P | 4.5 mg% | 4.80 | 0 | 0 |
| 3 | Mg | 2 mg% | 3.00 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 1.14 | 0 | 0 |
| 5 | Fe | 1 ppm | 3.35 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.23 | 0 | 0 |

Recommended Area Specific Mineral mixture for Solapur District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Sangali District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 9.02 | 0 | 0 |
| 2 | P | 4.5 mg% | 4.49 | 0 | 0 |
| 3 | Mg | 2 mg% | 4.37 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 1.02 | 0 | 0 |
| 5 | Fe | 1 ppm | 2.72 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.52 | 0 | 0 |

Recommended Area Specific Mineral mixture for Sangali District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Satara District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 9.44 | 0 | 0 |
| 2 | P | 4.5 mg% | 4.89 | 0 | 0 |
| 3 | Mg | 2 mg% | 2.69 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 0.99 | 0 | 0 |
| 5 | Fe | 1 ppm | 3.07 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.47 | 0 | 0 |

Recommended Area Specific Mineral mixture for Satara District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Kolhapur District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg% | 8.93 | 0 | 0 |
| 2 | P | 4.5 mg% | 4.60 | 0 | 0 |
| 3 | Mg | 2 mg% | 2.87 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 1.08 | 0 | 0 |
| 5 | Fe | 1 ppm | 3.32 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.05 | 0 | 0 |

Recommended Area Specific Mineral mixture for Kolhapur District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Latur District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.07 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 3.37 | 1.13 | 25.11 |
| 3 | Mg | 30 ppm | 19.47 | 10.53 | 35.10 |
| 4 | Cu | 0.7 ppm | 0.83 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 1.40 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 0.88 | 0 | 0 |

Recommended Area Specific Mineral mixture for Latur District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 21.724 |
| 2 | DCP | 61.068 |
| 3 | MgO | 10.982 |
| 4 | FeSO ₄ | 1.952 |
| 5 | MnSO ₄ | 3.238 |
| 6 | ZnSO ₄ | 0.732 |
| 7 | CuSO ₄ | 0.234 |
| 8 | CoSO ₄ | 0.042 |
| 9 | KI | 0.028 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Nanded District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.12 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 3.63 | 0.87 | 19.33 |
| 3 | Mg | 30 ppm | 19.60 | 10.40 | 34.67 |
| 4 | Cu | 0.7 ppm | 0.88 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 1.41 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 0.92 | 0 | 0 |

Recommended Area Specific Mineral mixture for Nanded District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCo ₃ | 21.258 |
| 2 | DCP | 59.661 |
| 3 | MgO | 11.209 |
| 4 | NaCl | 1.493 |
| 5 | FeSo ₄ | 2.000 |
| 6 | MnSo ₄ | 3.317 |
| 7 | ZnSo ₄ | 0.750 |
| 8 | CuSo ₄ | 0.240 |
| 9 | CoSo ₄ | 0.043 |
| 10 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Osmanabad District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 8.76 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 3.91 | 0.59 | 13.11 |
| 3 | Mg | 30 ppm | 19.64 | 10.36 | 34.53 |
| 4 | Cu | 0.7 ppm | 0.81 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 1.36 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 0.90 | 0 | 0 |

Recommended Area Specific Mineral mixture for Osmanabad District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 20.143 |
| 2 | DCP | 56.550 |
| 3 | MgO | 11.200 |
| 4 | NaCl | 5.728 |
| 5 | FeSO ₄ | 2.000 |
| 6 | MnSO ₄ | 3.317 |
| 7 | ZnSO ₄ | 0.750 |
| 8 | CuSO ₄ | 0.240 |
| 9 | CoSO ₄ | 0.043 |
| 10 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, Clostridium Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Aurangabad District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 10.29 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.75 | 0 | 0 |
| 3 | Mg | 10 mg/dl | 14.93 | 0 | 0 |
| 4 | Cu | 0.7 mg/dl | 1.11 | 0 | 0 |
| 5 | Fe | 0.57 mg/dl | 10.35 | 0 | 0 |
| 6 | Zn | 0.8 mg/dl | 1.61 | 0 | 0 |

Recommended Area Specific Mineral mixture for Aurangabad District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Jalana District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.65 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.36 | 0 | 0 |
| 3 | Mg | 10 mg/dl | 20.63 | 0 | 0 |
| 4 | Cu | 0.7 mg/dl | 0.58 | 0.12 | 17.14 |
| 5 | Fe | 0.57 mg/dl | 25.38 | 0 | 0 |
| 6 | Zn | 0.8 mg/dl | 2.05 | 0 | 0 |

Recommended Area Specific Mineral mixture for Jalana District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 24.986 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 1.120 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Beed District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 10.19 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 6.23 | 0 | 0 |
| 3 | Mg | 10 mg/dl | 22.26 | 0 | 0 |
| 4 | Cu | 0.7 mg/dl | 1.12 | 0 | 0 |
| 5 | Fe | 0.57 mg/dl | 13.61 | 0 | 0 |
| 6 | Zn | 0.8 mg/dl | 1.49 | 0 | 0 |

Recommended Area Specific Mineral mixture for Beed District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Parbhani District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 10.31 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 6.36 | 0 | 0 |
| 3 | Mg | 10 mg/dl | 17.65 | 0 | 0 |
| 4 | Cu | 0.7 mg/dl | 0.79 | 0 | 0 |
| 5 | Fe | 0.57 mg/dl | 11.41 | 0 | 0 |
| 6 | Zn | 0.8 mg/dl | 1.23 | 0 | 0 |

Recommended Area Specific Mineral mixture for Parbhani District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Hingoli District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.07 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 7.04 | 0 | 0 |
| 3 | Mg | 10 mg/dl | 13.99 | 0 | 0 |
| 4 | Cu | 0.7 mg/dl | 0.63 | 0.07 | 10.00 |
| 5 | Fe | 0.57 mg/dl | 12.62 | 0 | 0 |
| 6 | Zn | 0.8 mg/dl | 2.14 | 0 | 0 |

Recommended Area Specific Mineral mixture for Hingoli District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.066 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 1.040 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Nagpur District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.23 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.27 | 0 | 0 |
| 3 | Mg | 1 mg/dl | 2.06 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 0.58 | 0.02 | 3.33 |
| 5 | Fe | 1 ppm | 1.42 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.05 | 0 | 0 |

Recommended Area Specific Mineral mixture for Nagpur District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.786 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.320 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Wardha District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 10.08 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.19 | 0 | 0 |
| 3 | Mg | 1 mg/dl | 2.01 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 0.59 | 0.01 | 1.67 |
| 5 | Fe | 1 ppm | 1.47 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.21 | 0 | 0 |

Recommended Area Specific Mineral mixture for Wardha District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.854 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.252 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Bhandara District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.39 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.10 | 0 | 0 |
| 3 | Mg | 1 mg/dl | 1.97 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 0.64 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.43 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.18 | 0 | 0 |

Recommended Area Specific Mineral mixture for Bhandara District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Gondia District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.83 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.24 | 0 | 0 |
| 3 | Mg | 1 mg/dl | 2.17 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 0.65 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.56 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.12 | 0 | 0 |

Recommended Area Specific Mineral mixture for Gondia District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Chandrapur District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.58 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.11 | 0 | 0 |
| 3 | Mg | 1 mg/dl | 2.06 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 0.61 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.51 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.25 | 0 | 0 |

Recommended Area Specific Mineral mixture for Chandrapur District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Gadchiroli District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 10.04 | 0 | 0 |
| 2 | P | 4.5 mg/dl | 5.18 | 0 | 0 |
| 3 | Mg | 1 mg/dl | 2.16 | 0 | 0 |
| 4 | Cu | 0.6 ppm | 0.62 | 0 | 0 |
| 5 | Fe | 1 ppm | 1.60 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 1.23 | 0 | 0 |

Recommended Area Specific Mineral mixture for Gadchiroli District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Amravati District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.46 | 0 | 0 |
| 2 | P | 3 mg/dl | 4.85 | 0 | 0 |
| 3 | Mg | 3 ppm | 26.49 | 0 | 0 |
| 4 | Cu | 0.7 ppm | 1.25 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 3.26 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 2.39 | 0 | 0 |

Recommended Area Specific Mineral mixture for Amravati District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Washim District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.77 | 0 | 0 |
| 2 | P | 3 mg/dl | 5.15 | 0 | 0 |
| 3 | Mg | 3 ppm | 27.2 | 0 | 0 |
| 4 | Cu | 0.7 ppm | 1.4 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 4.35 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 3.31 | 0 | 0 |

Recommended Area Specific Mineral mixture for Washim District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Akola District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.80 | 0 | 0 |
| 2 | P | 3 mg/dl | 5.26 | 0 | 0 |
| 3 | Mg | 3 ppm | 54.28 | 0 | 0 |
| 4 | Cu | 0.7 ppm | 1.57 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 3.50 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 2.25 | 0 | 0 |

Recommended Area Specific Mineral mixture for Akola District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Yavatmal District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.64 | 0 | 0 |
| 2 | P | 3 mg/dl | 5.30 | 0 | 0 |
| 3 | Mg | 3 ppm | 22.98 | 0 | 0 |
| 4 | Cu | 0.7 ppm | 1.61 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 4.52 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 4.03 | 0 | 0 |

Recommended Area Specific Mineral mixture for Yavatmal District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day

Mineral Profile of Blood Serum of Buldhana District

| Sr. No. | Minerals | Critical Level | Observed Value | Deficiency Detected | % Deficiency |
|---------|----------|----------------|----------------|---------------------|--------------|
| 1 | Ca | 8 mg/dl | 9.20 | 0 | 0 |
| 2 | P | 3 mg/dl | 5.12 | 0 | 0 |
| 3 | Mg | 3 ppm | 33.25 | 0 | 0 |
| 4 | Cu | 0.7 ppm | 1.32 | 0 | 0 |
| 5 | Fe | 0.57 ppm | 4.38 | 0 | 0 |
| 6 | Zn | 0.8 ppm | 2.82 | 0 | 0 |

Recommended Area Specific Mineral mixture for Buldhana District

| Sr. No. | Ingredients | Incorporation Level (Kg) |
|---------|-------------------|--------------------------|
| 1 | CaCO ₃ | 17.755 |
| 2 | DCP | 50.000 |
| 3 | NaCl | 25.866 |
| 4 | FeSO ₄ | 2.000 |
| 5 | MnSO ₄ | 3.317 |
| 6 | ZnSO ₄ | 0.750 |
| 7 | CuSO ₄ | 0.240 |
| 8 | CoSO ₄ | 0.043 |
| 9 | KI | 0.029 |
| | Total | 100.00 |

Note:- i) Moisture content should not exceed more than 5 percent

ii) It should be free from spores of *Bacillus anthracis*, *Clostridium* Sps. etc.

Dose rate of formulated mineral mixture – 40 g/day