



**Monthly Workshop for Extension functionaries of Developmental Line Departments and  
Subject Matter Specialist of KVKs.**

**Message for the Month April, 2018**

**Agronomy**

<b>Crop</b>	<b>Operation/ Diseases/pests</b>	<b>Message/Impact points</b>
<b>Rabi</b>		
<b>Crops</b>		
Wheat	<i>Late jointing to booting</i>	<ul style="list-style-type: none"> <li>- Clean fields and channels to avoid water stagnation during rain.</li> <li>- Second top dose of urea @ 3.25 kg/kanal.</li> <li>- Avoid water stress at booting stage if possible.</li> </ul>
Brown Sarson	<i>Flowering to seed development</i>	<ul style="list-style-type: none"> <li>- Clean fields and channels to avoid water stagnation during rain.</li> <li>- Avoid moisture stress during seed development stage if possible.</li> </ul>
<b>Rabi Pulses</b>		
Field Pea	<i>Growth, flowering</i>	<ul style="list-style-type: none"> <li>- Clean fields and channels to avoid water stagnation during rain.</li> <li>- Avoid moisture stress during pre-flowering and seed development stage if possible.</li> </ul>
Lentil	<i>Growth, flowering</i>	<ul style="list-style-type: none"> <li>- Same as in case of field pea.</li> </ul>
Oat fodder	<i>Late jointing to flowering</i>	<ul style="list-style-type: none"> <li>- Clean fields and channels to avoid water stagnation during rain.</li> <li>- Apply second top dose of urea @ 4.1 kg/kanal at booting stage.</li> <li>- Spiny and allergic weeds can be removed by hand if possible</li> </ul>
<b>Kharif crops</b>		
Rice		<ul style="list-style-type: none"> <li>- Arrange inputs of all kharif crops.</li> <li>- Seed treatment and soaking of rice started in second fortnight of April for sprouting.</li> <li>- Prepare 1m wide nursery beds with convenient length as per requirement.</li> <li>- Make low poly tunnel with the help of willow sticks and polyethylene on nursery beds to avoid chilling injury and growing healthy seedling of rice.</li> <li>- The nursery should be free from weeds and the area should have adequate water for irrigation and facilities for drainage.</li> <li>- Nursery sowing can be done from last week of April.</li> <li>- Use 50-60 kg seed for 1 ha transplanting in lower belts and 80 kg seed for 1 ha transplanting in higher belts.</li> <li>- Sow pre-sprouted rice seeds in nursery beds in the last week of April.</li> <li>- In the nursery beds apply pre stored ponded water instead of running water to avoid chilling injury.</li> </ul>
Maize		<ul style="list-style-type: none"> <li>- Sow the crop from 1<sup>st</sup> April to end of the month in both lower and higher belts of valley.</li> <li>- Ensure sufficient moisture in the field before sowing.</li> </ul>

### Seed rate and planting geometry for different maize types.

S. No.	Purpose	Seed rate (kg/ha) (composite)	Seed rate (kg/ha) (hybrid)	Plant geometry (plant x row, cm)
1	Normal Maize	30	20	60 x 20 70 x 20
2	Sweet Corn	16	10	70 x 20 75 x 20
3	Baby corn	35	30	50 x 20 55 x 20
4	Pop corn	18	14	60 x 20
5	QPM	30	20	70 x 20
6	Fodder	70	60	25 x 10

*Note: If due to some practical limitations, farmer is practicing broadcasting method of sowing, enhance seed rate by 10-15 per cent*

### Nutrient management

Apply well decomposed compost or FYM uniformly @ 15-20 t/ha and should be incorporated in the soil at the time of land preparation.

**Note :** Application of vermicompost @ 2.5 t /ha will replace 5 t FYM/ha and 25% NPK from recommended dose of fertilizers.

### For irrigated maize,

- **In hybrid varieties :** the urea @ 5 kg/kanal, DAP @ 8.15 kg/kanal, MOP 3.35 kg/kanal and zinc sulphate @ 1.0 kg/kanal should be applied as basal dose.
- **In composite varieties :** the urea @ 4 kg/kanal, DAP @ 6.5 kg/kanal, MOP 2.5 kg/kanal and zinc sulphate @ 0.75-1.0 kg/kanal should be applied as basal dose

### For rainfed maize

- **In hybrid varieties :** the urea @ 3 kg/kanal, DAP @ 5 kg/kanal, MOP 1.7 kg/kanal and zinc sulphate @ 0.75 kg/kanal should be applied as basal dose.
- **In composite varieties :** the urea @ 2.4 kg/kanal, DAP @ 4.35 kg/kanal, MOP 1.65 kg/kanal and zinc sulphate @ 0.5 kg/kanal should be applied as basal dose.
- Apply Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i. ha<sup>-1</sup> in 600 litre water 2-3 days after sowing to avoid weed infestation.

### Entomology (Agriculture)

Crucifers	<i>Aphids</i>	-Dimethoate 30 EC @ 1ml/lit of water.
	<i>Flea beetle</i>	-Chlorpyriphos 20EC @ 1ml/lit of water
	<i>Pieris brassicae</i>	-hand picking of eggs and larva followed by their destruction
Mustard	<i>Flea beetle</i>	- Chlorpyriphos 20EC @ 1ml/lit of water

### **Impact Points:**

☞ Spray should be carried out during early morning or late evening hrs.

**Note: Spray on need basis.**

### Entomology (Horticulture)

#### Fruit crops

Apple (Pink bud stage)	San Jose scal	- <u>Need based :</u> - If HMO spray is missed
	Blossom thrips	- Spray Dimethoate 30EC @ 100 ml/100 lit. of water. - Apply when 2 or more thrips/flower are observed - Spray Thioclopid 21.7 % SC @ 40 ml/100 ml/100 lit. of water as per University recommendation.
Plum	Aphids	- In case aphid population is high spray Dimethoate 30EC @ 100

<b>Vegetables</b>	<i>Overwintering insects (cut worm, white grubs etc.)</i>	<p>ml/100 lit. of water.</p> <ul style="list-style-type: none"> <li>- Deep ploughing of fields to expose insects' pupae for desiccation predation by birds.</li> <li>- Removal of weeds in the vicinity of crops to be planted to discourage egg laying by cut worms.</li> <li>- Apply Carbofuran 3% CG @ 32.5 kg/ha before planting of seedlings during last ploughing of field.</li> </ul>
<b>Flowers</b>	<i>Tulip</i>	<ul style="list-style-type: none"> <li>• When 2-3 grub/m<sup>2</sup> in the soil is recorded;</li> <li>• Apply Carbofuran 3% CG @ in between the rows of field.</li> </ul> <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> <li>• Drench field either with Cholorpyriphos 20 EC @ 400 ml /100 lit. of water or Cypermethrin 10EC @ 100 ml /100 lit.of water.</li> </ul>
<b>Rodent management</b>	<i>Horticulture</i>	<p>If weather is dry, follow the below mentioned practices:</p> <ul style="list-style-type: none"> <li>- Field sanitation: Removal of dropped rotten fruits, debris and grasses from orchards to discourage rodents from availability of food and shelter</li> <li>- Reduction in bund size: Reduce the size of bunds or boundaries around the orchards up to 30cm to force the rodents to leave the burrows</li> <li>- <b>Burrow Fumigation</b> : Smoking the burrow with cow dung + Maize straw/maize pith + weeds with the help of burrow fumigator</li> </ul> <p><b><u>Chemical control (Rodent bait schedule):</u></b></p> <ul style="list-style-type: none"> <li>✓ <b>Day 1:</b> Plugging of burrows.</li> <li>✓ <b>Day 2:</b> Identification of live burrows for pre-baiting prior to poison baiting; For pre baiting with plain bait (crushed rice (48 gm) + broken wheat grain (48 gm)+ sugar (2.0 gm and 2.0 ml. mustard oil) and place 10-15gm/ live burrow.</li> <li>✓ <b>Day 3:</b> 2.0% Zinc Phosphide* baiting during late evening with (crushed rice (48 gm) + broken wheat grain (48 gm) + Zinc Phosphide 2.0 gm and 2.0 ml. mustard oil, all mixed together) be placed inside the live burrow @ 6-10 g bait/ live burrow).</li> <li>✓ <b>Day 4:</b> Collection and burying of dead rodent. Close all burrows.</li> <li>✓ <b>Day 5:</b> Identification of live burrows.</li> <li>✓ <b>Day 6:</b> Fumigate live reopened burrows with Aluminum phosphide pellets @ 2 pellets/burrow or 5-10 g pouch/burrow and cover with wet mud.</li> </ul> <p><b>Precautions</b> : Since residual rodent population develops bait shyness after one baiting with Zinc Phosphide, a minimum of 50-60 days gap should be given before it is used again.</p> <ul style="list-style-type: none"> <li>✓ Since rodents are a serious constraint in horticulture their effective control is only possible, if farmers worked together as a community.</li> </ul> <p><i>Note: If treatment has been carried out during March then do not repeat during February.</i></p>
<b>Apiculture</b>	☞	<p>Opening of colonies for detailed examination</p> <p>To stop swarming by clipping the wings of queens</p> <p>Season ideal for multiplication, it should be done by encouraging the colonies.</p>

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## Plant Pathology (Horticulture)

### A Fruits

Apple	<i>Scab and other foliar diseases</i>	<b>- Spray at Pink bud stage</b> - Spray Mancozeb 75 WP (0.3%) or Propineb 70WP (0.3%) or Captan 50WP (0.3%) or Ziram 80WP (0.2%) or Dodine 65WP (0.06%) or Carbendazim 12% + Mancozeb 63% 75WP (0.25%) or Captan 70% + Hexaconazole 5% 75WP (0.05%) <b>- Spray at petal fall stage (60-70% petal fall)</b> - Difenaconazole 25EC (0.03%) or Flusilazole 40EC (0.02%) or Trifloxystrobin 25% + Tebuconazole 50% 75WG (0.04%)
	<i>Root rot</i>	- Drench tree basin of affected tree with Carbendazim 50 WP (0.1%) or Carbendazim 12% + Mancozeb 63% 75WP (0.5%). Apply fungicide suspension in 15-20 cm deep holes at a distance of 30 cm throughout the tree basin
	<i>Collar rot</i>	- Clean the affected collar area and apply Chaubatia or Bordeaux paste. - Drench the soil under tree canopy with Metalaxyl MZ 72WP (0.5%) or Mancozeb 75WP (0.6%) or Copper oxychloride 50 WP (0.6%)
Almond, plum, peach, apricot and cherry	<i>Foliar fungal disease</i>	- Spray Carbendazim 50WP (0.05%) or Thiophanate Methyl 70WP (0.05%) or Dodine 65WP (0.06%) or Captan 50WP (0.3%) at fruit let and 15-20 days after fruit let stage.
Pear	<i>Fabrea leaf &amp; fruit spot</i>	- Spray Thiophanate Methyl 70WP (0.05%) or Carbendazim 50WP (0.05%) or Mancozeb 75WP (0.3%) or chlorothalonil 75 WP (0.25%).
Grapes	<i>Anthracoise</i>	- Spray with Thiophanate Methyl 70 WP (0.05%) or Carbendazim 50WP (0.05%) or Carbendazim 12% + Mancozeb 63% 75WP (0.25%) or Captan 50WP (0.3%) or Mancozeb 75WP (0.3%) at pre flowering and fruit set stage.
	<i>Powdery mildew</i>	- Spray with Dinocap 48EC (0.05%) or Hexaconazole 5 EC (0.05%) or Flusilazole 40EC (0.02%) immediately after disease appearance.

#### **Impact Points:**

- ☞ Improve orchard sanitation
- ☞ Ensure proper aeration and drainage in orchards.
- ☞ Sticker like Sandovit @ 50-75 ml/100 liter may be added to fungicide suspension during rainy seasons (**stickers should not be used with Dodine**)
- ☞ Do not conduct sprayings during high temperature. Spray be conducted during evening hours.

### B Vegetables

Tomato, chilli, brinjal & capsicum	<i>Pre-emergence damping off</i>	- Prepare raised nursery beds and incorporate well decomposed FYM @ 20 tons / ha. - Treat the seeds with mancozeb 75 WP or captan 50 WP @ 3 g/kg seed before sowing.
	<i>Post-emergence damping off/ seedling blight</i>	- Drench the nursery beds with mancozeb 75 WP (2g) + carbendazim 50 WP (1g) in 1 lit. of water. Repeat drenching if needed after 10-12 days of first drenching. - Give light but frequent irrigation in the morning hours.
	<i>Wilt/root rot</i>	- Avoid water stagnation. - Dip seedling in carbendazim 50 WP (0.1%) for 30 minutes before transplanting

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## Vegetable Science

- Solanaceous *Sowing of seeds in open nursery* - Raised beds of convenient size (2m x 1m x 15 cm) may be thoroughly prepared for raising nursery.  
 - Add 40 g urea, 25 g each of DAP and MOP and 5-10 kg of well rotten FYM to the nursery bed and mix it thoroughly with the working soil

☞ **Impact points**

- ☞ The soil of the seed bed should be of good tilth not liable to crusting and free from weeds.
- ☞ Site for Nursery bed may be selected at sunny areas facing south.
- ☞ Pre-sowing treatment of seeds may be done with suitable fungicides.
- ☞ Mulching should be done to conserve moisture and to maintain the soil temperature.
- ☞ Avoid excessive application of nitrogen
- ☞ Avoid sowing of seeds too close line sowing should be adopted.

- All cucurbits *Sowing in main field* - Well prepared pits (50x80cm) may be made for sowing of seeds.  
 - Sufficient amount of ash and well rotten FYM may be applied to each pit and mixed thoroughly with the soil and then seeds may be sown at 2-3 cm depth.  
 - Before sowing of seeds, 20g each of urea, DAP & MOP may be mixed with the soil at each hill/mound.

- Beans* - Bush type beans may be sown.  
 - Apply 1-1.25 t FYM/kanal, 0.75 kg/kanal Urea, 6.5 kg/kanal DAP and 5 kg/kanal MOP. Apply entire FYM, DAP, MOP and ½ Urea at the time of sowing and other ½ Urea when true leaves emerge.

**Impact Points:**

- ☞ Soaking of seeds in water for 12 hrs should be done.
- ☞ 2-3 pre-soaked seeds may be sown in each pit.
- ☞ Sunny locations are strictly recommended for cucurbitaceous crops.
- ☞ Sowing may be done preferably on ridges to avoid rotting due to water stagnation.

- Cabbage, Knol khol and Kale *Transplanting of seedlings (from nursery beds)* - Thorough field preparation is needed.  
 - Divide the main field in to convenient sized plots keeping provision for smooth flow of irrigation water.  
 - Apply fertilizers to an area of one kanal at the following rates.

Crops	FYM (t/k)	Urea	DAP	MOP
		(Kg/k)		
Cabbage	1.25-1.5	13.75	6.50	5
Knol Khol	0.75-1.00	11.00	6.50	6.75
Saag	1.25-1.50	7.25	6.50	5

**Impact Points:**

- ☞ Seedlings should be subjected to hardening treatment prior to transplanting.
- ☞ Uproot healthy seedlings when bed is moist.
- ☞ Plant Knol khol at a spacing of 30x20 cm, Sag 30 x 15 cm & Cabbage 60 x 45 cm.
- ☞ Apply water regularly with rose cane till the plants are established in the field.
- ☞ Avoid weak, lanky, over-aged and diseased seedlings.
- ☞ Entire FYM, DAP, MOP and ½ Urea should be applied just before sowing and other ½ Urea 30 days after transplanting.

- Radish (Scarlet Globe table variety) *Sowing of seeds* - Radish seed sowing may be continued.

Kale, Knol khol, cabbage, carrot, onion turnip

*Seed crops of Rabi vegetables* - Apply 2<sup>nd</sup> dose of urea at flowering and mix it thoroughly with soil soon after weeding and hoeing.

**Impact Points:**

☞ Vertical cross cuts perpendicular to each other should be applied to cabbage for facilitation if seed stalk.

Potato *Earthing up* - Earthing up of potato should be done.  
 Table Radish in Potato *Intercropping* - Sowing of radish on the ridges of potato planted during the month of March  
 (Scarlet Globe)

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**Fruit Science**

**Orchard Operations** - If the fertilizer has not been applied yet, then apply it after fruit set, as per the message of March.

- Apply fertilizers to nursery plants.
- Go for mulching the fruit trees to restrict weed growth

**Hoeing and mulching of fruit trees** - Hoeing followed by mulching especially under Karewa conditions may be done with grass and other crop residues. This will also suppress weed growth and conserves moisture.

- Hoeing and weeding of nursery stocks.
- Remove suckers/weeds from the orchards.
- Scrap off dead bark and lichens from trees with bark scrapers and white wash with the following formulation.
  - o Hydrated Lime = 5 kg
  - o Copper sulphate = 310 gm
  - o Water = 100 litres
- Also add sticker for its efficacy.

**Orchard Sanitation** - Deshooting of grafted/ budded plants.

- Control the weeds in the orchards.

**Pollination** - Provide pollination by introducing bee hives @1/acre in the apple orchard when there is 10-15 per cent bloom or when king flowers open and 2 hives per acre in pear orchard when there is 25-30 per cent bloom.

- If pollinizer proportion is lacking in the orchard, go for the Bouquet's placement as a temporary measure
  - Spray Boron @ 0.1% at pink bud stage.
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**Floriculture and Landscape Architecture**

Winter care of Pot plants - Rotation of pot plants and proper mointering for moisture,diseaes and insect pests

Monitoring of Bulb storage - Mointering of stored bulbs of lilium etc

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**Livestock Production Management**

**Sheep**

- ❖ As lambing period is in last phase lambs should be taken care.
- ❖ Creep mixture (CP >20%) to lambs (15 days and above).
- ❖ Routine recording of body weight every week.
- ❖ Repeat Amprolium dosing to lambs and kids @ 1gm/5kg body wt after 21 days.
- ❖ Repeat MCC vaccination to lambs and kids after 15-21 days.
- ❖ FMD vaccination after 15-21 days of MCC.
- ❖ In lambs and kids, FMD vaccination after 15-21 days of 2<sup>nd</sup> dose of MCC booster.

- ❖ Broad spectrum anthelmintic dosing to flocks including lambs and kids (60-75 days age).
- ❖ Enhancement of grazing hours from 2<sup>nd</sup> wk with no supplementation.
- ❖ Shearing of livestock depending upon weather condition.
- ❖ Ectoparasidal dipping of livestock after shearing.

#### Cattle

FMD vaccination should be completed as soon as possible

Greens can be added but gradually after 2<sup>nd</sup> week of April

Feeding should be based on body weight and Stage of production.

Calcium and Magnesium deficiency should be taken care during early green feeding

#### Ration Table

❖ Animal	Concentrate	Hay	Greens
Cow (15l)	6 Kg	10-12 Kg (can be decreased as greens are available)	Gradually added
Pregnant cow	6 kg +0.5 kg	Do	

#### ❖ Homemade Concentrate

Feed ingredient	Parts
Wheat bran	20
Rice bran	15
Mustard oil cake	22
Maize	35
Molasses/Gur	5
Salts (mixture of iodized salt 1 part,	1
Mineral salts like ostocalcium/ Agrimin fort	2

### Veterinary Parasitology

Animal	Disease	Parasitological techniques	Recommendation
Cattle	Fasciolosis	- Faecal examination - Sedimentation	- Triclabendazole (Fasinex bolus ) @12 mg/Kg BW - Oxytoclozanide (Hexanide Bolus, Tolzan-F Susp; Zaniil Liq) @ 10-15 mg/ Kg BW
	GI Nematodosis	Faecal examination -Floatation	-Albendazole (Albomar Bolus, Albomar Susp) @ 7.5 mg/Kg BW -Fenbendazole (Fentas Bolus; Panacur Bolus, Curaminth Bolus, Fenbendazole susp) @ 7.5 mg/ Kg BW -Levamisole (Lemsol-75 inj-25mg/ml)--- 8 mg/Kg BW Levamisole + Oxytoclozanide (Fasmin bolus; Fasmin susp) @ 7.5 mg/Kg BW -Closantel (Zycloz Bolus, Zycloz soln) @ 10mg/Kg BW
	Cestode infection	Faecal examination - Sedimentation & floatation	-Praziquantel (Cestonil Tab) @ 5-7.5mg/Kg BW
	Tick	Body surface examination	Cypermethrin (Cyprol)- @1ml/ L of water- body spray -@5ml/L of water- back line spray - 20ml/L of water- Animal house spray -Amitraz (Tactic Soln12.5%w/v ) @2ml/L of water -Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW Flumethrin (Bayticol Pour-on) 20 ml per animal
	Lice	Body surface examination	Amitraz (Tactic Soln 12.5%w/v ) @2ml/L of water Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec,

			Neomec) @ 200µg/ Kg BW
	Mites infestation	Skin scraping examination - Direct and - KOH method	- Amitraz (Taktic Soln 12.5%w/v) @ 2ml/L of water - Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW
	Babesiosis	Blood smear examination - Giemsa stain	- Diminazene aceturate (Berenil) @ 3-5 mg/Kg BW- Deep IM
	Theileriosis	Blood smear examination - Giemsa stain	- Buparvaquone @ 2.5mg/Kg BW- Deep IM
Sheep & Goats	Fasciolosis	Faecal examination - Sedimentation	- Triclabendazole (Fasinex bolus) @ 10 mg/Kg BW - Oxytoclozanide (Hexanide Bolus, Tolzan-F Susp; Zanil Liq) @ 15 mg/ Kg BW
	GI Nematodosis	Faecal examination - Floatation	- Albendazole (Albomar Bolus, Albomar Susp;) 5mg/Kg BW - Fenbendazole (Fentas Bolus; Panacur Bolus, Curaminth Bolus, Fenbendazole Susp) @ 5 mg/ Kg BW Levamisole (Lemsol-75 inj-25mg/ml) -- 8 mg/Kg BW Levamisole + Oxytoclozanide ( Fasmin bolus; Fasmin susp) @ 7.5 mg/KgBW
	Haemonchosis	FAMACHA – Guide Chart	Closantel (Zycloz Bolus, Zycloz soln) @ 10mg/Kg BW
	Cestode infection	Faecal examination - Sedimentation & floatation	- Praziquantel (Cestonil Tab) @ 15 mg/Kg BW
	Babesiosis	Blood smear examination - Giemsa stain	Diminazine aceturate (Berenil) @ 3-5 mg/Kg BW- Deep IM
	Theileriosis	Blood smear examination - Giemsa stain	Buparvaquone @ 2.5mg/Kg BW- Deep IM
	Coccidiosis	Faecal examination - Floatation Clinical signs: - Diarrhea, poor growth, rough hair coat, pot-bellied appearance, and anorexia	Sulphadimidine (Pabadin bolus, Diadin bolus, Sulfamin bolus, sulphadin bolus, Sulphadimidine bolus (@ 140mg/ Kg BW orally for 3 days individually in lambs and kids Amprolium @ 25-45mg/Kg BW
	Tick infestation	Body surface examination	Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW
	Lice infestation	Body surface examination	Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW
	Mites infestation	Skin scraping examination - Direct and - KOH method	Amitraz (Taktic Soln 12.5%w/v) @ 4 ml/L of water Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW
Equines	GI Nematodosis	Faecal examination - Floatation	Mebendazole @ 8.8 mg/ Kg BW Fenbendazole (Fentas Bolus; Panacur Bolus, Curaminth Bolus, Fenbendazole susp) @ 7.5 mg/ Kg BW Oxfendazole @ 5 mg/KG BW

			Pyrethrin @ 19 mg/Kg BW Ivermectin/ Doramectin/ Moxidectin @ 200µg/ Kg BW
	Cestode infection	Faecal examination - Sedimentation & floatation	-Praziquantel (Cestonil Tab) @ 5-7.5mg/Kg BW -Niclosamide (Niclomar Tab) @ 200 mg/Kg BW Fenbendazole @ 10 mg/ Kg BW for 3-5 days Mebendazole @ 15-20 mg/ Kg BW for 5 days
	Tick	Body surface examination	-Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW -Deltramethrin (Butox 12.5 mg/ml) @ 2-3 ml/L of water
	Lice infestation	Body surface examination	-Deltramethrin (Butox 12.5 mg/ml) @ 4-6 ml/L of water -Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW
	Mites infestation	Skin scraping examination - Direct and - KOH method	-Ivermectin (Inj. Connectin, Endact, Ivectin, Ivomec, Neomec) @ 200µg/ Kg BW -Deltramethrin (Butox 12.5 mg/ml) @ 4-6 ml/L of water
<b>Poultry</b>			
Local Bird	GI Nematodosis	Faecal examination - Sedimentation & floatation	Fenbendazole 0.01% in feed Hygromycin 0.25% in feed
Broiler	Fly troubles/ maggots infestation	Visual observation	Larvadax (Feed premix for fly control- Cyromazine) @ 500g/ ton of feed
	Coccidiosis	Faecal examination - Floatation Clinical signs <b>Huddling,</b> Bloody/ watery whitish diarrhoea, dehydration, mortality etc. Postmortem - Caecal core, haemorrhagic enteritis, - Chocolate colour droppings, - Ballooning of intestine, - Ladder like appearance on intestine	Managemental control - Litter management <b>Use of chemicals:</b> ➤ Preventive medication (Through feed) – Coxidol 500g/ ton of feed ➤ Therapeutic medication ( Through water) Amprolium powder@ 30g/ 25 L of water , 30g/ 50 L water, 60g/ 25 L water in usual, mild and severe outbreaks <b>Shuttle programme:</b> Use of ionophores followed by non-ionophores in starter, growers and finisher within a crop. ▪ Coban: Stenorol: Clinacox ▪ Coxistac: Avatec ▪ Coxistac: Stenorol ▪ Coxistac: Clinacox <b>Rotational programme:</b> Regular change of drug after every two crops (it may be winter or summer programme) ▪ 1st rotation (May-August) - ionophore i.e. Coxistac ▪ 2nd rotation (September-December) - non-ionophore i.e. Clinacox ▪ 3rd rotation (January-April)- Ionophore and Non ionophore i.e. Coban: Stenorol

S/d

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