Danforth et al. (1976) compared the anticoccidial agent salinomycin (AHR-3096) at various treatment levels (60 to 100 p.p.m.) in two experiments against unmedicated and either 100 or 121 p.p.m. monensin-mediated groups to evaluate its performance under floor-pen conditions. Salinomycin at all treatment levels showed definite anticoccidial activity resulting in improved weights, feed conversion ratios, lesion scores, and mortality compared with unmedicated controls. In pens with severe coccidiosis, this compound demonstrated a significant improvement in all parameters when compared with the corresponding unmedicated controls. Salinomycin-treated pens exposed to coccidiosis usually had a numerical increase in the parameters over the unmedicated control groups. Statistical analysis of overall main effects on mortality, weight gain, and feed conversion ratio showed no significant differences between the activity of any level of salinomycin and monensin.

Chappel et al. (1978) evaluated salinomycin a broad spectrum ionophore anticoccidial, for toleration and efficacy at 60 ppm in the feed of broiler reared to weight under floor pen conditions. The related ionophore anticoccidials, monensin and lasalocid, were included for comparison at 100 and 75 ppm respectively. Salinomycin and monensin had equivalent lesion control which was statistically superior (P<.05) to lasalocid. In 4 of 5 trials, monensin had the poorest weight gain while lasalocid had the best; however, salinomycin and lasalocid could be differentiated from each other by this criteria in only 2 of the 5 trials. In one trial, the weight gain of all medicated treatments were statistically equivalent. There was no coccidiosis related mortality among medicated treatments, nor were there any differences in feed conversions among any of the treatments. Untoward drug effects were not observed at termination necropsy.

Morrison et al. (1978) designed three experiments to test the efficacy of salinomycin and stenorol against infection by various Eimeria species on cage reared broiler type chicks. Sixty parts per million salinomycin alone or in combination with 50 ppm 3 nitro significantly improved the index over basal treatments or when 3 nitro was used alone. The differences in index values recorded for coban and salinomycin were not significant. Broiler chickens reared in floor pens to 8 weeks showed a significant reduction in weight gain when the diet contained salinomycin +3 nitro or coban.
Stenorol at 3, 6, or 9 ppm. reduced body weight, with linear regression for this, effect being highly significant (P<.01). No coccidiosis was observed.

Yvore et al. (1980) tested Salinomycin (Coxistac) efficacy in broilers reared in floor pens at 60 and 80 ppm fed continuously from 1 to 56 days of age. One trial was conducted. Comparisons were made with unmedicated, infected and medicated, noninfected treatments (controls) in addition to infected treatments given either monensin at 100 ppm or halofuginone at 3 ppm continuously (days 1 to 56) in the feed. Coccidia exposure was obtained by infection via the feed. Salinomycin was highly efficacious at 60 ppm based upon improved performance, lesion score, hematocrit, and serum optical density compared with the unmedicated, infected group. Statistical analysis of main effects on weight gain, feed conversion ratio, hematocrit value, and serum optical density showed no significant differences between salinomycin, monensin, or halofuginone. The weight gain of birds given salinomycin at 80 ppm was depressed significantly (P<.01) at 56 days as a result of decreased feed consumption.

Keshavarz and McDougal. (1981) evaluated the effect of anticoccidial Drugs on Growth and Performance Depressing in Young Chickens. Monensin, lasalocid, salinomycin, nicarbazin, halofuginone, or arprinocid were fed to 1-week-old male broiler chicks at recommended levels and 1.5, 2, 2.5, and 3 times the recommended level, for 3 weeks. At the recommended level of drugs, growth and feed conversion were not significantly affected. At elevated drug levels, performance was impaired; the adverse effects of drugs became more pronounced with increasing the concentrations in the diets. Weight gain was significantly depressed at 1.5× with arprinocid, halofuginone, and salimomycin, at 1 to 2× with monensin, at 2× with lasalocid, and at 2.5× with nicarbazin. Feed conversion, however, was adversely affected by 2× with halofuginone or 2.5× with salinomycin, nicarbazin, arprinocid, monensin, or lasalocid. The results of the pair-feeding experiments with 2 to 3 times drug levels indicated that most of the growth depression with medicated diets could be attributed to reduced feed consumption, but all drugs except arprinocid caused some additional growth depression.

Boiadzhieva et al. (1984) test the effect of two coccidiostat, amprol and monensin, on the level of the Newcastle disease anti-hem agglutinins. The study made use of broiler
chickens of a four-line hybrid (Plymouth Rock x Cornish) treated with a Hitchner B vaccine. The drugs were admixed with the feed--amprol at the rate of 0.5 g/kg, and monensin at 1 g/kg throughout the entire experimental period. The level of antibodies was recorded by means of the IH level. Highest titers of anti-hemagglutinins were discovered in the group treated with monensin. The birds of this group had higher live weight as against the remaining birds.

Wheelhouse et al. (1985) conducted two experiments consecutively with male broilers and then female broilers to determine the effects of feeding salinomycin (60 ppm), monensin (99 ppm), or lasalocid (125 ppm) at the following three levels of dietary protein: 1) that which meets National Research Council specifications (NRC, 1977), 2) that level deficient in sulfur amino acids (SAA), or 3) that deficient in protein. Group body weights, feed intake, and water consumption were noted at 28 and 49 days of age with feed efficiency and overall mortalities determined. Generally, inclusion of coccidiostats in the diet did not significantly hinder growth or feed efficiency.

Harms et al. (1989) conducted two experiments to compare monensin and salinomycin on performance of broiler chicks when these compounds were added to the diet. Five levels of each coccidiostat were fed. Increasing the levels of coccidiostat resulted in a decrease in body weight and feed intake. The interaction of experiment x treatment was significant and was a result of the greater performance depression at the lower levels (manufacturers' recommended levels) of coccidiostat administered in the first experiment than in the second. This research points out the necessity of the accurate use of the coccidiostats.

Damron. (1994) conducted two experiments, each consisting of duplicate battery trials, utilizing day-old broiler chicks for a 21-d experimental period to study the effects of maximum or intermediate levels of several coccidiostats on water consumption and other performance variables. Drug levels given in Experiment 1 were: halofuginone, 2.97 mg/kg; amprolium and ethopabate, .025%; salinomycin, 66 mg/kg; monensin, 121 mg/kg; and lasalocid, 124 mg/kg. In Experiment 2, levels were: amprolium and ethopabate, .02%; salinomycin, 55 mg/kg; monensin, 99 mg/kg; and lasalocid, 110 mg/kg. Both experiments employed unmedicated control groups. Average final body weights, daily feed intake, and feed efficiency were not affected.
by treatment in either experiment. In Experiment 1, Water consumption to body weight and feed ratios were significantly greater for birds fed lasalocid than for any group other than those receiving amprolium. In Experiment 2, daily water intake of groups receiving 110 mg/kg lasalocid was significantly elevated over that of other coccidiostats and controls. This relationship was also present in calculations of water: body weight and feed ratios.

**Ahsan-ul-Haq et al. (1995)** indicated that use of various coccidiostat in the diet of broiler chicken improved weight gain and feed consumption significantly (P<0.05) with non-significant differences among the various coccidiostat used. The feed efficiency was not significantly affected. Economics of rearing broiler chicks was improved by use of coccidiostat.

**Ouart et al. (1995)** determine the influence of several coccidiostats on performance, water intake, and litter moisture of broiler chicks. The following/drugs and drug levels comprised the treatment: halofugino, 3mg/kg, salinomycin, 55mg/kg, salinomycin, 66mg/kg, monensin, 99mg/kg, monensin, 121mg/kg, lasalocid, 121mg/kg, lasalocid, and 124mg/kg. Treatment did not significantly affect feed conversion or mortality. Significant treatment by experiment interactions were found for 21-day body weight and for 21- and 42-day feed values, indicated that birds in some treatments performed differently over the two trials (one cool season and one warm season).

**McDougalet al. (1996)** studied the effects of 25 ppm semduramicin, 66 ppm salinomycin, 110 ppm monensin, and unmedicated treatments on performance, shank pigmentation, and coccidian lesion scores in broiler chickens were evaluated in two floor pen trials in the United States. Weight gain and feed conversion were significantly (P < or = 0.05) improved in the semduramicin-treated broilers in comparison with the monensin-treated and unmedicated broilers. These performance variables for the salinomycin-treated birds were intermediate between the semduramicin- and monensin-treated birds. All three drugs were comparable in controlling lesions in the ceca.

**Ramadanet al. (1997)** tested the anticoccidial activities of toltrazuril and halofuginone against *Eimeriatenella* in broiler chickens. Comparisons were made between unmedicated infected and uninfected control birds in addition to infected groups given either toltrazuril at 37.5, 75 and 150 ppm in the drinking water, or halofuginone at
1.5, 3 and 6 ppm in the feed. Both drugs were highly efficacious against *E tenella*. Treatment improved the bodyweight gain and survival percentage in comparison with the unmedicated, infected group. Intestinal lesions, faecal and oocyst scores and oocyst shedding in droppings were significantly reduced by both drugs. Toltrazuril gave better protection than halofuginone; 75 and 150 ppm toltrazuril in drinking water gave good protection when administered four and five days after inoculation.

**Mahmood et al. (2001)** determine the chemotherapeutic efficacy of lasalocid sodium, monensin and salinomycin against coccidiosis in day-old broilers (n=150) was determined. The birds were experimentally inoculated with mixed field isolates of *Eimeria* spp. (50,000 sporulated oocysts/bird). Lasalocidsodium (180 ppm) medicated birds had better feed conversion and consumption ratio, more weight gain and lower faecal oocyst counts compared to salinomycin (66 ppm) and monensin (130 ppm) medicated birds.

**Mukiibi-Mukaet al. (2001)** determined the efficacy of two synthetic anticoccidial drugs (amprolium and diclazuril) in naturally infected broiler chickens in Uganda. Oocyst counts indicated the level of infection. Both drugs were effective in controlling coccidia, although diclazuril was superior in reducing oocyst excretion. Diclazuril administered by oral route as opposed to in the feeds, the usual way, was effective. There were no weight gain differences between the treated and the control groups of the broilers up to the age of slaughter.

**Tipuett al. (2002)** compared the anticoccidial efficacy of a herb, neem fruit (*Azadirachtaindica*) with an ionophorus anticoccidial, Kokcisan (salinomycin sodium) against coccidiosis in broilers. Weight gain, feed consumption, oocysts in the faeces, clinical findings and mortality were recorded. The result revealed that the birds of non-infected non-medicated group had better (P<0.05) weight gain as compared to medicated groups. The birds of Salinomycin sodium group have better weight gain and feed efficiency as compared to other treated groups but the difference was non-significant (P>0.05). Moreover, neem fruit 150 gm/50 kg feed had excellent performance in terms of oocyst count and lower mortality as compared to other treated groups.

**Gigi and Lucy. (2002)** evaluated three anticoccidials viz. Amprolium hydrochloride, monensin and salinomycin at the rate of 125, 100 and 66 ppm respectively in feed, as
coccidiostats in broiler chicken based on feed conversion ratio and performance index-survival (%), ratio of mean gain (%) and faecal score (%). Salinomycin was found to be the best coccidiostat closely followed by monensin. Amprolium hydrochloride was not able to contain coccidiosis based on the above parameters.

Chapman et al. (2003) tested the timing and magnitude of a coccidian infection, by the numbers of oocysts of Eimeria present in the litter, were affected by the duration of medication. In birds medicated for 6 wk and infected at 35 d of age, fewer oocysts were produced than in birds medicated for 4 or 5 wk whether infected at 18 or 35 d of age. Feed conversion at 6, 7, and 8 wk of birds infected at 18 d and medicated for 6 wk was less than that of birds medicated for 4 or 5 wk. Birds infected at 35 d and medicated for 6 wk had a lower feed conversion than birds medicated for 5 wk. Immunity to Eimeriatenella had developed by 8 wk in birds medicated for 4, 5, or 6 wk if infected at 18 d of age. Immunity did not develop in those birds medicated for 6 wk when infected at 35 d.

Ebrahimnezhad and Purreza. (2005) studied the effect of ionospheres drugs (salinomycin, lasalocid and their combination) on the performance of broiler chicks. Also their relationship with methionine (three levels) was evaluated. (0, recommended and 1.5times recommended) of drugs and three levels (0, 0.1% and 0.2%) of supplemental methionine. The results indicated that these drugs reduced body weight gain significantly (P<0.05) at 21 and 56 days of the experiment. Increasing drug level significantly (P<0.05) reduced body weight gain and feed intake and feed conversion was increased at 21 to 42 and 0 to 56 days of the experiment. Interactions between drug type and drug level on body weight gain. The result showed that salinomycin was better than Lasalocid.

Abbas et al. (2006) evaluated Anticoccidial screening of Azadirachtaindica. Fruit (Neem) was carried out in broiler chickens naturally infected with a mixed Eimeria infection. Powdered Azadirachtaindica fruits were administered orally in doses of 10, 15 and 20 mg/Kg body weight and their water and methanol extracts in amounts equivalent to 20mg/Kg of the powder were also administered. As a control drug Amprol plus (R) was administered orally. The data suggest that single oral administration of 20mg/Kg of Azadirachtaindica fruits and their extracts in methanol and water in equivalent amounts are effective in controlling the Eimeria infection in
chickens. However, since at higher doses mortality was observed they should not be used alone for therapeutic purposes in the poultry birds but may be recommended perhaps in smaller amounts along with other herbal ingredient.

**Demirulus et al. (2006)** evaluated effect of salinomycin in broiler performance by add six level of salinomycin to feed (0,1,3,5,7,or 9 ppm respectively) for 49 days. Increasing the level resulted in decrease in body weight, feed intake, weight gain and feed efficiency. The highest body weight and nec weight and the best feed efficiency were obtained with 1 ppm salinomycin (p<0.05). The best viability rate (96%) was obtained with 3 ppm salinomycin (p<0.05).

**Tipu et al. (2006)** refers that the medicinal plants and herbs have been used for many years in the treatment of various diseases in animals and human beings. Now-a-days, utilization of these medicinal plants is increasing. These are used in animal feed as the growth promoters. Due to prohibition of most of the antimicrobial growth promoters in animal feed because of their residual effects, plant extracts are becoming more popular. They act as antibacterial, antioxidant, anticarcinogenic, antifungal, analgesic, insecticidal, anticoccidial and growth promoters. These plant extracts compete with the synthetic drugs. Majority of medicinal plants do not have the residual effects. Azadirachtindica, Zizyphus vulgaris, Ocimumgratissimum and Atlanta monophylla have the strong antibacterial activity, whereas ocimum plant has strong antioxidant, anticarcinogenic, antifungal, analgesic and antipyretic properties. Leaves of Azadirachta indica are used for feeding and reducing the parasitic load of animals. The fruit of Azadirachta indica also has the anticoccidial activity for poultry.

**Biu et al. (2006)** studied the efficacy of the aqueous neem leaf extract in comparison to amprolium showed that the aqueous extract dose of 800 mg/kg compared favourably with 10 mg/litre of amprolium in treating the disease, both showed 100% survival rates for infected and treated chickens with zero oocyst per gram at day 4 post treatment. Also, the mean weight (grams) of infected and treated chickens improved significantly (P<0.05) at day 7 post treatment.

**Johansene et al. (2007)** revealed that no effect of salinomycin on C. jejuni but Salinomycin significantly affected the composition of the microflora. In addition, salinomycin significantly reduced the prevalence of Clostridium perfringes and
observed a significantly increase (63%) in the mean body weight of salinomycin treated chickens compared to un–treated controls.

Pirali-kheirabadi et al. (2008) assessed the effects of coccidiostatic drugs on fecal oocyst shedding and body weight gain of coccidi-infected broiler chickens, 180 one day old Ross 308 broiler chicks were randomly assigned to four treatments. Each treatment contained 3 replicates of 15 chickens. Treatments 1 and 2 were fed diets supplemented with 200ppm Diclazuril and 500ppm Salinomycin, respectively. Treatments 3 and 4 were designated as positive and negative control, received no coccidiostate. The lowest FCR was belonged to negative control followed by chickens treated with Diclazuril. It could be concluded that coccidiostate-supplemented diets in Eimeria infected groups shed less (P<0.05) oocyst than control-infected chickens and improved production performance in coccidian infected.

Durrani et al (2008) investigated growth promoting and immunomodulatory effects of neem leaves’ infusion on broilers. One hundred and sixty day-old chicks were randomly divided into four groups, designated as A, B, C and D. Birds of group A, B and C were given 4% concentrated neem leaves’ (Azadirachta indica) infusion @ of 30ml, 40ml and 50ml L-1 of fresh drinking water respectively, and group D was kept as control. Mean feed and water intake were higher (P<0.05) in control group as compared to others. Group C exhibited better (P<0.05) mean body weight gain, feed conversion ratio (FCR) and dressing percentage. It was found that Neem (Azadirachta indica) infusion successfully improved antibody titer, growth performance and gross return at the level of 50 ml/liter of fresh drinking water.

Onyimony et al (2009) investigated The performance and economic indices of broilers fed varying dietary levels of sun dried Neem Leaf Meal (NLM using ninety ‘Ross’ unsexed two weeks old broilers. The birds were randomly assigned to five treatment groups of eighteen birds each in which NLM was incorporated at 0, 0.5, 1.0, 1.5 and 2% for treatments 1, 2, 3, 4 and 5 respectively. Results showed that treatment effect on Average Final Body Weight (AFBW), Average Daily Gain (ADG), Average Daily Feed Intake [ADFI] and Feed Ratio (FCR) were significant (P<0.05). Birds on the 0.5% NLM had significantly (P<0.05) superior AFBW, ADG and FCR... It is concluded that inclusion of 0.5% NLM in the diets of broilers will support optimum performance and economic benefit compared with probiotic.
Lee et al. (2009) compared the live oocystcoccidiosis vaccine Coccivac-B with the ionophoresalinomycin (Bio-Cox) for controlling field-strain Eimeria in broilers reared on 2 different dietary rations varying mostly in protein concentration. Broilers were reared to 50 d on a 4-phase feeding program. The dietary protein profile for diet A was 21.5% (starter), 20% (grower), 16.5% (finisher), and 15.75% (withdrawal), whereas diet B had a profile of 22% (starter), 19.6% (grower), 17.8% (finisher), and 17.5% (withdrawal). Significant differences in final BW were not observed with regard to diet or anticoccidial control method. Broilers fed diet B had improved ($P<0.05$) mortality-corrected FCR during the starter and finisher phases of rearing. Broilers fed salinomycin had lower ($P<0.05$) mortality-corrected FCR for the starter and grower phases, whereas vaccinated broilers had lower ($P<0.05$) mortality-corrected FCR during the withdrawal period. Cumulative FCR for the entire grow-out period were similar ($P>0.05$) for all groups.

Wankar et al. (2009) A experiment was conducted on 120 day old broiler chicks divided into four groups, T0, T1, T2 and T3 which were supplemented with neem leaf powder @ 0gm, 1gm, 2gm and 3gm/kg of broiler ration, respectively. Weekly observations were recorded for live body weight, weekly gain in weight, weekly feed consumption and feed efficiency of birds for six weeks. All the treatment groups recorded significantly (P<0.01) higher means for live body weight than that of control T0 group. All the treatment groups showed no significant increase in weekly gain in weight, feed consumption and feed efficiency as compared to that of control group.

Dinizet at. (2009) evaluated the association of salinomycin and semduramicin, in different doses, against controlled mixed infection of Eimeriaacervulina, E. maxima and E. tenella in broiler chickens. Performance data and lesion scores were recorded. All treated groups showed statistically better cumulative weight gain at 21 days old. The association of salinomycin and semduramicin used in lower doses than the usual, showed to be an option in the coccidiosis control in this experiment.

Rahmatian. (2010) tested efficacy of butyric acid, salinomysin sodium and litter moisture on performance and number of oocysts in broiler chickens. The experiment was a factorial design, with/without butyric acid (0/5 and 0%), with/without salinomysin sodium (0/3 and 0%) and 2 levels of moisture (33 and 77%) of the litter of experimental pens. The obtained results showed that no significantly difference
were observed in feed intake in starter and grower, weight gain in starter, grower and total periods, feed conversion ratio in starter, grower and total period and oocysts count in weeks 3, 5 and 6 (p > 0.05). Significantly difference were observed in feed intake in finisher, weight gain in finisher, feed conversion ratio in finisher and oocysts numbers in weeks 2 and 4 (p < 0.05). Base on this experiment results, the main effects of most parameters had no significant efficiency (p > 0.05). It is concluded that butyric acid and salinomysin sodium did not have clear positive effects on performance of broiler chickens.

Nidaullah et al. (2010) investigate the role of aqueous extract from Garlic (Allium sativum), Ginger (Zingiber officinal), Neem (Azadirachta indica) and Berberry (Berberislycium) fed in-mix for their effect upon growth performance, immunomostimulant and anticoccidial in broilers. Two hundred and forty chicks were randomly allocated in to four groups A, B, C and D, and further into two subgroups. Group A was treated as control, whereas group B, C and D were watered with the corresponding recipe: a mixture of aqueous extract from Garlic (Allium sativum), Ginger (Zingiber officinal), Neem (Azadirachta indica) and Berberry (Berberislycium). Recipe B consisted of aqueous extract of 2, 4, 1, 8; recipe C of 3, 5, 2, and 9 and recipe D of 4, 6, 3, and 10 g of Garlic (Allium sativum), Ginger (Zingiber officinal), Neem (Azadirachta indica) and Berberry (Berberislycium) respectively, mixed per liter drinking water. The experiment lasted for 35 days. Growth rate, immune performance against Newcastle disease, Infectious Bronchitis, Infectious bursal disease and Coccidiosis were response parameters. At the end of research trail, weight gain, feed consumption and feed conversion ratio (FCR) were non-significantly varied. Present findings suggest that aqueous mixed extract of medicinal plants is better for immunomodulatory response against ND, IB, and IBD and to reduce coccidialoocysts burden, without affecting growth of the broilers.

Toulah et al. (2010) compared the therapeutic efficacy of Neem herb in chicken experimentally infected with E. tenella with Baycox as a reference anticoccidial drug. 120 broiler chicks were enrolled, randomly divided to 4 groups, (A, B, C & D) non-infected non-treated (negative control), (B) infected with 10^4 E. tenella oocysts (infected control), (C) infected and treated with Baycox (7 mg/kg b.w. for 2 days) and (D) infected and treated with Neem leaves water extract (100 mg/kg b.w. for 9 days). Evaluation was by clinical signs, performance data (gain weight, food consumption
In addition to histopathological changes in all chickens. The results revealed that chicks of GA had the best performance data compared to GB, GC & GD. In GC & GD there were a remarkable improvement in the data performance. In contrast, Neem appeared to have a remarkable improvement on cecal integrity.

*Baba Ahmadiet al. (2010)* compared Quim coccid and pharm coccid with popular anti-coccidial drugs. Amperolium and monensiam. 4 groups each with 20 chikens, each group for one medication were convener by the study, comparing with two control groups (one E. tenella infected without treatment and the other a healthy non-infected group) without any treatments. Monensim dose was 100ppm and for the remaining 3 medications, 125ppm was the dose of choice. After the treatments, no anticoccidial drug receiving group demonstrated any clinical symptoms of blind intestinal coccidisis, a fact confirming the complete treatment of their infections. Furthermore, all the groups showed a 100% ability to continue their normal lives. No differences were found in the weight of chickens in each group. 20% of the infected chickens without treatment lost their lives.

*Santosh and Gupta. (2011)* evaluated the efficacies of leaf powders of Carica papaya (Papaya) and Azadirachta indica (Neem) separately and together were tested along with their effect on serum IgY levels against Eimeriatenella infection in broiler birds. Leaf powders (Papaya - 15 g/kg, Neem - 7 g/kg) were incorporated in feed from 8\textsuperscript{th} day of age onwards and all the birds except those in negative control group received 50,000 sporulatedoocysts of E. tenella on day 21\textsuperscript{st}. The efficacy criteria were based on weight gain, feed conversion ratio (FCR), oocyst counts, lesion scores and PCV. Indirect ELISA was employed to measure serum IgY levels. Both neem and papaya group’s recorded significantly lower mean lesion scores than positive control and their PCV values were insignificantly different from negative control. However, papaya + neem group proved to be the worst among treatment groups. This study clearly demonstrates the anticoccidial efficacy of C. papaya and A. indica leaves with a possible humoral immunomodulation of the former, whereas nonspecific toxicity of neem and seemingly antagonistic role of the combination appear to be the cause of concern.
Zanu et al. (2011) evaluate the effects of Neem (Azadirachtaindica) decoction (AID) and Akakapenpen (Rauvolfiavomitoria) decoction (RVD) on body weight gain, carcass and organ characteristics and haematological values of broiler chickens. The total replacement of antibiotics and coccidiostat resulted in non-significant depression (p<0.05) in final body weight and weight gain in experimental birds. However, feed intake was slightly affected (p<0.05) by administration of RVD to broilers. There was no significant effect of decoctions on water intake, feed conversion efficiency and mortality. Apart. This study suggests that AID and RVD replacement to antibiotics and coccidiostat may have beneficial effects on body weight gain and feed conversion efficiency. Total comparative profit derived from replacing.

Landy et al. (2011) examined the effect of neem (Azadirachtaindica) as an antibiotic growth promoter substitute on growth performance, carcass traits, and humoral immune responses in broiler chickens. Body weights of broilers were determined at d 1, 14, 28, and 42, feed intake was determined at the same periods, and feed conversion ratio was calculated accordingly. Birds fed 7 g neem/kg in the diet had the highest feed conversion ratio at 42 d, compared with other treatments. Daily feed intake, internal organ weights, and carcass traits were not influenced by the dietary treatments at d 42, the results indicate that supplementing broiler diet with 7 g neem/kg could induce favorable influences on immune responses of broilers without any adverse effect on growth performance.

Kandeel. (2011) evaluated the efficacy of amprolium and toltrazuril in cases of subclinical coccidiosis. Chicken were divided into three groups, either infected nontreated or infected and treated with 150 ppm amprolium (AMP) or 25 ppm toltrazuril (TOL). Body weight in the AMP- and TOL-treated birds significantly exceeded that of the control nontreated group at the end of the observation period. Mean difference in body weight was higher in the TOL group (+216 g) and the AMP group (+200 g) compared with the control infected nontreated group (P < 0.05). In all groups, there was no change in appetite and the fecal score remained low until day 16 post infection.

Abbaset al. (2011) evaluate the anticoccidial activity of the different concentrations of the HCl against Eimeriatenellainfection in broiler chickens in comparison with the amproliumanticoccidial. For this purpose, a total of 198 chicks were placed 11per pen
with three pens per treatment. Anticoccidial activity was evaluated on the basis of performance (weight gain, feed conversion ratio) and pathogenic (oocyst score, lesionscore and mortality %age) parameters. In summary, the lower doses of HCl have the potential to be used as alternative to chemotherapeutic drugs for *Eimeria tenella* control.

**Zaman et al. (2012)** evaluate the anticoccidial effect of different concentrations of the herbal complex of 4 plants (leaves of *Azadirachta indica* and *Nicotiana tabacum*, flowers of *Calotropis procera* and seeds of *Trachyspermum ammi*) in broiler chickens in comparison with amprolium anticoccidial. All groups were inoculated orally with 75000 sporulated oocysts on the 14th day of age except the non-infected, non-medicated control. Among herbal complex medicated groups, the maximum anticoccidial effect was seen in the group medicated with 6 g herbal complex followed by 4 g and 2 g herbal complex medicated groups. In summary, concentration-dependent anticoccidial activity of the studied herbal complex suggests its use as an alternative anticoccidial agent to chemotherapeutic drugs for *Eimeria tenella* control.

**Abdul Hameed et al. (2012)** assessed the effect of coccidiosis on different blood parameters and its therapeutic trials, a total of 180 quails of 2 weeks old were reared on coccidiostat free feed and of these 150 were experimentally induced with coccidiosis. The birds were divided into 6 groups (i.e. A, B, C, D, E, and F) of 30 birds each. Groups A and B were treated with Amprolium 20 % and Sulphadimidine sodium, respectively. The groups C and D were treated with Amprolium 20 % and Sulphadimidine sodium, respectively, and were also supplemented with Vitamin A and K. Group E was kept as positive control whereas healthy birds were kept in Group F as negative control. Feed conversion ratio (FCR), average weight gain and haemoglobin values of the birds were significantly improved in groups C and D as compared to other groups with highest haemoglobin value in group C. Amprolium with supplementation of Vitamin A and K was proved to be more effect coccidiosis in quails.

**Adeyemo and Akanmu. (2012)** studied the effects of neem and pawpaw leaves supplementation on performance and carcass characteristics of broiler chickens from 14–56 days of age. 360 one day-old unsexed Arbor acre broiler chickens were randomly allotted to the following diets T1 (0% leaf meal), T2 (0.5% NLM), T3 (2%...
Results obtained from the study indicated that supplementation of NLM and PLM improved the dressing percentages, Body weight gain, feed consumed and feed conversion ratio of the broiler chickens improved in the treatments fed diets supplemented with leaf meal although and there were no significant (P>0.05) differences

Bonsu et al. (2012) report that medicinal response, haematological parameters and meat sensory analysis of broilers to diets containing neem leaf meal (NLM) were studied in an 8-week trial. Body weight gain was significantly (P<0.05) depressed in birds fed the NLM diets when compared with the control which adversely affected the conversion efficiency ratio. Total profit was relatively higher for birds fed the NLM diets when compared with the control diet. It was concluded that NLM can be a good herbal medicine for broiler production aside its nutritional importance.

Hady and Zaki. (2012) assessed the effect of dietary incorporation of Azadirachtaindica (neem) and Artemisia annua (A.annua) at levels of 10 and 5% on broilers performance and anticoccidial potency against Eimeriatenella (E.tenella). A total of 210 day-old Cobb chicks were allocated to seven groups each of three replicates. The average body weight gains (BWG), feed intake (FI) and feed conversion ratio (FCR) were recorded all over the experimental period. The anticoccidial evaluation post E.tenella infection depended on bloody diarrhea, mortality rate, cecal lesion score as well as the oocyst excretion (OE). The results in the post-infection period (21–42 d) suggested that either neem (10%) or A.annua (5%) incorporation in broiler diet was able to alleviate the adverse effect of E.tenella infection. These results emphasis the importance of both herbal plants not only as natural anticoccidial additive but also as a promising cheap feedstuff to be incorporated in broiler diets.

Ansari et al. (2012) studied three different levels of Azadirachtaindica dried leaf meal, using diets supplemented with 0 (negative control), 1.25 g antibiotic/kg (positive control), 1.25, 2.5 and 5.0 g leaf meal/kg of feed. At 28 and 42 d BW and feed conversion ratio (FCR) were determined. At both 28 and 42 d, birds fed diets supplemented with 2.5 g/kg of leaf meal had significantly greater BW and better FCR than those fed diets with 1.25, 5.0 g/kg of leaf meal and controls. There was no
significant (p>0.05) difference between BW and FCR when birds fed diets 1.25, 5.0 g/kg of leaf meal and antibiotic (positive control) at any age. It may be concluded that A. indica leaf meal can be included in the diets of broiler chicks up to 2.5 g/kg without any deleterious effects on their performance, serum biochemical constituents and haematological indices. Moreover, the dietary supplementation of A. indica leaf meal may lead to the development of low-cholesterol chicken meat as demanded by health-conscious consumers

Nayakaet al. (2012) conducted an experiment to study the efficiency of inclusion of neem, turmeric, vitamin E and its combinations on humoral immune response against Newcastle virus and cell mediated immune response Dinitrochlorobenzene (DNCB) test neck and foot web for a period of six weeks with 288 day old Raja II broiler chicks. Basal diet was supplemented with Azadirachta indica (Neem @ 8g/kg feed), Curcuma longa (Turmeric @ 2g/kg feed) and Vitamin E (@ 0.2g/kg feed) individually and in combination to form eight test diets. Each test diet was fed ad libitum for 42 days. Results of Hemagglutination inhibition (HI) titer revealed a significant difference (P<0.05) among various treatment groups at 3rd week of age and remained non-significant at first and fifth week of age. Statistical analysis revealed a significant difference (P 0.05) in mean HI values of group fed with neem and its combination of turmeric (T5), vitamin E (T7) and combination of both turmeric and vitamin E (T8) when compared to control. However use of turmeric, vitamin E and its combination showed no significant effect on mean HI titer values, although numerically a positive impact was observed. DNCB test revealed that inclusion of neem, turmeric and Vitamin E significantly improved the cell mediated immune response in broilers either alone or in combination. However, combinations containing turmeric and vitamin E had better results compared to neem fed and control diet fed broilers.

Wekheet et al. (2012) used (90), day-old Anak broiler birds to evaluate the cost of medication in commercial broiler production in the tropics in a study that lasted eight weeks. Three treatment groups were involved in the experiment: A control (Nom edication), B (routine prophylaxis) and C (routine vaccination and continuous coccidiostat). Daily feed intake and weekly body weight were recorded. Results showed that significant (P<0.05) differences existed in weight gain, feed intake and feed conversion efficiency. Treatment C had better production indices than treatments A and B. Treatment C that recorded the highest cost of production/bird and relative
cost/bird gave better total sales, mortality and gross margin among other treatments. It is therefore concluded that cost of prophylaxis did not adversely affect the production cost and it is necessary so as to safeguard against any sporadic or enzootic diseases that might by chance attack the flock and cause unprecedented loss of cash and meat.

Obikaonu. (2012) conducted feeding trials for 28days to evaluate the nutritional value of Neem(Azadirachtaindica) leaf meal on the performance and economics of deep litter managed finisher broiler production. The neem leaves were harvested, air dried and milled to become neem leaf meal. It was included in the broiler finisher diets at 0,2.5,5.0,7.5 and 10% levels respectively. One hundred and fifty (150) finisher broiler birds were used for the experiment. The birds were divided into 5 groups. Body weight gain of the treatment birds decreased significantly (p<0.05) as the level of neem leaf meal increased. The control group recorded significantly (p<0.05) heavier body weight than the birds on the leaf meal diet. Feed conversion ratio and protein efficiency ratio were also affected by the treatments (p<0.05).The average total feed intake increased with increase in the level of leaf meal inclusion with T10 having the highest value. No mortality was recorded in all the treatment during the trial. Feed cost decreased as the level of neem leaf meal increased, withT10 recording the least cost. Costs per kg body weight gain increased as the level of Neem leaf meal inclusion increased because of their higher feed intake and lower growth rate.

Kyung Woo Lee et al. (2012) investigated the effects various coccidiosis control programs in combination with antibiotic growth promoters (AGPs) on growth performance and host immune responses in broiler chickens. The coccidiosis programs that were investigated included in ovococcidiosis vaccination (CVAC) with Inovocox or in-feed medication with diclazuril as Clinacox (CLIN) or salinomycin (SAL). The AGPs were virginiamycin or bacitracin methylene disalicylate plus roxarsone. As a negative control, chickens were non-vaccinated and fed with non-supplemented diets (NONE). The SAL group showed decreased body weight and reduced ConA-stimulated spleen cell proliferation compared with the CLIN and SAL groups. Collectively, these results suggest that in ovococcidiosis vaccination or coccidiostat drug medication programs in combination with AGPs influences chicken growth and immune status in an Eimeria-contaminated environment.
Ahaotu. (2013) determined the effect of anti-coccidials on the field isolates and laboratory strain of E. maxima. The five drugs tested were mixed in the feed and the level used in parts per million (ppm) were: Salinomycin (66pm), Monensin (121pm), Nicarbazin (125pm), ethopabate (40pm), now called amprolium + Lasalocid Birds were raised in batteries with continuous lighting and were fed and libitum 3 times daily. Each bird was weighted individually at (D-2, D, D+5, D+7 and D+14 (D=day of infection with sporulated oocysts). Of the five anticoccidial drugs studied, Amprolium plus ethopabate was found most efficacious. The least efficacious drugs were Nicarbazin and Lasalocid, whereas, Salinmycin and Monesin showed medium efficacy.

Obun et al. (2013) evaluated the effects of feeding graded levels (0, 5, 10, 15 and 20%) of Neem leaf meals (NM) to broiler chicks on live weights, carcass and organ weights and blood constituents was investigated. The results of the live weights and carcass and organ weights decreased with increased NM inclusion in the diets. Inclusion of 15% NM in broiler chicks’ diet had no adverse effects on live, carcass and organ weights and immunity responses. NM needs further treatment to improve inclusion levels beyond 15% in broilers’ diets.

Ahad et al. (2013) evaluate in vivo anticoccidial effects of aqueous extract of wild mushroom *Fomesfomentarius* in comparison to the reference drug amprolium against coccidiosis in broilers on the basis of oocysts per gram of faeces, weight gain and feed conversion ratio. This study showed that treatment with *F. fomentarius* resulted in a marked reduction in the number of coccidian oocysts shed in the faeces, leading to improved weight gain and better feed conversion ratio. The results confirmed the virulence of coccidian oocysts and the effectiveness of both amprolium and *F. fomentarius* extract against coccidian oocysts.

Vinay Kant. (2013) refered that Selection of an anticoccidial is based on the ability of the drug to improve weight and feed conversion and to suppress the development of lesions. The common anticocidials/class of anticoccidoals are ionophores, amprolium, sulphonamides, ethopabate, clopidol and quinolones

Selvaraniet al. (2014) evaluated of the efficacy of test anti- coccidial efficacy of salinomycin and amprolium carried out in two different trials in 228 commercial chicken revealed 100% efficacy against mixed eimeriasp on comparative evaluation
with stooded in feed anti - coccidials. There was marked reduction in the oocyst output with increased body weight gain and improved feed conversation efficiency in the experimental study.