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Ask the publishers to restore access to 500,000+ books. I’m DELIGHTED to announce the all-new Poultry Farming Project Hub. What is the Poultry Farming Project Hub? It’s a free library of 80+ resources (inc. PDFs) that equips you with all you need to know on how to start a poultry farming project… …including market research, production models, operational strategies, financial decision making and more. You can check out the brand new Poultry Farming Project Hub right here (click on the button below): VISIT THE POULTRY FARMING PROJECT HUB This custom resource library has over 20,501 words, 200+ rows of data tables, as well as 30+ screenshots/images, sample calculations, case studies and more. Should I start a poultry farming project? Every day, this website attracts enquiries from start-up entrepreneurs across the globe wanting to start up a poultry farm. And it’s no surprise. By 2019, global poultry farming was estimated to have reached US$ 231.5 billion, rising for the 3rd consecutive year (Source). Consistent growth, the mountainous volume of product… …all fueled by the climbing demand for this relatively affordable source of dietary protein. Is it looking to slow up? Not in the slightest. Here’s a quote from Nan-Dirk Mulder (senior analyst, animal protein, at Rabobank,) speaking at the International Production & Processing Expo in Atlanta 2019: “Worldwide, there will be 35 percent more demand for animal protein in the next 20 years. Poultry will see the largest increase, about 2 percent, while expansion for eggs will be 1.6 percent; seafood, 1.2 percent; beef, 1.1 percent; and pork, 1 percent.” So, We’re agreed – poultry farming is only on the rise. But what is the best approach for new entrant start-ups to get involved? You need to document your model project. Then a project management outline. Then to implement. Why write a model project? Poultry farming projects are investment vehicles. They require money, time and effort to get off the ground, But once airborne they have the potential to REALLY take flight financially and keep your income at high altitude. Even as a small scale backyard poultry entrepreneur you can make relatively high returns. Why? Because of the low maintenance nature of the rearing process with chicken in particular. The main advantage being the space needed to raise a flock. Even at a non-intensive level, it is recommended that each bird have only 1.93 sq. ft. of floor space. So, with both layer and broiler farming the ROI per sq. ft. is substantial. A very compact and economically efficient investment proposition. So, reason would have it you need a model project. Here are the benefits: discover the best model set some solid poultry project objectives calculate the feasibility find out if you have enough capital to go-ahead decide if a loan, grant, subsidy or zero-debt start-up is the best option secure investors schedule when the business should replace your salary estimate the exit value of your poultry project …ane much, much more! How do you write a poultry project model? There are two ways. The long way. The short way. The best without – the latter. (Trust me, I’ve actually tried both.) In January 2019, I attempted to write my own poultry project and found myself swimming up to the eyeballs in PDF, tables and samples. And I could make head nor tail of the information. The more I read, The more confused I became. So I decided to break it down to the bare grain. (It took while.) Then… …that moment, (*lightbulb* ) “I’ve got it!” And once I had “it”, I was able to build the small stuff all back up again into a much bigger picture. But this time with UNDERSTANDING. Now, I was faced with a critical choice to make… a) take what you’ve got and run for it!, or; b) turn back and make it my mission to help others on their way up. Suffice to say, Here I am to help YOU. I dug deep and began to research the best methods to teach beginners how to start their own poultry project. I found the answer fell into one category = DIGITAL. So, There I had it… I invested the following 12 months to develop an in-house project software that would help ANYONE across the globe: learn the principles behind what makes a successful poultry farming project understand the format that the professionals use learn the financial investment language of proposals help you find the most profitable model for you instantly provide egg or meat production charts automatically calculate ALL the key financials – at your fingertips ….PLUS, I designed the program to present all your project information in a premium quality PDF too! Then, take a look at this exclusive software offer… The ONLY ‘do-it-yourself poultry project writer’ with auto-calculations. In September 2020, I released it…the immediate response was GREAT. But, what I heard loud and clear from the first wave of feedback from customers and enquirers alike was: “WE NEED SUPPORT, TEMI!” So, Here I am (again), but this time with exactly that – SUPPORT. Here’s what I’ve come up with like a 1.0 version (and for all those early adopters, a 2.0 waiting to come out in quick succession too!) Introducing: The Poultry Farming Project Hub I’ve produced a FREE learning library which is custom made to help you plan a winning poultry farming project. It’s a multilayered, multidisciplinary, multifaceted…collection of 1st class with 80+ resources for helping you: gain confidence in planning your own project get step-by-step consultation on key factors for success examine EVERY small, but critical detail of proposal writing understand how to make your poultry farming project ATTRACTIVE compare your desk work against a gold standard This is currently what is on offer (AND growing): The Tutorial This is the glue that holds the entire offering together. In fact, it’s really a 1st class online digital eBook for gaining expert instruction in making a successful poultry project. It comes with 7 sections: Techno-Economic Parameters: Here’s where you’ll learn the key metrics and measurements which form the foundation for how your poultry farming project will function (in production and constraints). You’ll learn how to best align the key input and outputs of your project for optimal profitability. Research & Development (R&D): Learn the socio-economic factors which will certainly impact your poultry farming project one way or another. You’ll learn how the softer elements of project planning add significant weighting to the overall picture of investment viability. Model Options: I take you through the optional extras which collectively buffer the bottom line of any poultry project investment. You’ll learn the fundamentals of how to choose the most suitable poultry farm project options for matching your investment expectations. Location Factors: Learn how great an influence location has on the success of your poultry farming project. Not just agriculturally, but also strategically. You’ll learn how to select the most advantageous situation for staging your future poultry farming successes. Operational Strategy: Learn the key areas of focus for making the engine of your poultry farming project rev-up to maximal profitability. You’ll learn the inside track on how to gear up your project to deliver EXACTLY the kind of results you desire. Financial Management: Here’s where you’ll learn how to keep your poultry farm’s accounting totally LEGIT and understand the treatment that finance professionals apply to the business. You’ll learn the major (and minor) terms and how to read statements. Investment Decision Making: Learn to make financially successful investment decisions and identify (and write) the most attractive investment proposals. You’ll learn all the professional investment analysis tools, like benefit-cost, that bankers and investor use to decide who to back. The Breakdown Samples Everybody loves a good ol’ analytical breakdown. You know the stuff where you chew down the detail to the bare fibre, And absorb ALL the nutrition you could possibly have gotten. Here, I provide 20 snippets direct from my strategy case book. The goal? To help you gain expert insight into ‘how-to’ do this for your own poultry farming project. Questions which these poultry project samples answer include: “How do I choose the number of birds I need to meet my planned production capacity?” “How to do I write a plan to rear multiple flocks for greater profit?” “How do I calculate exactly how much feed a flock of (x) birds will consume?” “How much start-up capital will I need?” “How much money could I make from selling spent hens and manure for fertiliser?” “What will a 6-year project of income and profit look like for my poultry farming project?” “How do I know if I should invest in this poultry farming project?” Example Case Studies Case studies are great for bringing theory to life. Through them, you get a real flesh and bone feel for how ‘what you are reading’ might look like if you tried it on. This is the reason why I produced these detailed poultry project case studies. To kick off with – I present a 10,000 layer project: step-by-step, line-by-line everything you would expect in a professionally written project, here it is. In-Depth, Step-By-Step Email Course For more meat on the bone of how it’s done, I designed this email course for beginners and professionals alike to get an in-depth view on: what different project scenarios look like how changing from one production or model option to another affects investment return a close-up on how much money can REALLY be made, for what upfront input preparing the best models for achieving precise income targets Here’s a snippet: This excerpt is taken from “Advanced Poultry Pickup“ Q&A Forum I get emails on a daily basis from people around the world asking GREAT questions about their poultry farming project. The problem I’ve had to date is two-fold: a) not having the time to immediately answer all questions b) not having a way of queuing up all my questions so I can deal with them in order (when I get round to it) So, I came up with this idea… A section of The Big Book Project website which is dedicated to: fielding your poultry farming project questions…WHATEVER they are publishing my answers online so we can ALL benefit from the discussion giving others a chance to add their measure of insight or expertise! You can find the question form here. And for a current thread of questions and answers – visit the Q&A discussion page. Poultry Project Stories And finally, I’ve had (for some time now) a real desire to see your project ‘shout outs’ raise above the private email exchange and now get a place on this website. Quite often, I’m waking up to receive a really thoughtful update from someone in the early stages of their poultry farming project. Whether great or small, The time and enthusiasm shared for poultry farming always puts a smile on my face. I simply want to pass on the good pleasure and well-wishing. Want to share the story of your poultry farming project? Get sharing here. BONUS: Poultry Project Software I mentioned this software further up within this post, But here it is again (in case) you forgot to go back to it. It’s basically a web-based PDF fillable form that produces auto-caluclated presentations like this: Want to document your own professional poultry farming project in under 90 minutes? Get the software now. What do you think? I want to thank everyone who has visited this website and emailed me with a question or feedback, commented or just said ‘hi’ passing through. You’ve REALLY done wonderfully in helping me put this new resource together. And I’d really like to hear what you think about the new Poultry Farming Project Hub. Specifically, I’d like to know: What’s the #1 thing you want to learn about poultry farming right now? Also, I plan on adding MANY more helpful resources to the library in no time. So let me know what your topic ideas or suggestions are. 100%(1)100% found this document useful (1 vote)108 viewsThis document discusses considerations for the planning and design of farm buildings. It outlines various building types including general agricultural buildings, stock housing, poultry hous…SaveSave Architectural Design Studio III Farm Bui For Later100%100% found this document useful, undefined Designing a poultry house for 1000 chickens is a critical step in ensuring the success of your poultry farming venture. Whether you are a beginner or an experienced farmer, a well-designed poultry house provides a comfortable and healthy environment for your flock, leading to better productivity and overall welfare. In this step-by-step guide, we will take you through the process of designing a poultry house optimized for 1000 chickens, catering to the needs of both beginners and pro farmers. Also, I have included necessary poultry pen plan layout images, a video guide, and all you need to get your poultry house up for your birds. How to Design a Poultry House for 1000 Chickens: A Step-by-Step Guide Poultry House Design For 1000 Chickens Step 1: Assessing Your Requirements Before diving into the design process, you must assess your specific requirements. Consider the following factors: Number of Chickens: Determine the exact number of chickens you plan to house. In this case, it’s 1000 chickens. Read Also: [Beginners Guide] How To Start Ostrich Farming In ZambiaType of Chickens: Identify the type of chickens you’ll be raising (layers, broilers, or other breeds) as their housing needs may vary. Climate and Location: Understand the climate of your area to design a poultry house that can withstand local weather conditions. Read Also: [Beginners Guide] How To Build A Poultry House For Layers Step 2: Choosing the Right Poultry House Type Selecting the appropriate poultry house type is crucial for accommodating 1000 chickens efficiently. Consider the following options: Free-Range Poultry House: Provides outdoor access for chickens during the day, promoting natural behaviors. Requires sufficient land and may not be suitable for all locations. Layer House: Designed specifically for egg-laying hens, with nesting boxes, roosting perches, and feeding areas tailored to the needs of layers. Broiler House: Optimized for raising meat chickens, focusing on efficient space utilization and temperature control to maximize growth rates. poultry house plans for 100 chickens pdf Step 3: Designing the Layout Create a detailed layout for your poultry house, keeping the following points in mind: Space Requirements: Allocate at least 2 square feet per chicken to ensure sufficient room for movement and comfort. Feeding and Watering Systems: Position them strategically for easy access and maintenance. Ventilation: Ensure proper airflow and ventilation to prevent heat stress and respiratory issues. Nesting and Roosting Areas: Designate appropriate spaces for nesting and roosting to encourage natural behavior. Here Is A Video Guide To Help You Design A Poultry Pen For Your Birds Step 4: Material Selection Choose high-quality and durable materials for construction to ensure the longevity of the poultry house. This step is essential for both cost-effectiveness and the welfare of the chickens. Step 5: Ensuring Biosecurity Measures Implement strict biosecurity measures to prevent diseases and infections within the poultry house. This involves controlling access, regular cleaning, and disinfection protocols. Step 6: Incorporating Environmental Controls Install environmental controls, such as fans, curtains, and insulation, to regulate temperature and humidity inside the poultry house, creating a comfortable environment for the chickens. Read Also: [Beginners Guide] How to Start Pig Farming Zimbabwe Step 7: Considering Future Expansion Anticipate future growth and potential expansion of your poultry farm. Design the poultry house in a way that allows for easy scalability if you plan to increase the flock size later on. Here Is the Download Link To the Poultry House Plan Pdf Low-Cost Poultry House Plans for 1000 Chickens: Designing a low-cost poultry house for 1000 chickens involves using budget-friendly materials and simple yet effective layout designs. Utilizing recycled materials or locally available resources can help reduce expenses while ensuring the comfort and well-being of the flock. Strategic space planning and cost-efficient ventilation systems are essential considerations for a successful low-cost poultry house. Poultry House Plans for 5000 Chickens (PDF): Creating poultry house plans for 5000 chickens in PDF format requires meticulous attention to detail due to the larger scale of the operation. The plans should incorporate scalable designs, advanced environmental controls, and streamlined management practices. Proper zoning and segregation within the poultry house are also crucial to ensure effective disease control and optimal utilization of resources. Poultry House Plans for 10,000 Chickens (PDF): For a poultry house accommodating 10,000 chickens, PDF plans must encompass efficient space management, automated feeding systems, and state-of-the-art climate control solutions. Advanced technology and automation play a significant role in managing such large-scale operations effectively. Additionally, biosecurity measures and waste management strategies are of utmost importance to ensure the well-being of the flock. Poultry House Plans for 100 Chickens (PDF): Creating poultry house plans for 100 chickens in PDF format focuses on simplicity and practicality. The plans should include basic elements such as nesting boxes, perches, and feeding areas. Easy access for cleaning and maintenance is essential for small-scale poultry farming success. Small-Scale Poultry House Design (PDF): Small-scale poultry house design in PDF format should cater to the specific needs of backyard or homestead flocks. The plans should emphasize space optimization, appropriate insulation, and predator-proofing measures. The design should be easily adaptable and easy to construct for poultry keepers with limited resources. Read Also: How to Start Goat Farming Business in AustraliaRead Also: [DIY Guide] Poultry House Construction Guidelines Pdf Broiler Chicken House Plans for 100 Chickens (PDF): Broiler chicken house plans for 100 chickens in PDF format should prioritize rapid growth and efficient feeding. Proper ventilation and temperature control are crucial to achieving optimal growth rates. The plans should also consider waste management to maintain a clean and hygienic environment. 1000 Chicken House Size in Meters: A poultry house accommodating 1000 chickens typically ranges from 400 to 600 square meters in size. The exact size may vary based on the chosen poultry house design, space requirements, and management practices. Size of Poultry House for 1000 Birds: To house 1000 birds comfortably, the poultry house should have an approximate area of 800 to 1200 square feet. This size allows each chicken to have enough space to move around freely and promotes a healthier environment. How Much Space Do I Need for 1000 Chickens? For 1000 chickens, a minimum of 2000 square feet of space is recommended. Each chicken should have at least 2 square feet of space to ensure adequate movement and comfort. How Many Chickens Can Fit in a 10×10 Run? A 10×10 run can comfortably house around 25 to 30 chickens. This provides sufficient space for each chicken to move and interact without overcrowding. How Much Land Do You Need for 500 Chickens? To accommodate 500 chickens, you’ll need approximately 1000 to 1500 square feet of land. Providing each chicken with 2 to 3 square feet of space ensures their well-being. How Many Chickens Can Fit in 50 Square Feet? In 50 square feet, you can comfortably house around 10 to 15 chickens. This allows each chicken to have 3 to 5 square feet of space for movement and comfort. How Many Chickens Can You Put in a 4×8 Run? A 4×8 run can accommodate approximately 8 to 12 chickens. This ensures that each chicken has enough space to move around comfortably in the limited area. How much space do I need per chicken in a poultry house for 1000 chickens? It’s recommended to provide at least 2 square feet of space per chicken in a poultry house for 1000 chickens. Can I use the same poultry house for both layers and broilers? While it’s possible, it’s not ideal as the housing requirements for layers and broilers differ. Separate houses are recommended for better management. How often should I clean the poultry house? Regular cleaning and disinfection are essential to maintaining a healthy environment. The frequency depends on the number of chickens and the level of cleanliness required. Are there any specific building regulations for poultry houses? Building regulations may vary depending on your location. It’s crucial to check with local authorities to ensure compliance with relevant guidelines. What is the average lifespan of a well-constructed poultry house? With proper maintenance, a well-constructed poultry house can last for several years, generally around 15 to 20 years or more. Conclusion Designing a poultry house for 1000 chickens is a significant undertaking, but with a well-thought-out plan and attention to detail, it can be a rewarding investment. A properly designed poultry house not only ensures the health and productivity of your chickens but also contributes to the success of your poultry farming venture. You might already know that there are literally endless poultry house designs, structures, systems and sizes… But, what exactly are they? (All a bit of a maze, especially if you’re a poultry farming beginner). Well, I’ve saved you HOURS in rooting around the net because I’ve put together a complete list. Some are old and traditional. Others are built using more modern techniques. Others are innovative & experimental. But I’ve got them all right here. And I made sure this list is up-to-date for 2022. Let’s get started. Key Goals The comfort of birds is directly related to their growth and laying performance. Key features for success: (a) light, (b) stable temperature, (c) fresh air, (d) space & (e) security. Cost-effective: both in capital building cost, but also to maintain. Convenient and amenable for labourers to perform at their best and not be discouraged. Location Good water drainage to protect the foundations & keep the flock healthy Circulation of air for natural ventilation Not in a low pocket or hollow (to avoid cold air settling) Southern or southeastern alignment. Light loam to sandy soil for good drainage. Avoid heavy clay which holds water content. Tree protection or windbreaks to prevent direct drafts. Brooder Houses Definition: Brooder houses are houses for chicks of a day-old and upward. The first 7 days of care are the most critical days to get right when projecting the performance of broiler or layer chicken. Optimised for growth: chicks require conditions that will assist them best through their critical growth stages. Ventilated, but not draughty: helps chicks adopt suitable eating and drinking habits. At least, 1/3rd sq. ft each chick: providing ample space. Overcrowding kills and stunts performance. Ideally, a portable brooder house: to allow for siting adjustments for best results. Colony Brooder House (including plans) Definition: A portable house for brooder chicks. Portable and easy to use for tending to brooders: can be built to different sizes and height. Successfully used by the United States Animal Husbandry Experiment Farm, Beltsville, Maryland. 10′ x 14′ (feet) is ample space for 300-400 chicks: but for best results, no more than 300 chicks. Built on runners for ease of movement: pulled by a vehicle across your site. Ventilated by: openings on 3 sides and ventilating board under eaves (especially for the summertime). Rain guarded windows: hinged at the top and swing outwards. Faux-windows: made of transparent plastic, to allow in UV light. Removable lower sections of the house: for increase ventilation and direct sunlight in warmer months. Stove heated: with a metal collared chimney to prevent burning of the roof. Plus waterproof against rain. Long Brooder Houses An alternative to colony-style brooder houses, more robust for winter brooding. 16′ by 14 wide′ (feet): hot-water pipe design for winter months especially. An alternative heating system to hot-water-piping is a radiant panel. Used for rearing pullets after brooder age: they are reared here until they reach the point of lay. Made long enough for the desired capacity: but usually 75′ to 150′ (feet) long. Varying width: 14′ to 25′ (feet). Internally, the house is divided into pens: of 4′ to 6′ wide with an aisle at the end of the house. Concrete flooring: sanitary and rodent-proof & sloping concrete yards for cleaning ease. Heavy mesh wire layer just above floor: installed on frames for removal by cleaning. Concrete yard: for exposure of chicks to direct sunshine. Some poultry farmers choose not to provide the yard space: instead, they use cod liver oil feed supplement to complement the lack of sunshine. Laying Houses Purpose made houses for your laying flocks throughout their productive lives. Backyard laying houses: 12′ to 16′ (feet) deep only, because floor space is not that large Commercial sized laying houses: 18′ to 24′ (feet) deep, because of larger floor space. Deeper houses provide more comfort to layer birds: because deeper houses provide greater flock density which protects against draught. Where land is cheaper and climate is mild enough: colony style housing can be adopted successfully each house having a capacity for about 25 – 100 birds. Stationary laying houses are preferable for most medium to large farm and commercial-scale businesses: because of cheaper construction cost (single structure, rather than many), less land use (more compact layout) & less labour in looking after birds. Stationary laying houses support maximum yield egg production: feeding and management practices are optimised in this set-up vs. colony style. Breeding would favour colony style housing: to give breeders a rest in the winter by offering them a bit of range. This produces better quality hatching eggs. Typical stationary laying house features: single structures, long and continuous houses, either divided into sections or multi-storey (many floors). Stationary laying houses are usually, 2-6 storeys tall or 30′ to 60′ (feet) deep): they are capable of housing capacity of several thousand hens at a time. On average, 1 sq. ft. of window space for 50 sq. ft. of floor space: is a general rule of thumb for ample exposure to natural light. In many cases, large farm barn buildings can be remodelled into multi-storey stationary laying houses: this is in an effort to conserve land space and to avoid unnecessary construction costs. If kept confined in this house long term without range, hens will not do well unless: clean, well ventilated, dry, draught free. Conveniently proportioned for labourers: to stand, work unhindered – therefore, about 2.5 to 4.5 sq. ft. per bird is adequate. Floor space allocation should vary: according to the housing system, size of the flock, weather condition & size of birds. More birds can be kept in a smaller floor space: where free-range is given at times during the year and the climate is milder. With larger sized flocks, 3 sq. ft. per bird for Leghorns and 4 sq. ft. per bird for general-purpose: is ample allocation for good results. In milder climate, where birds are kept in colony housing and free-range is given: then 2.5 sq. ft. per bird for Leghorn and 3 sq. ft. per general-purpose bird is enough. Colony sized housing is appropriate for flocks of 30 – 50 hens: as this scale of structure can be moved about relatively easily. Larger numbers are best kept in a long laying house: as a single flock, rather than smaller mini-flocks. Caring for larger flocks is more economical: less duplication of labour (not having to enter into multiple houses). Single flock rearing system is more disease prone: because of a lesser controlled environment, less individual attention from attendants and more densely packed floor space. Yard and fences This is the outdoor space surrounding the poultry houses that must be secured and is sometimes offered to birds as range. Usually confined to yards next to the house: which gives enough range to roam without wandering too far – for more efficient/economic management. Separate your flock: they should not have any contact with other livestock or wildlife to minimise the scope for transmission of disease. Ample amounts of clean and green space can add great value quality of bird and egg: foraging opportunities, fresh air and room to roam a little help to keep birds comfortable. Many farms adopt a 100% confinement model for layers: to maximise egg production. Where you have good grassland, allow up to 220 to 260 sq. ft. per bird (more space for poorer grass quality): this grants each bird enough roaming room and foraging opportunity. Frequently cultivated, sandy soil can support as many as 1,000 birds per acre: enough green food or vegetation for birds to get optimum benefit. Ideally, provide both front and rear yarding with 125′ to 150′ (feet) of depth & as wide as the house: gives birds enough liberty to enjoy the yard space. Rear and front yards are given to alternate the use: as one is being sown, the other is being occupied by the flock. General-purpose and meat (broiler) breeds require fences of 5′ to 6′ (feet) high, and Leghorns 6′ to 7′ (feet): to provide enough security against them fleeing the coop. To make sure Leghorns are securely penned in, provide a 30-degree upwards slope on the far fence post: this ensures Leghorns don’t have enough take-off space to clear the fence. A bit of barbed wire also helps on top of the fence: as a deterrent to birds. Clipping flight feathers: really makes sure your birds remain grounded. Don’t set boards at the top of fences: hens will look to perch on them. Wooden posts should be 8′ to 10′ (feet) apart and fencing should be hexagonal poultry netting: otherwise 16′ to 20′ for woven wire. Corner posts should be about 8″ (inches) in diameter, driven 4′ (feet) deep and braced: for maximum strength and integrity of the fence. Line posts should be 4″ to 5″ (inches) in diameter and driven 3′ (feet) deep: to keep the fence standing strongly throughout all seasons. Treat post ends which are driven underground with creosote of like- treatment: will preserve against rot. As an alternative to wooden posts, it is advised smaller metal posts or pipe be used: 10′ (feet) apart, which give a more tidy appearance and can be driven more easily. Roofs Waterproof covering with ventilation benefits for all-weather protection of flocks. Well constructed and watertight: preventing the flock from being exposed to draft and rain. Shingle roofs not less than 1/3rd pitch (slant), but metal ones can be almost flat: because without a substantial run-off, water pooling can cause ingress and water seepage into the poultry house. Houses up to 20 ft. can adopt a single slant or shed roof shape: a girder in the middle offers just enough support to avoid sagging in the middle. Snowfall requires great girding: to enable the roof structure to successfully hold up under the additional weight. Combination or gable roofing is for houses between 16′ to 24′ (feet) wide: central peak offers 2 times the run-off potential of a single slant roof. Therefore the design can accommodate a wider scale. Monitor and semimonitor roofing are alternatives to gable slants: they provide similar structural benefit to A-frame housing. Shed type roof is cheaper than the combination rood: as it involves lesser materials and less labour. Plus, the combination roof looks better. Combination roof gives more headroom than shed design and better air circulation: because of the taller pitch in the middle. Gable roof is the most common type of roof for modern poultry housing: it offers the best air circulation and headroom. Gable roof at times is ventilated at the eaves with lath lattice: this allows for natural airflow provision for the flock. Semimonitor style roofing best suits very wide houses with a central alley: because it allows for more sunlight. Semimonitor faces south: so that the window openings face eastwards with the rising of the sun. Monitor style roofing has opposing windows: allowing for airflow and sunlight in from 2 different directions. Monitors laying houses can get drafty and cold: because of the double window exposure. Front and rear The poultry house often is built with outdoor access both to the front and rear of the house. In warmer climes, a completely open-sided design is adopted, whereas a partially open-sided building with curtains for cooler ones: preventing the flock from being exposed to draft and rain. Openings in the front of the house using glass or curtains: allow for adjustments to airflow and sunlight. Large glass area at the front of the house: acts as a heat trap – keeping things warm in the day and cold at night (because glass radiates heat naturally). Unbleached muslin cloth over the open side: keeps rain and wind out. For wider houses, use windows between the floor and the dropping boards: this provides ventilation for more densely packed flocks. Larger windows can be used for more exposure to sunlight, ventilation and distribution of litter material: this is because hens scratch litter away from the sunlight. Adjustable ventilation panels and weather shields just beneath the eaves: can be set to 45-degrees maximum and made to seal shut tightly to avoid sweeping rain entering the house. Double-wall construction provides better insulation: for cooler climates. The front of the house should be built high enough: to allow ample sunlight into the house even in the winter months. Windows and curtains should be arranged in such a way as to let in maximum direct sunlight when opened and raised: because this optimises the conversion of minerals within the body of the bird, amongst other performance benefits. Floors Poultry house flooring for birds, labourers and general ease of maintenance and cleanliness. Concrete flooring is best for stationary, permanent houses: they are sanitary, easy to clean, rat-proof, relatively inexpensive. Concrete flooring should be covered with litter: to maintain dryness and warmth for birds, where the flock has direct contact with the floor (i.e. not caged). Lumber flooring is best used where the floor is 1.5 to 3 inches above ground level or where the ground is uneven: lower space between ground and floor makes harbours for rats, and is prone to rot. Board flooring should be raised high enough for air circulation: this adds a further source of ventilation for your flock, plus this keeps the floor dry. This style of flooring is common in portable houses. Dirt floors should be avoided: they are dusty which pollutes the air quality and unsanitary. Plus, litter doesn’t last as long on these compared with concrete or board floors. Partitions Dividing up the poultry house space into smaller compartments for better environmental control In long permanent poultry houses, build partitions every 40 ft. of length: to prevent drafts affecting the flocks. Also, roosts should be partitioned every 20 ft.: from the droppings board to the roof. Partitioning the house space also prevents overcrowding: as birds are physically encouraged to break up the flock throughout the house. Roost and dropping boards Internal fixtures and fittings of the birdhouses that encourage natural behaviour and collect droppings Anthracene oil or another preservative will kill insects: keeping your flock’s environment free from invasion. Roosts are placed near the back wall and 6″ to 8″ (inches) above the dropping board: hinged for ease of cleaning and infecting. Provide 7″ (inches) of roosting space per Leghorn bird and 10″ (inches) per Plymouth Rock: plus have roosts all at the same level, or else birds will fight to occupy the highest roost. Provide 3 roosts per 16′ ft. length of house, or 5 roosts in houses 20′ to 25′ (feet) deep: this gives enough variety of space use that you avoid the effects of overcrowding. For Leghorns, build roosts that are 13″ (inches) apart and 15″ apart for Plymouth Rock: but outer roosts should be at least within 19″ (inches) of the droppings board beneath. Guard the birds against reaching the dropping boards: by placing 1.5-inch mesh netting immediately beneath the roosts. This way you avoid the chicken pecking at their own waste and ingesting worm eggs often found in droppings. Materials for building Commonly accessible materials for building poultry houses with an affordable budget. Wood is the most versatile material for building poultry houses: it’s cheap, can be torn down relatively easily, or changed when compared with brick, hollow tile or concrete. Lumber must be: durable & seasoned – if for outside. (Second hand or used lumber can also be used). Hollow tile is cost-effective compared with wood and durable: a very good choice for buildings that require insulated walls, like brooder houses or incubator cellars. Concrete houses are to be avoided: because they are, by nature, cold and wet. Framework Structural orientation of the poultry house and the assembly of its parts for best results. Sills: support the building. Studs or uprights: rest on the sills. Plates: lay on top of the studs. Rafters: rest on top of the plates. Sills are placed on concrete supports, concrete walls or wooden posts: for stability. Wooden posts: should be 6″ to 8″ (inches) diameter, 6′ to 8′ (feet) apart and 2′ to 3′ (feet) in the ground/ below frost level. And they preferably should be made from cedar, locust, chestnut, redwood and cypress. Concrete posts: are more durable than wooden ones. Dimensions of the sills will differ depending on the size of the buildings: 2″ by 4″ and of lighter material for colony style or single-wall construction, or 4″ by 4″ (inches) for a larger house or on with double-wall construction. 4″ by 6″ (inches) for 2-storey birdhouses. Planting the sills closer together for heavier buildings (or lighter material of sill): provides more structural integrity and strength. Concrete wall foundations should be adopted for larger houses: in such cases, the sills are bolted into the concrete. For portable houses, use runner 3″ by 4″ (inches) or 4″ by 6″ (inches) as sills: the corners require extra bracing to resist snapping or shearing when moved. Floor joists should be 2″ by 4″ (inches) or 2″ by 6″ (inches), depending on the span: they should be fitted 16″ to 20″ apart from one another. If the floor span is more than 10′ (feet) then central support should be used for the joists. Rafters are chosen according to the load requirement of the roof and span: 2″ by 4″ (inches) for lighter buildings where the clear span is not more than 12 ′ (feet) and 2″ by 5″ (inches) for longer roofs and where a snow load is expected. Purlins and girders should be used where rafters are more than 12′ (feet) long: purlins are usually 2″ by 6″ (inches) and set on the edge of posts as supports for the roof. They are placed lengthwise of the house and about halfway along the rafter they relate to. In ridged-roofed designs, a board is placed between the end of rafters: this keeps the ridge straight and even. Collar beams and crossties should be fitted, with dimension 1″ by 6″ (inches): to prevent splaying of rafters on gable or combination roofs. Position these collar beams and crossties as low as possible as to gird maximally, but not to interfere with headroom for labourers. If hens roost on them, cover the space between beams and rafters with wire netting. Rafters cut 2′ (feet) apart from centre to centre: to avoid wastage of roof boards when cut. Floors Type of alternative flooring for the poultry house – materials and designs for differing circumstances. Concrete flooring must not be laid in direct contact with the ground: otherwise, the floors will be damp and cold, leading to bird discomfort and perhaps disease. To combat this, install flooring on a deep and porous foundation and well insulated. An even and complete floor coverage with litter should be used: this helps to keep the floor dry and warmer for the birds. Best practice for concrete flooring: lay tamped compact foundation of cinders, broken stone or gravel, approximately 6″ (inches) deep, with 3″ to 4″ (inches) of cement flooring on top. Between the two layers (the foundation and the cement floor) it is advised that an impermeable layer of tarred building paper inserted. This prevents moisture from rising up from the ground and getting into the concrete, thus making the floor damp. Best practice for wooden flooring: lay single thickness matched flooring in milder conditions and climates. In cooler climates, use double floor layering, with lower layer boards set diagonally and tight: the space between layers and building paper will help to insulate and prevent damp absorption. Walls Upright structures for upholding the integrity of the building. Mostly, single-walled and nailed directly into the studs: this provides a good combination of optimal cost-effectiveness and satisfactory strength. In colder climates, use double-thickness walls with space in between and also a layer of building paper over sheathing: this adds to insulation, heat retention and thermal efficiency. Lumber of 2.5″ to 6″ (inches) thick should be used: because boards are likely to shrink a lot – even to produce cracks. The lowest board on the wall should extend beyond the sill: this makes sure the joint is entirely covered. Tight joints at the eaves: by cutting off the rafters with the rear wall and also covering the joint with roofing paper. Shutters under the eaves: allow for better ventilation in summer months and hot climates. Roofs Weatherproof, thermal efficient roofing design for poultry houses. 3-ply sheeting on the roof: to prevent heat loss. Planed on one side and laid close together: smooth side up helps you lay on prepared roofing successfully. Sheathing paper between sheaths and layers: this improves insulation and waterproofing. A slope of 1″ (inch) or more to the foot: to prevent pooling of rainwater, by quick run-off. The steeper the slant, the longer-lasting the roof: because it endures less weathering by preventing pooling of water. A good way of sealing off the end of the roofing paper is to bend them under the heating layer: this prevents the tracking in of rainwater into the roofing structure by capillary action at the edges of the roof sheathing. Paints and whitewash A covering for the inside and outside of poultry houses giving a clean, hygienic and crisp finish. Layer of paint (on the inside and outside) of the poultry house: adds a clean appearance and durability. Primer coat half paint and half linseed oil: is thoroughly brushed into the wood, to protect against moisture. Spread whitewash lightly and evenly: for complete coverage. Artificial lights Artificial lights are required to compensate for the lack of natural light in darker, winter months. Give hens 12 – 14 hour days with artificial lighting to extend winter months: this increases the proportion of eggs laid in winter months (but not increasing the total egg output of the farm). 40-watt lamps 10′ (feet) apart, with 2 lights in a pen of twenty sq. ft. : for even and satisfactory distribution of light. 6′ (feet) high with reflectors of 16″ (inches) in diameter and 4″ (inches) deep: for the appropriate intensity of light for flocks. Greatest concentration of light should be on the mash hoppers and water dispensers: to encourage correct patterns of feeding in the flock. Lights can be programmed on a timer: to ensure automated delivery of artificial lighting and reducing man-power labour hours. Artificial heating Power-generated heating for the correct running of flock management including watering and normal usage of the entire floor space Prevent freezing of water and keeping the house dry from damp and moisture: this ensures the folk is well watered, maintaining good feeding habits and that disease from damp does not occur. Well structured and insulated poultry houses ought to be artificially heated: or else it proves too costly and inefficient. Typical methods of artificial heating: hot water system, electrical panel heaters or stoves fueled with coal briquettes. Insulation of walls and roofs An additional layer that traps heat (reduces heat loss) laterally and vertically. Double walls for insulation: preventing sudden changes in temperature or sharp gradient. Plus, is a reducer to condensation. Ventilation Planned airflow system for the poultry house, helping flock obtain good quality of air aiding performance. Usually controlled by openings in the front of houses: this plus the rafters is usually more than enough to raise a flock successfully. No. (or frequency) or openings: is dependent on exactly how much ventilation is required for the climate, or flock density. Best practice for poultry house ventilation via openings & windows: 4″ to 18″ (inches) wide and high up in the front and back of the house. This is enough to avoid condensation moisture but still allow enough heat retention. On cold nights: rafter ventilation is all you need. Ventilator flues: are advised for houses with 24′ (feet) depth or more, and where walls are insulated. 1 sq. ft. of flue are for 100 hens. Flues should be just in front of droppings boards. Flues built with a slide to adjust depending on the weather. Fixtures & equipment Nests, hoppers and drinkers – anything that would be provided to enable normal bird behaviour and facilitate performance. Avoid excessive items: otherwise interferes with bird behaviour, hinders the job of the labourers, adds unnecessary capital cost and makes cleaning more difficult. Nests Small, comfortable niches where hens can rest, lay and sleep. Location: placed on end walls or partitions & high enough that birds can work beneath them. User-friendly: arranged so then the hens can easily get into them. Dimensions & design: about 12″ to 14″ (inches) square, about 12″ (inches) high and a lip of about 4″ (inches) at the door to prevent litter from escaping or spilling out. Distribution: 1 nest for every 4 to 5 hens. Style: darkened nests for the minimal egg-eating habit of hens. Dry mash hoppers Eating containers for birds to gather and economically receive their feed. Key benefits: minimal wastage of feed, keep litter and dirt out. This keeps your birds performing and growing a peak performance. Size: long enough to enable birds to eat with ample space and from both sides. 1′ to 1.5′ (feet) long for every 10 birds. Small sections added for shell and grit: to encourage these good eating behaviours. Small open troughs: are great for small birds and chicks and getting their feeding 2 to 4 birds at a time. Drinking Stations Drinking apparatus for birds to gather around and get refreshed. Placed on platforms: to keep the dispensers sanitary and free from dust/dirt. Also, put slats on the floor of the platform to allow droppings to fall through for easy collection. Poultry Farm Layout These are just some of the practically useful poultry farm layout examples on the internet. I pulled them together for your viewing pleasure and benefit, so to speak. One man 10-acre poultry farm: well-organised use of space for using a 10-acre plot and running a layer and breeder farm, with free-range access to crops for foraging. Natural windbreakers and orientation for sunlight etc. Broiler farm layout with feed mill: a good example of spatially organising a simple commercial broiler farm, complete with feed mill and incinerators. I like the fact this plan details recommended distances between structures on-site. Buttercup Poultry Farm Poster: a useful artist’s impression of what a 200,000 layer farm would have been laid out like in the 1920s, for example. From the picture, you can only imagine that the smaller brown huts are where the brooder colony style houses were sited and perhaps where the pullets were kept. Layers, of course, were in the large houses. 1+3 layer hen system and 4+1 broiler system: ever wanted to know what the layout plans would look like for your favourite layer hen or broiler rearing system? This is a simplified sketch (which needs LOTS of zooming up) that helps puts things into perspective for your poultry farm project report. Norfolk Black 40,000 bird free-range farm plans: according to Norfolk Black Chicken (www.norfolkblackchicken.com) this bird is:

ones above. Therefore, their reserves need continual replenishment to maintain an ‘even keel’ so to speak in production of eggs and chicken meat. Protein being a general term for the classification of nutrient can be further broken down into constituent parts, known as amino acids. A quick comparison would be… To look at proteins as whole words which could be grouped together as protein complexes to make sentences… If you understand this, it follows that: Amino acids are like the alphabet letters which make up the words (proteins). Get the right sequence of letters, you can make up the right words and your communication is clear. Get the wrong letters and you are unable to make the right words and your communication is deficient. The same applies to the relationship between proteins, their composite amino acids and the complexes which proteins assemble to make. Think of Scrabble… And a chicken’s body continually searching for the right letters to make the necessary words… And sentences… To output the desired results. Further reading: Fish Feed Technology – FAO The source of a chicken’s protein should be varied. Grains generally contain 8-9% of crude protein (barley and sorghum) whilst higher protein content can be found in wheat, oats and triticale at 12%, according to the FAO. Other reliable sources of dietary protein for poultry are: vegetable oils such as in palm kernel cake, legumes like chickpea, cowpea and mungbean, and fish meal. More precisely, the essential amino acids in poultry are (in no particular order): Arginine, Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan and Valine According to studies, the most critical to get right in your poultry feed formulation are: Lysine and Methionine. Why? They impact the growth rate of broilers & also egg production in layers most significantly. Deficiency in these translate to under production… Excess of protein equally reduces production yield, overloading their bodies… Therefore damaging your poultry business profits considerably. [B] Carbohydrates & Fats in poultry nutrition Carbs and fat are the fuel to keep things going for your chicken. Much like other types of fuel, like with vehicles for example, the importance is in it’s value for energy conversion. In the case of poultry feed, metabolisable energy (ME) is a common phrase used to define the comparative energy content of feed. The official definition of metabolisable energy (ME): “(ME)…represents the energy available for growth or reproduction and for supporting metabolic processes such as work (locomotion) and respiration [expressed as KCal per kilo of feed]” Further reading: Metabolisable Energy (ME) – Encyclopedia of Marine Mammals (Second Edition), 2009 This ME is the critical content value of feed which dictates intake. More KCal availability, the less fuel needed to keep things going optimally within the bird’s body. Less KCal availability, the more fuel needed…increasing feed intake. Certain fuel release more drive than others. Alongside protein content, this Kcal or calorie measure is equally touted as a leading measure indicative of poultry feed quality. This relationship is coined as C:P ratio. This is a balance which needs keenly calibrating according to factors such as: …typically, hotter climates and presence of disease decrease feed intake amongst birds. It is necessary therefore in decrease the ME or energy content of the feed… To conversely increase the overall quality of nutritional uptake. Again, it’s a fine balance, which requires experience to get right. [C] Vitamins in poultry nutrition Vitamins are integral biochemical factors for maintaining optimal conditions for mission critical functions like: Metabolism. Metabolism is the driver for growth and adds strength to body and egg integrity. These vitamins are both naturally occurring and can be added via supplements. How are vitamins grouped or classed? Typically, they are classified as either: water soluble, or; B complex …thiamin (B1), riboflavin (B2), niacin, pantothenic acid, pyridoxine, biotin, choline, folic acid and cobalamine (B12) Vitamin C fat soluble; Vitamin A Vitamin D Vitamin E Vitamin K Which of these are the most important vitamins for poultry weight gain and egg production? Vitamins, A, B2 and D3. [D] Minerals in poultry nutrition Minerals are a universal factor in the process of producing tissues such as bone, blood, egg shell and meat in the chicken’s body. Minerals are a common supplementary addition to poultry feed diets. “Macro”, “Micro” and “Trace” are all pretexts used regarding dietary minerals – referring to their respective amounts require…Macro being the most in demand and trace being the least. Calcium in particular is in heavy demand in broiler and layer egg production for bone and shell production respectively. How do you calculate if your flocks are getting enough nutrition? Poultry feed nutrition is usually estimated according to overall weight of feed of a particular composition. Broilers and layers each have differing levels of optimal nutritional demand. Significant proportions of total nutritional value of poultry feed can go underutilised due to: loss during storage destruction in the digestive tract …as a consequence it is common practice to account for this loss in the buffering of an extra margin of nutritional content in feed mixes. Costs vs. benefits of formulating your own poultry feed As stated earlier, due to the disproportionate level of cost due to poultry feed… There is great economic benefit to be gained if you hit upon a winning formula. As a baseline of nutrition content of poultry feed, we reference the following table: Further reading: Good practices in planning and management of integrated commercial poultry production in South Asia – FAO The above ingredients contribute the usual commercial poultry feed mix – commonly found in most marketplaces. The items themselves are interchangeable with alternatives of similar content. As for what substitutions work best… There are no hard and fast rules. Each geographic location will benefit from it’s own profile characteristics of readily available poultry feed substitute ingredients… Success in this field of alternative ingredient sourcing is dependant upon: Resourcefulness. Taking the castoffs and waste/by-products of other production processes in the locality can provide… A rich source of relatively cheaper ingredients with yet equivalent nutritional quality. Not only can this drastically reduce poultry feed costs, but also medicines and supplements costs. Are there any hidden costs to acquiring alternative poultry feed ingredients for a homemade mix? Yes. Sourcing and preparing ingredients for your own homemade poultry feed mix takes additional time and effort. This hidden cost must be factored into the eventual ROI estimation. Also, reduced cash flow although increased profit may still be a stifling circumstance. Why? Because where raw materials are found locally, although they can be charged at lower prices… They are usually sold at very high wholesale volumes, which make it prohibitive to access for many micro poultry farmers, whose budgets are strictly tight. Whilst relative cost of said alternative ingredients might be lower than that of commercial feed… Where minimum order quantities exceed many tens of metric tonnes, the deal cost might be out of reach. Feasibility of establishing a long term strategy for in-house feed production will be on the basis of access to raw materials. Taking A Trial & Error Approach To Formulating Poultry Feed Whilst there isn’t necessarily a right and wrong to how one ought to go about formulating poultry feed… The advised approach would be to adhere to nutritional best practices… Whilst having a: Trial and error, or experimental attitude. In other words… Exercising artistic license, yet remaining… Under the governance of a well grounded and principled understanding of the optimal input needs of your birds. Given all the detailed nutritional demands discussed above, there are 2 ways of formulating your first trial mix: Manually by long-hand calculation, Or; Assisted (by the use of a calculator…I know which my maths teacher would have preferred!) Not negating that custom programmed software (like this patent) & Excel [.xls] spreadsheet calculators have their place, we mustn’t overlook the strength of being able to do the calculations ourselves. N.B. In this guide we simply want to lay out the practicality of approach, rather than any science of formulation – in order to lay a basis of understanding. In a further knowledge base post, we will outline clearly the methods used by professional nutritionists for formulating feed mixes. So what are the recommended principals to preparing your own poultry feed formula trial: Once you’ve assessed within your local market the ready availability of alternative feed ingredients… The next step is to assess the relative nutritional make-up of each raw material. The composite make-up of the overall balance being the final/actual nutritional benefit given to your birds. *Remember the key nutrient goals of: protein, energy, lysine and; methionine …complimented with the recommended amounts of mineral and vitamin content, your first experimental feed mix should be about ready to serve up. But… Remember always to audit the final mix to make sure you’re not imbalanced, knowing the knock on effects will be deleterious to business. If need be, keep tweaking the levels until you achieve an acceptable blend. Be patient, don’t settle for a sub par composition. The long term benefits will multiply your profitable rewards in compound fashion, year on year… Conversely, Rush and make mash of your poultry profits! Once the mix is ready, add supplements. Now you’re complete. How should your in-house formula poultry feed compare to commercial grade bagged poultry feed? The whole point of this exercise is to produce a like-for-like alternative. The bird’s performance won’t lie. We advise that you don’t either. Understand that you are aiming for excellence here. Anything less will be deceiving you of optimal profit. Oh… And speaking of ‘profit’… Let us not forget that once we have established our first ‘draft’ poultry feed mix: We must calculate the overall cost relative to the volumes typically consumed of commercial grade feed. Why? The principal benefit of this whole exercise remember is to: Save cost! How much cost is a good enough saving? This is down to you…but it has to be worth your while: time effort risk incurred to transition & change procurement practices Put it this way… Saving 10% of poultry feed costs would save approximately 7% of your overall business costs & overheads… Adding more profit to your existing margin (assuming all goes well with your feed being adopted readily by your birds.) Say, …your poultry farm revenues are 12,000,000 KSh. per annum …operational costs being 4,200,000 KSh. …gross profits therefore being 5,800,000 KSh. …70% of the operational cost being attributed to feed = (4,200,000 x 0.70) = 2,940,000 KSh. …saving 10% of the feed proportion of cost will add back 294,000 KSh. of cash back into your business (an increase of 5% to your business profits = 294,000 / 5,800,000 x 100) Important note to add – this is year on year (Y-o-Y)! (Assumptions: costs of raw materials remain consistent, costs of commercial feeds remain consistent … clearly this won’t happen: so due diligence mus always and continually be taken to audit market prices of feed ingredients to ensure you maintain or even increase your marginal savings.) The practicalities of making homemade poultry feed formulations and storing feed The following is advice for a practical method of preparing your own poultry feed mix: Sourcing Make sure you source the best quality ingredient product. Quality directly correlates to: content, assimilation and; yield. Don’t cut corners – it just isn’t worth it. Aim for the best. Space prep Make sure before you start you lay out your feed prep space optimally. Organise the necessary equipment and containers for the job and ensure clean and dry. Logistically ensure you have thought through how your will move, carry and store the feed prep once made. Quantity Plan your overall composite quantity. This will dictate each of your ingredient quantities. Reference your records on typical rates of commercial feed consumption & plan an initial trial outlay & duration. Purchase and acquisition Having received relevant quotes and test samples of feed, purchase necessary quantities of individual ingredients. Allocate additional space for storage alongside your remaining inventory of commercial feed bags… Remembering that this is a trial experiment involving only a small proportion of birds to begin with… You will still want to hold inventory stock of commercial feed for your remaining birds. Don’t mix feed types: homemade vs. commercial… …label carefully, maintain experiment controls well to make confident conclusions. Sun drying feed The best practice advice regarding drying – is to sun dry feed ingredients before storage. This not only dries out food thoroughly and cheaply, but is responsible also for naturally disinfecting ingredients. Weigh, grind & mix feed Ensure you have reliable and adequately proportioned scales for the job of measuring out the feed ingredients. Calibrate the scales to ensure accuracy. Grinding your ground ingredients is an exact process and requires precision. Why? Doesn’t feed of any size particle get eaten and digested the same anyway? No… Not according to North Carolina State University researchers, C. G. Chewning , C. R. Stark ,1 and J. Brake who state: “The chicks fed the P300 (300 micromolar pellet) diet exhibited a significantly higher body weight to 21 days, but the difference diminished thereafter. The 44-days body weight of broilers in the pelletised dietary treatment was higher and feed conversion ratio was better than for those fed mash diets (more powdered feed preparation), as expected. No significant difference was observed in the feed conversion ratio of birds fed the P300 (1.88) or P600 (1.85) diets at 44 days, respectively. On the basis of these results, broilers performed better when fed the pelletised diets, and they demonstrated a positive body weight response to feeding finer particles up to 21 d.” Further reading: Effects of particle size and feed form on broiler performance – Department of Poultry Science, North Carolina State University There are a number of these types of studies out there which seem to advocate pelletised feed prep as yielding better results in poultry… But they tend to be broiler-based studies (where weight and feed conversion ration is scrutinised more highly as being a direct root of profitable weight gain)… Plus, they don’t give any insight to quality measures other than body mass e.g. nutritional content of meat or egg produced from homemade feed vs. commercial feed. Do all feed ingredients have to be ground? No. There should be elements of whole grain within your feed for the reasons stated above. Simply add the whole grains to your ground feed base, after the grinding process. Now you have a composite feed mix of varying particle size. Add vitamin, mineral and medicinal supplements Now, Prepare a pre-mix of supplementary feed ingredients according to your prescribed calculations: vitamins minerals medicinal agents …it is generally accepted that a little ground base is the ideal vehicle for carrying this supplement mix. Avoid the loss of feed material during preparatory phases by dustiness. Storage conditions As with all feed storage environments – ensure your feed store is: dry (proofing against damp) cool pest-proof (especially no access for rats and other vermin) secure Example poultry feed formulation recipes This is a sample mix of ingredients for broiler birds at both starter and finisher stages of growth, as quoted by FAO (please bear in mind the suitability of the detail enclosed is for the South Asian market): Example broiler feed formulation Here is the layer farming version: Example layer feed formulation Again, we stress that there is no right and wrong prescription for recipe. Just what ever your birds like and delivers equal results to the commercial feed. Conclusion Making your own poultry feed formulation is primarily a cost saving exercise. Commercial feed producers carry the costs and burdens of having to prepare the most profitable product mixes… Using the most cost effective sourcing methods… Continual raw ingredient price research… Procurement due diligence… Importing & customs exercises… …all to pass on the benefit of an optimally blended mix of chicken feed in a pre-measured bag. Taking on the challenge of making your own means although you would hope to locally source alternative ingredients… You become exposed to the market fluctuations of sourcing your own ingredients: price availability quality …remembering that consistency is the key to a sustainably profitable poultry farm over the long term. The more variable your input, the variable your output and profit. DIY poultry feed formulation is a trade-off with substantial risk… And once begun, becomes a continual ‘work in progress’ to stay ahead of the curve for maintaining advantage. Consideration should be taken to appreciate the risk involved. Research well and don’t rush. Patiently transition – should you decide in favour of the home made approach. Happy poultry farming! Do you have a plan to formulate your broiler or layer poultry feed? Need more advice? Ask us a question. Have experience of formulating your own feed? Share advice and pictures with your peers. Are you a supplier of alternative poultry feed ingredients? Share your wares here.