**NSDA Reference**

To be Added by NSDA

CONTACT DETAILS OF THE AWARDING BODY FOR THE QUALIFICATION

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| 1. **Name and address of awarding body:**   **National Academy of RUDSETI**  **Chitrapur Bhavan**  **15th Cross, 8th Main**  **Malleswaram**  **Bengaluru- 560 055**  **Ph: 080- 2346 2875**  **Email:** [**info@rudsetacademy.org**](mailto:info@rudsetacademy.org)   1. **Name and contact details of the Individual dealing with the submission:**   **Name: Sri. R. R. Singh**  **Position in the Organization**: **Director General**  **Address:** Same as above  **Email:** [**dg@rudsetacademy.org**](mailto:dg@rudsetacademy.org)   1. **List of Documents submitted in support of the Qualifications file (Annexure)** 2. **About National Academy of RUDSET** 3. **RUDSETI Model of Entrepreneurship Development** 4. **Curriculum document /Syllabus** 5. **Session Plan** 6. **Bank wise list of RSETIs** 7. **Research Studies regarding RUDSETI/RSETI** |

# SUMMARY

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| **Qualification Title: Commercial floriculture** |
| **Qualification Code: NARQ30041-AGRI- Commercial floriculture** |
| **Nature and purpose of the qualification:**  Qualification enables the trainee to engage in Floriculture in a viable manner. Worldwide more than 140 countries are involved in commercial Floriculture. According to a study titled, ‘Indian Floriculture Industry: The Way Ahead’ released by the apex industry body ASSOCHAM, India’s floriculture industry is growing at a compounded annual growth rate of about 30%. The demanding for ornamental flowers is increasing and hs become an integral part of the functions and important occasions. Most of the self employed are engaged in agriculture along with floriculture and have very little formal skills both in farm and non-farm occupations. Hence, the need to skill rural youth so that the next generation of workers become skilled, productive and contribute positively for the growth of the economy.  Floriculture is an age old farming activity in India having immense potential for generating gainful self-employment among small and marginal farmers. In the   recent years it has emerged as a profitable agri-business in India and worldwide as improved standards of living and growing consciousness among the citizens  across the globe to live in environment friendly atmosphere has led to an increase in the demand of floriculture products in the developed as well as in the  developing countries worldwide. The production and trade of floriculture has increased consistently over the last 10 years.  In India, Floriculture industry comprises flower trade, production of nursery plants and potted plants, seed and bulb production, micro propagation and extraction of essential oils. Though the annual domestic demand for the flowers is growing at a rate of over 25% and international demand at around Rs 90,000 crore India’s share in international market of flowers is negligible. However, India is having a better scope in the future as there is a shift in trend towards tropical flowers and this can be gainfully exploited by country like India with high amount of diversity in indigenous flora. |
| **Body/bodies which will award the qualification:**  **National Academy of RUDSETI, Bengaluru**  The National Academy of RUDSETI was established in April 2009 in response to an emerging need for capacity building and mentoring of more than 585 Rural Self Employment Training Institutes (RSETIs) established in each district of the country as joint venture between different Banks and the Ministry of Rural Development, Government of India to work as National Level Resource Organization for RUDSETIs and RSETIs and other similar type of Institutes   1. To design and conduct training programmes and undertake project in Enterprise Promotion, Rural Development, Technology Transfer and imparting Human Resource Development (HRD) concepts. 2. To conduct research and development work in the field of Entrepreneurship Development 3. To act as a advisory to policy makers relating to Enterprise Promotion and Rural Development (for Government /NGOs/ Other Organizations / Financial Institutions /Corporate Entities / Central Secretariat, RUDSETI) 4. To take up any other activities connected with Rural Development and Entrepreneurship Development and Rural Development. 5. To provide Consultancy and Counseling Services in the field of Entrepreneurship Development and Rural Development. 6. Any other activity aimed at Development of Entrepreneurship, Rural Development and serving the society at large.   (See Annexure I for a complete profile of NAR and Annexure II for RUDSETI model of Entrepreneurship Development) |
| **Body which will accredit providers to offer courses leading to the qualification:**    National Academy of RUDSETI, Bengaluru |
| **Body/bodies which will be responsible for assessment:**    National Academy of RUDSETI, Bengaluru |
| **Occupation(s) to which the qualification gives access:**  This qualification will enable the trainee to engage in agriculture to make his/her farm more productive and economically viable. He/she will also gain the knowledge and skills relating to undertaking this activity as a viable self employment venture. This qualification will enable the trainee to be well equipped to manage his own farm in a more professional manner, and be able to provide employment to 5 to 7 persons. Besides skills in the field of agriculture, the qualification will give access to the trainee to:   1. Acquire and internalize the required Entrepreneurial Competencies (skill as well as attitude). 2. Knowledge and techniques for identifying the business opportunities, selection of an entrepreneurial activity, launching of the venture and skills for managing a Micro Enterprise. 3. Build confidence in one’s own abilities |
| **Proposed level of the qualification in the NSQF:**  Level 3 |
| **Anticipated volume of training/learning required to complete the qualification:**  80 hours  See Annexure III for Curriculum document and Annexure IV for Session Plan |
| **Entry requirements / recommendations:**  Male or Female Candidates in the age group of 18 to 45 years having inclination for taking up innovative works in agriculture. |
| **Progression from the qualification:**  This qualification will enable the trainee to become Self Employed by taking up floriculture activity under commercial lines. He/she will be able to manage his or her own floriculture in a professional manner and thereby be able to manage men, material and money with efficiency and self confidence. |
| **Planned arrangements for the Recognition of Prior learning (RPL):**  Not applicable |
| **International comparability where known:**  **------** |

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| **Formal structure of the qualification** | | | |
| **Krishi Udyami** | **Mandatory/**  **Optional** | **Estimated Size (learning hours)** | **Level** |
| **Professional Knowledge**  **A - Entrepreneurship**   1. Knowledge of self-confidence, attitude 2. Entrepreneurial competencies 3. Banking, insurance, financial accountancy and management   **Technical Knowledge**   1. Floriculture – present scenario and scope 2. Definition, introduction, importance and types of nursery 3. Manure and fertilizer, its importance and application methods. 4. Uprooting, transplanting and maintenance of plant spacing. 5. Definition, importance and methods of clonal cutting/seed showing. 6. Types of irrigation. 7. Soil structure and its conservation technique. 8. Definition of insects, mites and plant diseases, and their identification, prevention and management. Common pesticide available and precaution to be taken when handling pesticide 9. Bio pesticides/micronutrient / growth promoters in flower. 10. Major flower crops – geographical distribution, description 11. High tech agriculture for floriculture – Green houses, poly houses, and its types 12. Nutrition, fertilization, and irrigation 13. Use of growing and rooting media, hormones and growth regulators in floriculture 14. Pest and disease management in flower crops 15. Plant propagation in flower and ornamental crops 16. Handling tools and equipment. | Mandatory  Mandatory | 8 hours  20 hours | Level 3  Level 3 |
| **Professional / Technical Skills**   1. Soil preparation. 2. Soil treatment. 3. Sowing of seeds 4. Application of fertilizers 5. Irrigating the crop 6. Application of pesticides 7. Preparing organic fertilizers 8. Cultivation of Anthurium, Orchid, Gerbera and Camation under protected conditions 9. Cultivation of Rose, Jasmine, chrysanthemum, Astra,Marigold and Crossandra 10. Cultivation of Gladiolus, Tuberose and Petunia | Mandatory | 24 hours | Level 3 |
| **Core Skills**   1. Business Opportunity Identification 2. Market Survey and Business Plan Development 3. Planning and Risk Assessment 4. Problem solving 5. Time management 6. Communication 7. Business Management skills | Mandatory | 22 hours | Level 3 |
| **Admission, Evaluation Test & Valedictory** | Mandatory | 6 hrs | - |
| **Total Duration of the Course** |  | **80 hrs** | |

**SECTION 1 - ASSESSMENT**

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| **Body/Bodies which will carry out assessment:**  This qualification will be used by 585 RSETIs (list is furnished in Annexure IV) across the country which has been established in each district. These RSETIs are controlled by commercial banks (both Government owned and Private). NAR is a separate body and there is no linkage in management and control between the RSETIs offering the training and NAR which will conduct the assessment. The assessment of outcome of the qualification will be done by NAR which is an independent organization. It is run by professionals who are expert in rural entrepreneurship development. In NAR there will be a separate vertical similar to ‘Controller of Examinations’ in Universities, which will conduct the assessment through its empanelled assessors at the RSETI level. The empanelled assessors will be provided training by NAR.  **How will RPL assessment be managed and who will carry out?**  Not Applicable  **Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of NSQF.**  Assessment tools for the Qualification are decided on the basis of composition of knowledge and skill in that particular Course. All assessments shall have at least two tools viz.1. Practical test and 2. Written test and/or Viva.   1. **Assessment process:**   The assessment will be primarily carried out by collecting evidence of competence gained by the trainees by observing them at work, asking questions and initiating formative discussions to assess understanding and by evaluating their practical work. The question papers for the theory Examinations contain objective/descriptive type questions, drawings etc.  **Minimum pass mark:** Overall 50% of marks allotted   1. **Testing and certifications for the course:**   Arrangements will be made by NAR to ensure that the evidence on which assessment / judgments made are comparable for all trainees and that the judgments made does not vary from assessor to assessor. Arrangements relating to the conduct and monitoring process of assessment are as follows:   * Questions papers will be prepared by NAR in consultation with vocation experts in the field. * Structured tests at the Institute level will be administered in the presence of the assessors. * The tests will be supervised and monitored at every Centre * Theory and practical Examinations will be carried out with invigilators/examiners with the overall supervision of the certified assessors. * Examiners called for evaluation of practical will have technical expertise in the field |

**ASSESSMENT EVIDENCE**

**Assessment & Evaluation:**

The trainees will be assessed through a structured test process. The test will comprise of both written, practical and viva voce. Standard question paper will be devised keeping in view the expected outcome of the training. The test will be administered by certified and empanelled assessors at RSETI level. The technical skill component will be tested through practical examination. Both of these tests will be followed by personal interview wherein the entrepreneurial competencies will be tested. The extent of internalization of the inputs given will be tested. The face-to-face interview will assess the overall ability of the trainee concerned to perform the defined job role including behavioral aspects of entrepreneurial competencies. On getting the results of these tests from the assessors at ground level, a senior expert in entrepreneurship at NAR, Bengaluru will review the marks and on his validation, system generated certificates will be issued to the successful candidates online.

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| **Entrepreneurship Development** | | | | |
| **Assessable Outcomes** | **Performance Criteria** | **Assessment Criteria** | | |
| **Total** | **Theory** | **Practical** |
| 1. Candidate is clearly able to differentiate between Wage employment, Self-employment and Entrepreneurship 2. Understand, appreciate and develop the self-confidence for embarking on self-employment / entrepreneurship. 3. Understand and internalize entrepreneurial competencies and know their importance for becoming a successful entrepreneur. 4. Trainee is able to understand the legal and regulatory aspects of launching an enterprise. 5. Trainee is able to appreciate need for continuous growth and expansion of an enterprise 6. Trainee is able to analyze major trends in a given economic sector / sub-sector and identify Business Opportunities 7. Trainee is able to conduct market survey and develop sound Business Plans based on obtained data. 8. Develop effective personal management skills like time management and communication skills. 9. Knows to maintain simple books of accounts and prepare financial statement for small business 10. Trainees able to devise a simple marketing and sales strategies and plan for a small business 11. Trainee is able to manage small team of workers required for managing a small business | **PC 1** – Understanding the Context and Need for Rural Entrepreneurship Development, Role of RSETIs | 3 | 3 | 0 |
| **PC 2** – Developing Self Confidence and Positive Attitude (Micro Lab & Tower Building) | 3 | 2 | 1 |
| **PC 3** – Comparative Advantages of Entrepreneurship and Self Employment over Wage Employment | 5 | 5 | 0 |
| **PC 4** - Understanding and internalizing entrepreneurial competencies | 8 | 3 | 5 |
| **PC 5** - Understanding the process of steps in Problem Solving | 5 | 3 | 2 |
| **PC 6–** Time Management – Understanding of Basic Concepts and ability to manage time | 5 | 3 | 2 |
| **PC 7 –** Effective Communication Skills – Understanding of Basic Concepts and ability | 5 | 2 | 3 |
| **PC 8** – Ability to assess market conditions and indentify appropriate business opportunities | 5 | 5 | 0 |
| **PC 9** – Understanding of Banking & Insurance and how it can help a start up enterprise | 5 | 4 | 1 |
| **PC10** – Understanding and ability for Inventory and Materials Management | 4 | 4 | 0 |
| **PC 11**– Understanding and ability for Sales and Marketing | 4 | 3 | 1 |
| **PC 12** – Human Resource Management – Understanding of Concepts and ability to manage a team | 4 | 4 | 0 |
| **TOTAL EDP** | **60** | **46** | **14** |

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| **Professional Knowledge**  **B**. **Technical Knowledge**   1. Interest generated in learning the techniques of commercial floriculture for taking it up as self employment 2. Trainee understands aspects related commercial floriculture– 3. Soil preparation, Soil and Plant nutrients, selection of planting material, spacing to be followed. Types of irrigation and frequency, methods, manuring and application of fertilizers. 4. Knowledge of various methods of cultivating flower, foliage and ornamental plants to be followed in commercial floriculture 5. Knows about cultivation practices to be followed in respect of flower, foliage and ornamental plants. 6. Knows about Organic fertilizers and its application 7. Knows the pests and diseases affecting the crop, how to control them, and their effects on yield of crop. 8. Knows about various types of plant propagation – Budding, grafting, aerial layering, tissue culture 9. Knows about the cultivation under protected method and open method 10. Is able to know how to plan crops for various seasons and prepare a farm plan. 11. Knows about the growing and routing media required for cultivating flowering / foliage and ornamental plants 12. Knows about hormones and growth regulators used in floriculture 13. He knows about cultivation of various flowering plants under protected condition 14. Knows about cultivation of various flowering plants under open environment | **PC1** Trainee is able to understand the scope of commercial floriculture as a self employment venture | 2 | 2 | Nil |
| **PC2** Trainee is able to distinguish the difference between open cultivation and protected cultivation | 2 | 2 | Nil |
| **PC3** – Trainee is able to appreciate the different methods of soil preparation and Soil nutrients, | 3 | 3 | Nil |
| **PC 4** – He is able to select the right kind of planting material for flower / foliage /ornamental plants | 3 | 3 | Nil |
| **PC 5** – He knows what spacing to maintain between plants | 2 | 2 | Nil |
| **PC 6** - He is able to irrigate the flower plants at the critical periods at proper intervals, using the right kind of irrigation methods | 3 | 3 | Nil |
| **PC 7** He is able to apply fertilizers and manures to the flower / foliage /ornamental plants as per recommended dosage | 2 | 2 | Nil |
| **PC 8** He is able to appreciate the cultivation practices | 3 | 3 | Nil |
| **PC 9** He is able to appreciate the cultivation practices to be followed. | 2 | 2 | Nil |
| **PC10** – He is able to follow the package of practices for various flowering plants | 2 | 2 | Nil |
| **PC11**-He is able to understand the composition and usage of organic fertilizers and its advantage over inorganic fertilizers | 2 | 2 | Nil |
| **PC12** He can identify the diseases, knows the control measures | 2 | 2 | Nil |
| **PC 13** He is aware of Budding, grafting and aerial layering as methods of propagation | 2 | 2 | Nil |
| **PC 14** He is aware of the advantages of open cultivation of flowering plants over its cultivation in protected environment | 2 | 2 | Nil |
| **PC 15**. He is aware of the different growing and routing media required for cultivating flower / foliage and ornamental plants | 2 | 2 | Nil |
| **PC16** – He is aware of the advantages of using hormones and growth regulators and its importance in increased production in floriculture | 2 | 2 | Nil |
| **PC17**– He is aware of cultivating anthorium, orchid, zerbera, carnation under protected condition | 2 | 2 | Nil |
| **PC18** – He is aware of cultivating rose, jasmine, chrysanthemum, Astra, Marigold and crossandra under open environment | 2 | 2 | Nil |
| **Total** | **40** | **40** | **Nil** |
| **Technical Skills** | | | | |
| 1. Soil and media preparation | **PC 1** Trainee is able to prepare the soil and media for taking up commercial floriculture | 10 | 0 | 10 |
| **PC 2** Trainee is able to cultivate various flowering plants in different soil media. | 10 | 0 | 10 |
| 1. Plant Propagation | **PC 3** – Trainee is able to do Grafting | 5 | 0 | 5 |
| **PC 4** – Trainee is able to do Budding | 5 | 0 | 5 |
| **PC 5** – Trainee is able to do Layering | 5 | 0 | 5 |
| **PC 6**– Trainee is able to do Tissue Culture | 5 | 0 | 5 |
| 1. Use of growing and rooting media | **PC 7** – Trainee is able to make use of suitable growing media | 5 | 0 | 5 |
| **PC 8** – Trainee is able to make use of suitable rooting media | 5 | 0 | 5 |
| 1. Use of Manures & Pesticide Application | **PC 09-** He is able to apply Manures and fertilizers at specified dose and apply pesticides at suitable type | 8 | 0 | 8 |
| 1. Use of Hormones and growth regulators in floriculture | **PC 10-** He is able to use suitable hormones and growth regulators to maximize production of quality flowers | 7 | 0 | 7 |
| **PC** **11** - He is able to use appropriate dosage of hormones and growth regulators | 5 | 0 | 5 |
| 1. Diseases of flower plants and its control | **PC 12 –** He can identify the diseases the flower / foliage / ornamental crops affecting the production and suitable remedial methods | 5 | 0 | 5 |
| 1. Use of various tools and equipments | **PC 13** He is able to use different equipments for different purposes like sprayers and drip / sprinkler irrigation equipments, temperature controlling equipment. | 5 | 0 | 5 |
| 1. Harvesting and packaging | **PC 14**– He is able to harvest the flowers and its package for transportation / export | 5 | 0 | 5 |
| 1. Green house and poly house and their management | **PC 15 –** He is able to manage the green house and poly house to increase production in floriculture | 5 | 0 | 5 |
| 1. Cultivation of gladiolus, tuberose and petunia | **PC 16** – He is able to cultivate gladiolus, tuberose and petunia | 5 | 0 | 5 |
| 1. Water management | **PC 17**- he is able to use the pumpsets, sprinklers, pipes, drip irrigation etc as Water management techniques | 5 | 0 | 5 |
| **Total** | | **100** | **0** | **100** |
| **Total Marks** | | **200** | **86** | **114** |
| **Assessment – Viva Voce and Practical’s** | | | | |
| **Pass : Overall 50 % and above** | | | | |

# SECTION 2 - EVIDENCE OF LEVEL

Option B: Key Requirements of the Job Role

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| **Title of the Qualification: Commercial Floriculture** | | | | |
| **NSQF LEVEL – 3** | | | | |
| **Process Required** | **Professional Knowledge** | **Professional Skills** | **Core Skills** | **Responsibility** |
| **Carry out a job which may require limited range of activities routine and predictable** | **Basic facts, process and principle applied in trade of employment** | **Recall and demonstrate practical skill, routine and repetitive in narrow range of application.** | **Language to communicate written or oral, with minimum required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment** | **Under close supervision some responsibility for own work and within defined limits** |
| In floriculture there is limited facilities which can be taken in an routine manner and the outcomes (yield) is predictable. | A person with basic knowledge of floriculture can take up the venture | Ability to work on the unit with available resources – land , water, equipments and with or without labour | Knowledge of local language, local practices, and basic knowledge of keeping accounts | As this training provides entrepreneurial inputs responsibilities for own work at learning is to be present and demonstration |

# SECTION - 3

# EVIDENCE OF NEED

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| **What evidence is there that the qualification is needed?**  India is blessed with varied and dynamic agro-climatic condition, good quality soil and water made suitable for floriculture. Floriculture products posses 25-30 time more foreign exchange earning ability than cereals or any other agricultural/horticultural products. Floriculture is capable of attracting and retaining large number of progressive farmers / entrepreneurs.  To train the rural youth for taking up self employment ventures, Rural Self Employment Training Institutes (RSETIs) have been established by various Banks. Ministry of Rural Development gives part funding of the training. The RSETIs have been established on the RUDSETI model which has been proved very effective in eradicating the problems of unemployed youth. The trainings by these Institutes is unique in the sense they are demand based. The Institutes have got the experience of conducting these Programmes over the years.  **In order to identify the potential programmes as per the needs of the unemployed youth, a Committee of General Managers of top 5 RSETI sponsoring Banks has been constituted. The General Managers of State Bank of India, Punjab National Bank, Bank of Baroda, Central Bank of India and Bank of India are the members of this Committee. In addition, Executive Director, RUDSETI, National Director for RSETIs and Director General, National Academy of RUDSETI who got rich field experience also joined this Committee. The above Committee met at Mumbai on 7th November 2016. After thorough discussions and based on the past experience the Committee short listed potential /need based courses for training rural unemployed youth in the RSETIs. The training on Commercial Floriculture is one such shortlisted need based training**. |

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| **What is the estimated uptake of this qualification and what is the basis of this estimate?**  Presently there are 586 Rural Self Employment Training Institutes (RSETIs) across the country sponsored by various Banks. National Academy of RUDSETI is the anchoring Institution which designs and approves the training programmes being conducted by these RSETIs. The Training Modules are demand driven and are vetted by National Academy of RUDSETI, having experience of running similar programmes by the RUDSETIs since over three decades. Self employment in Commercial Agriculture and Allied Activities is a growing trade among the rural youth who stay in rural areas nearer to towns and cities     |  |  |  | | --- | --- | --- | | **FY** | **No. of Training Programmes** | **No. of Candidates** | | 2013-14 | 33 | 824 | | 2014-15 | 37 | 1076 | | 2015-16 | 24 | 367 |     So far in RSETIs 4474 candidates have been trained in this Qualification of which 2494 candidates are settled in their chosen trade. Cumulative settlement rate for the above qualification 56 % and observing the above trend the candidates trained under the above qualification file, the number of candidates estimated to be trained in the next three years is estimated at about 3000. |
| **What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?**    Currently no course is offered by SSCs comprehensively covering all aspects of floriculture activities along with entrepreneurship development inputs to start own enterprise. Hence the need for this qualification.  **What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?** |

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| **What Arrangements are in place to monitor and review the qualification (s)? What data will be used and at point will the qualification (s) be revised or updated?**  National Academy of RUDSETI has put in place a robust MIS for RSETIs. Comprehensive data (Course wise/Bank Wise/State Wise) for all RSETIs is maintained by NAR in the said MIS. Entry level data include the photograph of the candidate other basic details. Course modules are made available in the MIS and the website of NAR. Training logs and Post Programme Reports with action photographs of the training are also made available in the MIS. Details of Settlement and credit linkages are uploaded in the MIS with action photos and documentary proofs. The State Directors of RSETIs are also visiting the RSETIs every quarter for reviewing the quality of training / settlement. Officials from the controlling offices of the Banks and NAR are also making periodic visits to the RSETIs for reviewing the activities. MIS reports are used for viewing the settlement of the trained candidates, their level of income and employment generation by them. Feedback obtained from the trained candidates, RSETI sponsoring bank and other stake holders are used to review/update the course. |

# SECTION 4- EVIDENCE OF RECOGNITION AND PROGRESSION

**What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?**

Candidates trained in Commercial floriculture will be good and are able to take up further advanced programmes in exporting cut flowers, flower decorations poly house techniques etc..