

MTMPSR5604B Manage new product/process development

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| Unit descriptor | This unit covers the skills and knowledge required to cost, develop, evaluate and manage the commercial production of new products or processes. The development of new products and processes can provide the business with a competitive edge and lead to new markets. |
| Employability Skills | The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements. |
| Application of the unit | This unit applies to senior staff in a meat industry enterprise who have responsibility for the research, development, evaluation and implementation of new products or processes. |

ELEMENT

Elements describe the essential outcomes of a Unit of Competency.

PERFORMANCE CRITERIA

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

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| 1 Identify potential for <i>new product or process development</i> | 1.1 | <i>Internal and external environments</i> including legislative framework, industry directions, enterprise goals and consumer trends are analysed to identify emerging opportunities. |
| | 1.2 | Enterprise goals for the development of new product or process are clearly described. |
| | 1.3 | Potential products or processes are identified and evaluated, consistent with the goals and directions of the enterprise. |
| | 1.4 | Enterprise estimates and forecasts of required production levels, costs, sales and required rate of return are obtained. |
| | 1.5 | Regulatory requirements for the development and sale of new product or process are identified. |
| 2 Develop and test product or process | 2.1 | Schedules and plans for the development and trial of new product are prepared. |
| | 2.2 | Sources of technical expertise and information are identified. |

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| | 2.3 | Product or process concept is researched and refined. |
| | 2.4 | Prototype is developed and evaluated for impact on meat quality and food safety. |
| | 2.5 | Specifications for new product or process are refined and confirmed. |
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| 3 | Evaluate feasibility of product or process for the enterprise | 3.1 Bench top samples of new products are prepared. |
| | | 3.2 <i>Trials and tests of product or processes</i> are coordinated, monitored and evaluated for commercial operation. |
| | | 3.3 Customer and consumer feedback is gathered and analysed. |
| | | 3.4 Enterprise capacity to support new product or process is assessed and system strengths and weaknesses are identified. |
| | | 3.5 Resource analyses and proposals for the introduction of new product or process are prepared. |
| | | 3.6 New product is <i>costed for commercial implementation</i> and evaluated against enterprise forecasts of production, costs, sales and rate of return. |
| | | 3.7 Risks are identified, measured and analysed. |
| | | 3.8 Recommendations including risk management strategies are prepared and presented to stakeholders. |
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| 4 | Scale up operations for commercial implementation | 4.1 Resources for commercial operation are obtained and scheduled. |
| | | 4.2 Action plans for the scale up to commercial operations are prepared, in consultation with enterprise personnel. |
| | | 4.3 <i>Communication</i> and consultation strategies to inform stakeholders of progress and gain commitment to the process are prepared and implemented. |
| | | 4.4 Food safety requirements of new product or process are identified and included in food safety system and plans. |
| | | 4.5 Monitoring and control systems are developed and implemented. |
| | | 4.6 Contingency plans are prepared. |

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| | 4.7 | Personnel are trained in new product or processes, systems and procedures. |
| | 4.8 | Product or process is commissioned with minimum disruption to other operations. |
| 5 Evaluate market impact of new product | 5.1 | Product information and samples are prepared for marketing and promotion. |
| | 5.2 | Targets for new product or process are determined in consultation with relevant personnel, within enterprise goals and operations. |
| | 5.3 | Product or process performance is measured against targets. |
| | 5.4 | <i>Causes of non-achievement of targets</i> are analysed and recommendations for improvement prepared. |
| | 5.5 | Customer or consumer feedback is gathered, analysed and included in recommendations for improvement. |

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge required for this unit. Where bold italicised text is used, further information is detailed in the Range Statement.

- Analyse product or process performance against enterprise targets. This includes identifying company goals, setting targets, collecting and analysing performance data including customer feedback.
- Apply relevant communication and ***mathematical skills***.
- Demonstrate ability to work effectively as an individual and as a team member.
- Describe and comply with the legal, ethical and ***regulatory requirements*** relating to the development, testing and trialing, packaging, labelling and distribution of meat and meat products.
- Develop commitment and capacity of personnel. This requires identification of training requirements and provision of training, consultation with personnel in planning and in the resolution of problems, teamwork, and the use of effective communication strategies with all stakeholders.
- Develop concept proposals based on detailed technical and product knowledge and an evaluation of alternative products or processes.
- Explain the impact of pre and post slaughter factors and the major physical, chemical, biochemical and microbiological characteristics and changes affecting the quality of meat and meat products.
- Identify and apply relevant ***OH&S*** and ***workplace requirements***.
- Outline sampling, testing and evaluation procedures and assess their appropriateness to the development of new product.
- Outline the nutritional qualities of meat and meat products.

- Plan and implement the commercial operation of the new product or process. This includes obtaining and scheduling resources, the development of standard operating procedures, work instructions, product specifications and their integration with plant systems.
- Prepare product descriptions for a range of audiences, for example regulatory authorities, importing countries, enterprise marketing and/or sales personnel, customers and consumers.
- Prepare product or process development strategy.
- Prepare resource proposals based on the calculation and estimation of costs, sales, payback periods and potential rates of return.
- Present reports according to legal and enterprise requirements.
- Research and describe current technical and product information relating to potential new product, for example processing and manufacturing techniques, functional ingredients, *additives*, and consumer and industry trends.
- Take action to improve own work practice as a result of self-evaluation, feedback from others, or in response to changed work practices or technology.
- Utilise a range of communication and information technologies for the development, testing, monitoring and analysis of new products.

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments within the meat industry and situations that may affect performance. This includes any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Bold italics wording in the Elements and Performance Criteria, and Required Skills and Knowledge, is detailed below.

New product or process developments may include:

- development of products or processes totally new to the market
- introduction of products or processes already in the market and used by competitors
- product or process extensions eg pack sizes, mild and hot salamis, restructured meat products
- product or process improvements including convenience (eg easy carve), eating quality (eg taste), extended shelf life.

Internal and external environments and information may include:

- changes in legislation eg export, environment, food safety
- competitors' practices
- enterprise goals and requirements for by-product utilisation, increased market share, diversification
- market research and consumer feedback
- technical advances.

Trials and tests of products or processes are conducted within the framework of enterprise and industry ethical and legal standards.

Trials and tests of products or processes may include:

- chemical, microbiological, nutritional, physical, organoleptic or other sensory evaluations and tests
 - customer or consumer evaluations
 - instrumental and non-instrumental tests.
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Costs of commercial implementation operation may include:

- determining enterprise current and future capacity against projections
- interpreting and analysing the results of product or process tests and trials
- pre-production costs (eg capital), production costs and post production costs including marketing and distribution
- resource requirements.

And are conducted within the framework of enterprise and industry ethical and legal standards.

Communication may:

- be formal or informal and involve personal face-to-face methods and technological and/or electronic methods
 - involve communication and information technology that may include telephone, email, internet, software including testing and analysis programs, scheduling, financial packages, data bases etc
 - involve preparation of reports which may be complex, contain information from a range of technical sources and include mathematical and graphic information and data
 - involve strategies that are inclusive of the cultural, ethnic and social diversity of individuals and groups
 - involve the use of negotiation, persuasion and assertiveness skills
 - occur in a variety of sensitive, conflictive, collaborative and supportive environments
 - require analysis and presentation of complex concepts, technical information, mathematical information and other data in simple or complex formats
 - require the establishment of appropriate industry and information networks.
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Causes of non-achievement of targets may include:

- ingredient availability
 - packaging
 - palatability and quality
 - price point
 - production costs and levels
 - unit size.
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Mathematical skills may relate to complex actual and hypothetical technical and financial

modelling, calculations and interpretation and analysis. Mathematical information may be complex and relate to product and product quality, financial operations, personnel, operations, sales and turnover, exports etc.

Regulatory requirements may include:

- animal welfare
 - commercial law including fair trading, trade practices
 - consumer law
 - corporate law, including registration, licensing, financial reporting
 - environmental and waste management
 - equal opportunity, anti-discrimination and sexual harassment
 - Export Control Act
 - industrial awards, agreements
 - relevant Australian Standards
 - relevant regulations
 - state regulations regarding meat processing
 - taxation.
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OH&S requirements may include:

- enterprise OH&S policies, procedures and programs
 - hygiene and sanitation requirements
 - OH&S legal requirements
 - Personal Protective Equipment (PPE) which may include:
 - coat and apron
 - ear plugs or muffs
 - eye and facial protection
 - head-wear
 - lifting assistance
 - mesh apron
 - protective boot covers
 - protective hand and arm covering
 - protective head and hair covering
 - uniforms
 - waterproof clothing
 - work, safety or waterproof footwear
 - requirements set out in standards, codes of practice etc.
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Workplace requirements may include:

- enterprise ethical standards, values and obligations
 - enterprise-specific procedures, policies and plans
 - standard operating procedures
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| | <ul style="list-style-type: none"> • work instructions. |
| <i>Additives</i> may include: | <ul style="list-style-type: none"> • alginates and calcium technology • binding agents • protein additives (meat and non meat). |

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

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| Overview of assessment | <p>The meat industry has specific and clear requirements for evidence. A minimum of three forms of evidence is required to demonstrate competency in the meat industry. This is specifically designed to provide evidence that covers the demonstration in the workplace of all aspects of competency over time.</p> <p>These requirements are in addition to the requirements for valid, current, authentic and sufficient evidence.</p> <p>Three forms of evidence means three different kinds of evidence – not three pieces of the same kind. In practice it will mean that most of the unit is covered twice. This increases the legitimacy of the evidence.</p> <p>All assessment must be conducted against Australian meat industry standards and regulations.</p> |
| Critical aspects for assessment and evidence required to demonstrate competency in this unit | <p>Competency must be demonstrated through sustained performance over time, at an appropriate level of responsibility and authority under typical operating and production conditions for the enterprise.</p> |
| Context of and specific resources for assessment | <p>Resources may include:</p> <ul style="list-style-type: none"> • a real work environment • relevant documentation such as: <ul style="list-style-type: none"> — workplace policies and procedures — manufacturer’s instructions and operations manuals — regulatory requirements • relevant equipment and materials. |
| Method of assessment | <p>Recommended methods of assessment are:</p> <ul style="list-style-type: none"> • a third party referee report of sustained performance at appropriate level of authority and responsibility • assignment focusing on understanding and application of principles and theory to workplace operations • workplace projects which focus on company |

environment and conditions.

Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender, or language backgrounds other than English. Language and literacy demands of the assessment task should not be higher than those of the work role.

Guidance information for
assessment

Resource materials available from MINTRAC, telephone
1800 817 462.

Meat and Livestock Australia (www.mla.com.au):

- *Technology transfer resource package #2* (+ CD ROM
PPI 217
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