REFERENCES

Abia, W. A., Warth, B., Sulyok, M., Krska, R., Tchana, A. N., Njobeh, P. B., Dutton, M. F., & Moundipa, P. F. (2013). Determination of multi-mycotoxin occurrence in cereals, nuts and their products in Cameroon by liquid chromatography tandem mass spectrometry (LC-MS/MS). *Food Control, 31*(2), 438-453.

Agius, C., & Roberts, R. J. (2003). Melano-macrophage centres and their role in fish pathology. *Journal of Fish Diseases, 26*(9), 499-509.

Alm, H., Greising, T., Brüssow, K. P., Torner, H., & Tiemann, U. (2002). The influence of the mycotoxins deoxynivalenol and zearalenol on in vitro maturation of pig oocytes and in vitro culture of pig zygotes. *Toxicology in vitro, 16*(6), 643-648.

AOAC (Ed.). (1995). *Official Methods of Analysis, sixteenth edition*.

Arnold, D. L., McGuire, P. F., Nera, E. A., Karpinski, K. F., Bickis, M. G., Zawidzka, Z. Z., Fernie, S., & Vesonder, R. F. (1986). The toxicity of orally administered deoxynivalenol (vomitoxin) in rats and mice. *Food and Chemical Toxicology, 24*(9), 935-941.

Arroyo, M., Aldred, D., & Magan, N. (2005). Environmental factors and weak organic acid interactions have differential effects on control of growth and ochratoxin A production by *Penicillium verrucosum* isolates in bread. *International Journal of Food Microbiology, 98*(3), 223-231.

Arukwe, A., Grotmol, T., Haugen, T. B., Knudsen, F. R., & Goksøyr, A. (1999). Fish model for assessing the in vivo estrogenic potency of the mycotoxin zearalenone and its metabolites. *Science of the total environment, 236*(1), 153-161.

Awad, W. A., Vahjen, W., Aschenbach, J. R., & Zentek, J. (2011). A diet naturally contaminated with the *Fusarium* mycotoxin deoxynivalenol (DON) downregulates gene expression of glucose transporters in the intestine of broiler chickens. *Livestock Science, 140*(1–3), 72-79.

Bartley, D. M., Rana, K., & Immink, A. J. (2000). The use of inter-specific hybrids in aquaculture and fisheries. *Reviews in Fish Biology and Fisheries, 10*(3), 325-337.

Bauer, D. H., Lee, D. J., & Sinnhuber, R. O. (1969). Acute toxicity of aflatoxins B_1 and G_1 in the rainbow trout (*Salmo gairdneri*). *Toxicology and Applied Pharmacology, 15*(2), 415-419.

Bergmeyer, H. U. (1980). IFCC methods for the measurement of catalytic concentrations of enzymes: Part 3. IFCC method for alanine aminotransferase (L-alanine: 2-oxoglutarate aminotransferase, EC 2.6.1.2). *Clinica Chimica Acta, 105*(1), 147-154.

Bergmeyer, H. U., Bowes Jr, G. N., Hørder, M., & Moss, D. W. (1976). Provisional recommendations on IFCC methods for the measurement of catalytic concentrations of enzymes Part 2. IFCC method for aspartate aminotransferase. *Clinica Chimica Acta, 70*(2), F19-F42.

Bergsjø, B., Langseth, W., Nafstad, I., Jansen, J. H., & Larsen, H. J. S. (1993). The effects of naturally deoxynivalenol-contaminated oats on the clinical condition, blood parameters, performance and carcass composition of growing pigs. *Veterinary Research Communications, 17*(4), 283-294.

Bernet, D., Schmidt, H., Meier, W., Burkhardt-Holm, P., & Wahli, T. (1999). Histopathology in fish: proposal for a protocol to assess aquatic pollution. *Journal of Fish Diseases, 22*(1), 25-34.

Berthiller, F., Dall'Asta, C., Schuhmacher, R., Lemmens, M., Adam, G., & Krska, R. (2005). Masked mycotoxins: determination of a deoxynivalenol glucoside in artificially and naturally contaminated wheat by liquid chromatography-tandem mass spectrometry. *Journal of Agricultural and Food Chemistry, 53*(9), 3421-3425.

Berthiller, F., Krska, R., Domig, K. J., Kneifel, W., Juge, N., Schuhmacher, R., & Adam, G. (2011). Hydrolytic fate of deoxynivalenol-3-glucoside during digestion. *Toxicology Letters, 206*(3), 264-267.

Binder, E. M., Tan, L. M., Chin, L. J., Handl, J., & Richard, J. (2007). Worldwide occurrence of mycotoxins in commodities, feeds and feed ingredients. *Animal Feed Science and Technology, 137*(3-4), 265-282.

BIOMIN's Mycotoxins Report. (2011). Global Mycotoxin Survey Report. Retrieved 20, November, 2013 http://temp.biomin.net/fileadmin/user_upload/Magazines/MTX_Survey/index.html

BIOMIN's Mycotoxins Report. (2012). Global Mycotoxin Survey Report. Retrieved December, 23, 2013 http://temp.biomin.net/fileadmin/user_upload/Magazines/MTX_Survey/index.html

Bowen, S. H. (1987). Dietary Protein Requirements of Fishes — A Reassessment. *Canadian Journal of Fisheries and Aquatic Sciences, 44*(11), 1995-2001.

Bureau, D. P., Harris, A. M., & Young Cho, C. (1998). The effects of purified alcohol extracts from soy products on feed intake and growth of chinook salmon (*Oncorhynchus tshawytscha*) and rainbow trout (*Oncorhynchus mykiss*). *Aquaculture, 161,* 27-43.

Camargo, M. M. P., & Martinez, C. B. R. (2007). Histopathology of gills, kidney and liver of a Neotropical fish caged in an urban stream. *Neotropical Ichthyology, 5*(3), 327-336.

CAST. (2003). Mycotoxins: risks in plant, animal and human systems *Task Force Report No. 116* (Vol. 116). Ames, IA: Council for Agricultural Science and Technology.

Charmley, E., Trenholm, H. L., Thompson, B. K., Vudathala, D., Nicholson, J. W. G., Prelusky, D. B., & Charmley, L. L. (1993). Influence of level of deoxynivalenol in the diet of dairy cows on feed intake, milk production, and its composition. *Journal of Dairy Science, 76*(11), 3580-3587.

Chi, M. S., Mirocha, C. J., Weaver, G. A., & Kurtz, H. J. (1980). Effect of zearalenone on female White Leghorn chickens. *Applied and environmental microbiology, 39*(5), 1026-1030.

Clark, G., & Conn, H. J. (1973). *Staining procedures used by the Biological Stain Commission*: Published for the Biological Stain Commission by Williams & Wilkins.

Commission Recommendation. (2006). Commission recommendation 2006/576/EC of 17 August 2006 on the presence of deoxynivalenol, zearalenone, Ochratoxin A, T-2 and HT-2 and fumonisins in products intended for animal feeding. *Official J. Eur. Union, L-229*, 7-9.

Côté, L. M., Dahlem, A. M., Yoshizawa, T., Swanson, S. P., & Buck, W. B. (1986). Excretion of deoxynivalenol and its metabolite in milk, urine, and feces of lactating dairy cows. *Journal of Dairy Science, 69*(9), 2416-2423.

Cuero, R. G., Smith, J. E., & Lacey, J. (1987). Interaction of water activity, temperature and substrate on mycotoxin production by *Aspergillus flavus, Penicillium viridicatum* and *Fusarium graminearum* in irradiated grains. *Transactions of the British Mycological Society, 89*(2), 221-226.

D'Mello, J. P. F., & Macdonald, A. M. C. (1997). Mycotoxins. *69*, 155-166.

Dänicke, S., Goyarts, T., Döll, S., Grove, N., Spolders, M., & Flachowsky, G. (2006). Effects of the *Fusarium* toxin deoxynivalenol on tissue protein synthesis in pigs. *Toxicology Letters, 165*(3), 297-311.

Dänicke, S., Valenta, H., Klobasa, F., Döll, S., Ganter, M., & Flachowsky, G. (2004). Effects of graded levels of *Fusarium* toxin contaminated wheat in diets for fattening pigs on growth performance, nutrient digestibility, deoxynivalenol balance and clinical serum characteristics. *Archives of animal nutrition, 58*(1), 1-17.

De Silva, S. S. (2004). *Tilapias as Alien Aquatics in Asia and the Pacific: A Review*: Food and Agriculture Organization of the United Nations.

De Verdal, H., Rosario, W., Vandeputte, M., Muyalde, N., Morissens, P., Baroiller, J.-F., & Chevassus, B. (2014). Response to selection for growth in an interspecific hybrid between *Oreochromis mossambicus* and *O. niloticus* in two distinct environments. *Aquaculture, 430*, 159-165.

Desjardins, A. E., Hohn, T. M., & McCormick, S. P. (1993). Trichothecene biosynthesis in *Fusarium* species: chemistry, genetics, and significance. *Microbiological reviews, 57*(3), 595-604.

Dill-Macky, R., & Jones, R. K. (2000). The effect of previous crop residues and tillage on *Fusarium* head blight of wheat. *Plant Disease, 84*(1), 71-76.

Dillenburger, T., Lauber, U., Klobasa, F., & Drochner, W. (2001). Deoxynivalenol in pigs: An exclusive effect on the appetite? *Mycotoxin Research, 17*(1), 58-61.

Döll, S., & Dänicke, S. (2011). The *Fusarium* toxins deoxynivalenol (DON) and zearalenone (ZON) in animal feeding. *Preventive veterinary medicine, 102*(2), 132-145.

Doohan, F. M., Brennan, J., & Cooke, B. M. (2003). Influence of climatic factors on *Fusarium* species pathogenic to cereals *Epidemiology of Mycotoxin Producing Fungi* (pp. 755-768): Springer.

Drochner, W., Schollenberger, M., Götz, S., Lauber, U., Tafaj, M., & Piepho, H. P. (2006). Subacute effects of moderate feed loads of isolated *Fusarium* toxin deoxynivalenol on selected parameters of metabolism in weaned growing piglets. *Journal of Animal Physiology and Animal Nutrition, 90*(9-10), 421-428.

Dvorska, J. E., & Surai, P. F. (2001). *Effect of aurofusarin, a mycotoxin produced by Fusarium graminearum, on Japanese quails.* Paper presented at the In International Symposium Bioactive Fungal metabolites-Impact and Exploitation University of Wales Swansea. .

Dvorska, J. E., Surai, P. F., Speake, B. K., & Sparks, N. H. C. (2002). Antioxidant systems of the developing quail embryo are compromised by mycotoxin aurofusarin. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology, 131*(2), 197-205.

El-Sayed, A.-F. M. (1990). Long-term evaluation of cotton seed meal as a protein source for Nile tilapia, *Oreochromis niloticus* (Linn.). *Aquaculture, 84*(3-4), 315-320.

El-Sayed, A.-F. M. (1999). Alternative dietary protein sources for farmed tilapia, *Oreochromis* spp. *Aquaculture, 179*(1-4), 149-168.

El-Sayed, A.-F. M. (2003). Effects of fermentation methods on the nutritive value of water hyacinth for Nile tilapia *Oreochromis niloticus* (L.) fingerlings. *Aquaculture, 218*(1-4), 471-478.

El-Sayed, A.-F. M. (2006a). *Tilapia Culture*. Willingford, Oxfordshire, United Kingdom, United Kingdom CABI Publishing, CABI International.

El-Sayed, A.-F. M. (2008). Reducing feed costs in semi-intensive tilapia culture. *International Aquafeeds, 11*(1), 32-34.

El-Sayed, A.-F. M., & Kawanna, M. (2008). Effects of dietary protein and energy levels on spawning performance of Nile tilapia (Oreochromis niloticus) broodstock in a recycling system. *Aquaculture, 280*(1-4), 179-184.

El-Sayed, A. F. M. (2006b). *Tilapia Culture*: CABI.

El-Sayed, Y. S., Khalil, R. H., & Saad, T. T. (2009). Acute toxicity of ochratoxin-A in marine water-reared sea bass (*Dicentrarchus labrax* L.). *Chemosphere, 75*(7), 878-882.

El-Sayed, A. F. M. (2002). Effects of stocking density and feeding levels on growth and feed efficiency of Nile tilapia (*Oreochromis niloticus* L.) fry. *Aquaculture Research, 33*(8), 621-626.

Encyclopedia of Life. (2014). *Oreochromis mossambicus*. Retrieved 20, January, 2014 http://eol.org/pages/356342/media

Eriksen, G. S., & Pettersson, H. (2004). Toxicological evaluation of trichothecenes in animal feed. *Animal Feed Science and Technology, 114*(1-4), 205-239.

Eriksen, G. S., Pettersson, H., & Lindberg, J. E. (2003). Absorption, metabolism and excretion of 3-acetyl don in pigs. *Archives of animal nutrition, 57*(5), 335-345.

Eriksen, S., G. (2003). *Metabolism and toxicity of trichothecenes* (Vol. 400).

European Food Safety Authority. (2013). Deoxynivalenol in food and feed: occurrence and exposure. *EFSA Journal 11*(10), 56 pp.

FAO. (2012). Fishery Statistical Collections - Global Aquaculture Production. Retrieved January, 4, 2014, from Fisheries and Aquaculture http://ftp.fao.org/FI/STAT/summary/default.htm

FAO. (2014). *The State of World Fisheries and Aquaculture 2014*. Rome: Food and Agriculture Organization of the United Nations.

Feinberg, B., & McLaughlin, C. S. (1989). Biochemical mechanism of action of trichothecene mycotoxins. In V. R. Beasley (Ed.), *Trichothecene Mycotoxicosis: Pathophysiologic Effects* (pp. 27-35). Boca Raton, Fla: CRC Press

Fioramonti, J., Dupuy, C., Dupuy, J., & Bueno, L. (1993). The mycotoxin, deoxynivalenol, delays gastric emptying through serotonin-3 receptors in rodents. *Journal of Pharmacology and Experimental Therapeutics, 266*(3), 1255-1260.

Fitzpatrick, D. W., Boyd, K. E., & Watts, B. M. (1988). Comparison of the trichothecenes deoxynivalenol and T-2 toxin for their effects on brain biogenic monoamines in the rat. *Toxicology Letters, 40*(3), 241-245.

Forsyth, D. M., Yoshizawa, T., Morooka, N., & Tuite, J. (1977). Emetic and refusal activity of deoxynivalenol to swine. *Applied and environmental microbiology, 34*(5), 547-552.

Friend, D. W., Trenholm, H. L., Elliot, J. I., Hartin, K. E., & Thompson, B. K. (1982). Effect of feeding vomitoxin-contaminated wheat to pigs. *Canadian Journal of Animal Science, 62*(4), 1211-1222.

Friend, D. W., Trenholm, H. L., Fiser, P. S., Hartin, K. E., & Thompson, B. K. (1986). Effect of feeding diets containing deoxynivalenol (vomitoxin)-contaminated wheat or corn on the feed consumption, weight gain, organ weight and sexual development of male and female pigs. *Canadian Journal of Animal Science, 66*(3), 765-775.

Gajęcka, M., Rybarczyk, L., Zwierzchowski, W., Jakimiuk, E., Zielonka, Ł., Obremski, K., & Gajęcki, M. (2011). The effect of experimental, long-term exposure to low-dose zearalenone mycotoxicosis on the histological condition of ovaries in sexually immature gilts. *Theriogenology, 75*(6), 1085-1094.

Ghebremeskel, M., & Langseth, W. (2001). The occurrence of culmorin and hydroxy-culmorins in cereals. *Mycopathologia, 152*(2), 103-108.

Griffin, G. F., & Chu, F. S. (1983). Toxicity of the *Alternaria* metabolites alternariol, alternariol methyl ether, altenuene, and tenuazonic acid in the chicken embryo assay. *Applied and environmental microbiology, 46*(6), 1420-1422.

Guan, S., He, J., Young, J. C., Zhu, H., Li, X.-Z., Ji, C., & Zhou, T. (2009). Transformation of trichothecene mycotoxins by microorganisms from fish digesta. *Aquaculture, 290*(3-4), 290-295.

Haaparanta, A., Valtonen, E. T., Hoffmann, R., & Holmes, J. (1996). Do macrophage centres in freshwater fishes reflect the differences in water quality? *Aquatic Toxicology, 34*(3), 253-272.

Hagler, W. M., Danko, G., Horvath, L., Palyusik, M., & Mirocha, C. J. (1980). Transmission of zearalenone and its metabolite into ruminant milk. *Acta Veterinaria Academiae Scientiarum Hungaricae, 28*(2), 209-216.

Hamilton, R. M. G., Thompson, B. K., Trenholm, H. L., Fiser, P. S., & Greenhalgh, R. (1985). Effects of feeding white Leghorn hens diets that contain deoxynivalenol(vomitoxin)-contaminated wheat. *Poult. Sci., 64*, 1840-1852.

Harvey, R. B., Edrington, T. S., Kubena, L. F., Elissalde, M. H., Casper, H. H., Rottinghaus, G. E., & Turk, J. R. (1996). Effects of dietary fumonisin B1-containing culture material, deoxynivalenol-contaminated wheat, or their combination on growing barrows. *American journal of veterinary research, 57*(12), 1790-1794.

Harvey, R. B., Edrington, T. S., Kubena, L. F., Elissalde, M. H., Corrier, D. E., & Rottinghaus, G. E. (1995). Effect of aflatoxin and diacetoxyscirpenol in ewe lambs. *Bulletin of environmental contamination and toxicology, 54*(3), 325-330.

Hasan, M. R., & Halwart, M. (2009). *Fish and feed inputs for aquaculture: practices, sustainability and implications*. Rome: FAO Fisheries and Aquaculture Technical Paper.

He, P., Young, L. G., & Forsberg, C. (1992). Microbial transformation of deoxynivalenol (vomitoxin). *Applied and environmental microbiology, 58*(12), 3857-3863.

Hendricks, J. D., & Bailey, G. S. (1989). Adventitious toxins. *Fish nutrition*, 605-651.

Higgs, D. A., McBride, J. R., Markert, J. R., Dosanjh, B. S., Plotnikoff, M. D., & Clarke, W. C. (1982). Evaluation of Tower and Candle rapeseed (canola) meal and Bronowski rapeseed protein concentrate as protein supplements in practical dry diets for juvenile chinook salmon (*Oncorhynchus tshawytscha*). *Aquaculture, 29*(1), 1-31.

Hinton, D. E., Lauren, D. J., Holliday, T. L., & Giam, C. S. (1988). *Liver structural alterations accompanying chronic toxicity in fishes: potential biomarkers of exposure*.

Hooft, J. M., Elmor, A. E. H. I., Encarnação, P., & Bureau, D. P. (2011). Rainbow trout (*Oncorhynchus mykiss*) is extremely sensitive to the feed-borne *Fusarium* mycotoxin deoxynivalenol (DON). *Aquaculture, 311*(1-4), 224-232.

Hope, R., Aldred, D., & Magan, N. (2005). Comparison of environmental profiles for growth and deoxynivalenol production by *Fusarium culmorum* and *F. graminearum* on wheat grain. *Letters in Applied Microbiology, 40*(4), 295-300.

Houston, A. H. (1997). Review: Are the classical hematological variables acceptable indicators of fish health? *Transactions of the American Fisheries Society, 126*(6), 879-894.

Hsu, I.-C., Smalley, E. B., Strong, F. M., & Ribelin, W. E. (1972). Identification of T-2 Toxin in Moldy Corn Associated with a Lethal Toxicosis in Dairy Cattle. *Applied microbiology, 24*(5), 684-690.

Hussein, H. S., & Brasel, J. M. (2001). Toxicity, metabolism and impact of mycotoxins on humans and animals. *Toxicology, 167*, 101-134.

Ingalls, J. R. (1996). Influence of deoxynivalenol on feed consumption by dairy cows. *Animal Feed Science and Technology, 60*(3–4), 297-300.

Inudo, M., Ishibashi, H., Matsumura, N., Matsuoka, M., Mori, T., Taniyama, S., Kadokami, K., Koga, M., Shinohara, R., & Hutchinson, T. H. (2004). Effect of estrogenic activity, and phytoestrogen and organochlorine pesticide contents in an experimental fish diet on reproduction and hepatic vitellogenin production in medaka (*Oryzias latipes*). *Comparative medicine, 54*(6), 673-680.

Jiménez, M., Máñez, M., & Hernández, E. (1996). Influence of water activity and temperature on the production of zearalenone in corn by three *Fusarium* species. *International Journal of Food Microbiology, 29*(2–3), 417-421.

King, R. R., McQueen, R. E., Levesque, D., & Greenhalgh, R. (1984). Transformation of deoxynivalenol (vomitoxin) by rumen microorganisms. *Journal of Agricultural and Food Chemistry, 32*(5), 1181-1183.

Korosteleva, S. N., Smith, T. K., & Boermans, H. J. (2007). Effects of feedborne *fusarium* mycotoxins on the performance, metabolism, and immunity of dairy cows. *Journal of Dairy Science, 90*(8), 3867-3873.

Kostelanska, M., Hajslova, J., Zachariasova, M., Malachova, A., Kalachova, K., Poustka, J., Fiala, J., Scott, P. M., Berthiller, F., & Krska, R. (2009). Occurrence of deoxynivalenol and its major conjugate, deoxynivalenol-3-glucoside, in beer and some brewing intermediates. *Journal of Agricultural and Food Chemistry, 57*(8), 3187-3194.

Kovačić, S., Pepeljnjak, S., Petrinec, Z., & Klarić, M. (2009). Fumonisin B1 neurotoxicity in young carp (*Cyprinus carpio* L.). *Archives of Industrial Hygiene and Toxicology, 60*(4), 419-426.

Krska, R., & Molinelli, A. (2009). Rapid test strips for analysis of mycotoxins in food and feed. *Analytical and Bioanalytical Chemistry, 393*(1), 67-71.

Kubena, L. F., Edrington, T. S., Harvey, R. B., Buckley, S. A., Phillips, T. D., Rottinghaus, G. E., & Casper, H. H. (1997). Individual and combined effects of fumonisin B_1 present in *Fusarium moniliforme* culture material and T-2 toxin or deoxynivalenol in broiler chicks. *Poultry Science, 76*(9), 1239-1247.

Kubena, L. F., Edrington, T. S., Harvey, R. B., Phillips, T. D., Sarr, A. B., & Rottinghaus, G. E. (1997). Individual and combined effects of fumonisin B_1 present in *Fusarium moniliforme* culture material and diacetoxyscirpenol or ochratoxin A in turkey poults. *Poultry Science, 76*(2), 256-264.

Langseth, W. (1998). Mycotoxin production and cytotoxicity of *Fusarium* strains isolated from Norwegian cereals. *Mycopathologia, 144*(2), 103-113.

Leathwood, P. D. (1987). Tryptophan availability and serotonin synthesis. *Proceedings of the Nutrition Society, 46*(01), 143-156.

Ledoux, D. R., Brown, T. P., Weibking, T. S., & Rottinghaus, G. E. (1992). Fumonisin Toxicity in Broiler Chicks. *Journal of Veterinary Diagnostic Investigation, 4*(3), 330-333.

Leung, M. C. K., Díaz-Llano, G., & Smith, T. K. (2006). Mycotoxins in Pet Food: A Review on Worldwide Prevalence and Preventative Strategies. *Journal of Agricultural and Food Chemistry, 54*(26), 9623-9635.

Lumlertdacha, S., Lovell, R. T., Shelby, R. A., Lenz, S. D., & Kemppainen, B. W. (1995). Growth, hematology, and histopathology of channel catfish, *Ictalurus punctatus*, fed toxins from *Fusarium moniliforme*. *Aquaculture, 130*(2), 201-218.

Lun, A. K., Young, L. G., & Lumsden, J. H. (1985). The effects of vomitoxin and feed intake on the performance and blood characteristics of young pigs. *Journal of animal science, 61*(5), 1178-1185.

Manning, B. (2005). Mycotoxin in aquaculture. In D. Diaz (Ed.), *The Mycotoxin Blue Book* (pp. 139-156). Nottingham, UK: Nottingham University Press.

Manning, B. B., & Abbas, H. K. (2012). The effect of Fusarium mycotoxins deoxynivalenol, fumonisin, and moniliformin from contaminated moldy grains on aquaculture fish. *Toxin Reviews, 31*(1-2), 11-15.

Manning, B. B., Abbas, H. K., Wise, D. J., & Greenway, T. (2013). The effect of feeding diets containing deoxynivalenol contaminated corn on channel catfish (*Ictalurus punctatus*) challenged with Edwardsiella ictaluri. *Aquaculture Research*, n/a-n/a.

Manning, B. B., Li, M. H., Robinson, E. H., Gaunt, P. S., Camus, A. C., & Rottinghaus, G. E. (2003). Response of channel catfish to diets containing T-2 toxin. *Journal of Aquatic Animal Health, 15*(3), 229-238.

Manning, B. B., Terhune, J. S., Li, M. H., Robinson, E. H., Wise, D. J., & Rottinghaus, G. E. (2005). Exposure to feedborne mycotoxins T-2 toxin or ochratoxin A causes increased mortality of channel catfish challenged with *Edwardsiella ictaluri*. *Journal of Aquatic Animal Health, 17*(2), 147-152.

Marasas, W. F. O., Bamburg, J. R., Smalley, E. B., Strong, F. M., Ragland, W. L., & Degurse, P. E. (1969). Toxic effects on trout, rats, and mice of T-2 toxin produced by the fungus *Fusarium tricinctum* (Cd.) Snyd. et Hans. *Toxicology and Applied Pharmacology, 15*(2), 471-482.

Marin, S., Sanchis, V., & Magan, N. (1995). Water activity, temperature, and pH effects on growth of Fusarium moniliforme and Fusarium proliferatum isolates from maize. *Canadian Journal of Microbiology, 41*(12), 1063-1070.

Matejova, I., Modra, H., Blahova, J., Franc, A., Fictum, P., Sevcikova, M., & Svobodova, Z. (2014). The Effect of Mycotoxin Deoxynivalenol on Haematological and Biochemical Indicators and Histopathological Changes in Rainbow Trout (*Oncorhynchus mykiss*). *BioMed Research International, 2014*, 5.

Matos, P., Fontaı´nhas-Fernandes, A., Peixoto, F., Carrola, J., & Rocha, E. (2007). Biochemical and histological hepatic changes of Nile tilapia *Oreochromis Niloticus* exposed to carbaryl. *Pesticide Biochemistry and Physiology, 89*(1), 73-80.

Maul, R., Warth, B., Kant, J.-S., Schebb, N. H., Krska, R., Koch, M., & Sulyok, M. (2012). Investigation of the hepatic glucuronidation pattern of the *Fusarium* mycotoxin deoxynivalenol in various species. *Chemical Research in Toxicology, 25*(12), 2715-2717.

Miller, J. D. (1995). Fungi and mycotoxins in grain: implications for stored product research. *Journal of Stored Products Research, 31*(1), 1-16.

Mirocha, C. J., Pathre, S. V., & Robison, T. S. (1981). Comparative metabolism of zearalenone and transmission into bovine milk. *Food and Cosmetics Toxicology, 19*, 25-30.

Montani, M. L., Vaamonde, G., Resnik, S. L., & Buera, P. (1988). Influence of water activity and temperature on the accumulation of zearalenone in corn. *International Journal of Food Microbiology, 6*(1), 1-8.

Morgavi, D. P., & Riley, R. T. (2007a). *Fusarium* and their toxins: Mycology, occurrence, toxicity, control and economic impact. *Animal Feed Science and Technology, 137*(3-4), 199-200.

Morgavi, D. P., & Riley, R. T. (2007b). An historical overview of field disease outbreaks known or suspected to be caused by consumption of feeds contaminated with *Fusarium* toxins. *Animal Feed Science and Technology, 137*(3-4), 201-212.

Mostrom, M. S. (2011). Chapter 54 - Trichothecenes and zearalenone. In R. C. Gupta (Ed.), *Reproductive and Developmental Toxicology* (pp. 739-751). San Diego: Academic Press.

Mostrom, M. S. (2012). Chapter 95 - Zearalenone. In R. C. Gupta (Ed.), *Veterinary Toxicology (Second Edition)* (pp. 1266-1271). Boston: Academic Press.

Mostrom, M. S., & Raisbeck, M. F. (2012). Chapter 94 - Trichothecenes. In R. C. Gupta (Ed.), *Veterinary Toxicology (Second Edition)* (pp. 1239-1265). Boston: Academic Press.

Nagl, V., Schwartz, H., Krska, R., Moll, W.-D., Knasmüller, S., Ritzmann, M., Adam, G., & Berthiller, F. (2012). Metabolism of the masked mycotoxin deoxynivalenol-3-glucoside in rats. *Toxicology Letters, 213*(3), 367-373.

National Research Council. (2011). *Nutrient requirements of fish and shrimp*. Washington, DC: National Academies Press.

Ohta, M., Matsumoto, H., Ishii, K., & Ueno, Y. (1978). Metabolism of Trichothecene Mycotoxins. *Journal of Biochemistry, 84*(3), 697-706.

Ostry, V. (2008). *Alternaria* mycotoxins: an overview of chemical characterization, producers, toxicity, analysis and occurrence in foodstuffs. *World Mycotoxin Journal, 1*(2), 175-188.

ØVernes, G., Matre, T., Sivertsen, T., Larsen, H. J. S., Langseth, W., Reitan, L. J., & Jansen, J. H. (1997). Effects of diets with graded levels of naturally deoxynivalenol-contaminated oats on immune response in growing pigs. *Journal of Veterinary Medicine Series A, 44*(1-10), 539-550.

Pang, V. F., Felsburg, P. J., Beasley, V. R., Buck, W. B., & Haschek, W. M. (1987). The toxicity of T-2 toxin in swine following topical application: II. Effects on hematology, serum biochemistry, and immune response. *Fundamental and Applied Toxicology, 9*(1), 50-59.

Pang, V. F., Swanson, S. P., Beasley, V. R., Buck, W. B., & Haschek, W. M. (1987). The toxicity of T-2 toxin in swine following topical application: I. Clinical signs, pathology, and residue concentrations. *Fundamental and Applied Toxicology, 9*(1), 41-49.

Pardo, E., Marın, S., Sanchis, V., & Ramos, A. J. (2004). Prediction of fungal growth and ochratoxin A production by *Aspergillus ochraceus* on irradiated barley grain as influenced by temperature and water activity. *International Journal of Food Microbiology, 95*(1), 79-88.

Pestka, J. J. (2007). Deoxynivalenol: Toxicity, mechanisms and animal health risks. *Animal Feed Science and Technology, 137*(3-4), 283-298.

Pestka, J. J., & Smolinski, A. T. (2005). Deoxynivalenol: Toxicology and potential effects on humans. *Journal of Toxicology and Environmental Health - Part B: Critical Reviews, 8*(1), 39-69.

Pestka, J. J., Zhou, H.-R., Moon, Y., & Chung, Y. J. (2004). Cellular and molecular mechanisms for immune modulation by deoxynivalenol and other trichothecenes: unraveling a paradox. *Toxicology Letters, 153*(1), 61-73.

Pietsch, C., Kersten, S., Burkhardt-Holm, P., Valenta, H., & Dänicke, S. (2013). Occurrence of deoxynivalenol and zearalenone in commercial fish feed: An initial study. *Toxins, 5*(1), 184-192.

Pinton, P., Accensi, F., Beauchamp, E., Cossalter, A.-M., Callu, P., Grosjean, F., & Oswald, I. P. (2008). Ingestion of deoxynivalenol (DON) contaminated feed alters the pig vaccinal immune responses. *Toxicology Letters, 177*(3), 215-222.

Placinta, C. M., D'Mello, J. P. F., & Macdonald, A. M. C. (1999). A review of worldwide contamination of cereal grains and animal feed with *Fusarium* mycotoxins. *Animal Feed Science and Technology, 78*(1-2), 21-37.

Poapolathep, A., Ohtsuka, R., Kiatipattanasakul, W., Ishigami, N., Nakayama, H., & Doi, K. (2002). Nivalenol-induced apoptosis in thymus, spleen and Peyer's patches of mice. *Experimental and Toxicologic Pathology, 53*(6), 441-446.

Pollmann, D. S., Koch, B. A., Seitz, L. M., Mohr, H. E., & Kennedy, G. A. (1985). Deoxynivalenol-contaminated wheat in swine diets. *Journal of animal science, 60*(1), 239-247.

Poston, H. A., & Coffin, J. L. (1982). Biological effects of dietary T-2 toxin on rainbow trout, *Salmo gairdneri*. *Aquatic Toxicology, 2*(2), 79-88.

Prelusky, D. B., Gerdes, R. G., Underhill, K. L., Rotter, B. A., Jui, P. Y., & Trenholm, H. L. (1994). Effects of low-level dietary deoxynivalenol on haematological and clinical parameters of the pig. *Natural Toxins, 2*(3), 97-104.

Prelusky, D. B., Savard, M. E., & Trenholm, H. L. (1995). Pilot study on the plasma pharmacokinetics of fumonisin B1 in cows following a single dose by oral gavage or intravenous administration. *Natural Toxins, 3*(5), 389-394.

Rakocy, J. E. (2005). Culture aquatic species information programme *Oreochrmis niloticus*. Retrieved 20, June, 2014, from Food and Agriculture Organization of the United Nation (FAO) http://www.fao.org/fishery/culturedspecies/Oreochromis_niloticus/en

Ramirez, M. L., Chulze, S., & Magan, N. (2006). Temperature and water activity effects on growth and temporal deoxynivalenol production by two Argentinean strains of *Fusarium graminearum* on irradiated wheat grain. *International Journal of Food Microbiology, 106*(3), 291-296.

Ramos, A. J., Labernia, N., Marın, S., Sanchis, V., & Magan, N. (1998). Effect of water activity and temperature on growth and ochratoxin production by three strains of *Aspergillus ochraceus* on a barley extract medium and on barley grains. *International Journal of Food Microbiology, 44*(1), 133-140.

Rana, K. J., Siriwardena, S., & Hasan, M. R. (2009). *Impact of rising feed ingredient prices on aquafeeds and aquaculture production* Rome: FAO Fisheries and Aquaculture Technical Paper.

Rašković, B. S., Stanković, M. B., Marković, Z. Z., & Poleksić, V. D. (2011). Histological methods in the assessment of different feed effects on liver and intestine of fish. *Journal of Agricultural Sciences, Belgrade, 56*(1), 87-100.

Richard, J. L. (2007). Some major mycotoxins and their mycotoxicoses--An overview. *International Journal of Food Microbiology, 119*(1-2), 3-10.

Ridha, M. T. (2006). Comparative study of growth performance of three strains of Nile tilapia, *Oreochromis niloticus*, L. at two stocking densities. *Aquaculture Research, 37*(2), 172-179.

Rizzo, A. F., Atroshi, F., Hirvi, T., & Saloniemi, H. (1992). The hemolytic activity of deoxynivalenol and T-2 toxin. *Natural Toxins, 1*(2), 106-110.

Rocha, O., Ansari, K., & Doohan, F. M. (2005). Effects of trichothecene mycotoxins on eukaryotic cells: A review. *Food Additives and Contaminants, 22*(4), 369-378.

Roche, H., & Bogé, G. (1996). Fish blood parameters as a potential tool for identification of stress caused by environmental factors and chemical intoxication. *Marine Environmental Research, 41*(1), 27-43.

Rodrigues, I., & Nährer, K. (2011a). Biomin survey 2010: Mycotoxins inseparable from animal commodities and feed. *ALLABOUTFEED 2-2011*, 17-20.

Rodrigues, I., & Nährer, K. (2011b). BIOMIN's Mycotoxin Survey – 2nd Quarter Report 2011. *Mycotoxin Report*.

Rodrigues, I., & Nährer, K. (2012a). Prevalence of mycotoxins in feedstuffs and feed surveyed worldwide in 2009 and 2010. *Phytopathologia Mediterranea, 51*(1), 175-192.

Rodrigues, I., & Nährer, K. (2012b). A three-year survey on the worldwide occurrence of mycotoxins in feedstuffs and feed. *Toxins, 4*(9), 663-675.

Rotter, B. A. (1996). Invited review: Toxicology of deoxynivalenol (vomitoxin). *Journal of Toxicology and Environmental Health Part A, 48*(1), 1-34.

Rotter, B. A., Thompson, B. K., Lessard, M., Trenholm, H. L., & Tryphonas, H. (1994). Influence of low-level exposure to *Fusarium* mycotoxins on selected immunological and hematological parameters in young swine. *Toxicological Sciences, 23*(1), 117-124.

Rotter, R. G., Trenholm, H. L., Prelusky, D. B., Hartin, K. E., Thompson, B. K., & Miller, J. D. (1992). A preliminary examination of potential interactions between deoxynivalenol (DON) and other selected *Fusarium* metabolites in growing pigs. *Canadian Journal of Animal Science, 72*(1), 107-116.

Samapundo, S., Devliehgere, F., De Meulenaer, B., & Debevere, J. (2005). Effect of water activity and temperature on growth and the relationship between fumonisin production and the radial growth of *Fusarium verticillioides* and *Fusarium* proliferatum on corn. *Journal of Food Protection®, 68*(5), 1054-1059.

Sauer, D. B., Seitz, L. M., Burroughs, R., Mohr, H. E., West, J. L., Milleret, R. J., & Anthony, H. D. (1978). Toxicity of *Alternaria* metabolites found in weathered sorghum grain at harvest. *Journal of Agricultural and Food Chemistry, 26*(6), 1380-1383.

Schwartz, P., Bucheli, T. D., Wettstein, F. E., & Burkhardt-Holm, P. (2011). Life-cycle exposure to the estrogenic mycotoxin zearalenone affects zebrafish (*Danio rerio*) development and reproduction. *Environmental toxicology*.

Scott, M. P. (1989). The natural occurrence of trichothecenes. In V. R. Beasley (Ed.), *Trichothecenes mycotoxicosis: pathophysiologic effects*. Boca Raton; Florida; USA: CRC Press.

Smith, T. K. (1992). Recent advances in the understanding of *Fusarium* trichothecene mycotoxicoses. *Journal of animal science, 70*(12), 3989-3993.

Smith, T. K., McMillan, E. G., & Castillo, J. B. (1997). Effect of feeding blends of *Fusarium* mycotoxin-contaminated grains containing deoxynivalenol and fusaric acid on growth and feed consumption of immature swine. *Journal of animal science, 75*(8), 2184-2191.

Snijders, C. H. A. (1990). *Fusarium* head blight and mycotoxin contamination of wheat, a review. *Netherlands Journal of Plant Pathology, 96*(4), 187-198.

Sokolović, M., Garaj-Vrhovac, V., & Šimpraga, B. (2008). T-2 toxin: incidence and toxicity in poultry. *Arhiv za higijenu rada i toksikologiju, 59*(1), 43-52.

Speijers, G. J. A., & Speijers, M. H. M. (2004). Combined toxic effects of mycotoxins. *Toxicology Letters, 153*(1), 91-98.

Streit, E., Schwab, C., Sulyok, M., Naehrer, K., Krska, R., & Schatzmayr, G. (2013). Multi-mycotoxin screening reveals the occurrence of 139 different secondary metabolites in feed and feed ingredients. *Toxin 5, 3*, 504-523

Sudakin, D. L. (2003). Trichothecenes in the environment: relevance to human health. *Toxicology Letters, 143*(2), 97-107.

Sulyok, M., Berthiller, F., Krska, R., & Schuhmacher, R. (2006). Development and validation of a liquid chromatography/tandem mass spectrometric method for the determination of 39 mycotoxins in wheat and maize. *Rapid Communications in Mass Spectrometry, 20*(18), 2649-2659.

Sulyok, M., Krska, R., & Schuhmacher, R. (2007). A liquid chromatography/tandem mass spectrometric multi-mycotoxin method for the quantification of 87 analytes and its application to semi-quantitative screening of moldy food samples. *Analytical and Bioanalytical Chemistry, 389*(5), 1505-1523.

Sulyok, M., Krska, R., & Schuhmacher, R. (2010). Application of an LC–MS/MS based multi-mycotoxin method for the semi-quantitative determination of mycotoxins occurring in different types of food infected by moulds. *Food Chemistry, 119*(1), 408-416.

Suresh, A. V., & Lin, C. K. (1992). Effect of stocking density on water quality and production of red tilapia in a recirculated water system. *Aquacultural Engineering, 11*(1), 1-22.

Swamy, H. V., Smith, T. K., Karrow, N. A., & Boermans, H. J. (2004). Effects of feeding blends of grains naturally contaminated with *Fusarium* mycotoxins on growth and immunological parameters of broiler chickens. *Poultry Science, 83*(4), 533-543.

Swamy, H. V. L. N., Smith, T. K., MacDonald, E. J., Boermans, H. J., & Squires, E. J. (2002). Effects of feeding a blend of grains naturally contaminated with *Fusarium* mycotoxins on swine performance, brain regional neurochemistry, and serum chemistry and the efficacy of a polymeric glucomannan mycotoxin adsorbent. *Journal of animal science, 80*(12), 3257-3267.

Swanson, S. P., Helaszek, C., Buck, W. B., Rood Jr, H. D., & Haschek, W. M. (1988). The role of intestinal microflora in the metabolism of trichothecene mycotoxins. *Food and Chemical Toxicology, 26*(10), 823-829.

Tacon, A. G. J., & Metian, M. (2008). Global overview on the use of fish meal and fish oil in industrially compounded aquafeeds: Trends and future prospects. *Aquaculture, 285*(1–4), 146-158.

Tacon, A. G. J., Metian, M., & Hasan, M. R. (2009). *Feed ingredients and fertilizers for farmed aquatic animals: sources and composition*: Food and Agriculture Organization of the United Nations (FAO).

Tiemann, U., Brüssow, K. P., Küchenmeister, U., Jonas, L., Kohlschein, P., Pöhland, R., & Dänicke, S. (2006). Influence of diets with cereal grains contaminated by graded levels of two *Fusarium* toxins on selected enzymatic and histological parameters of liver in gilts. *Food and Chemical Toxicology*, *44*(8), 1228-1235.

Trenholm, H. L., Thompson, B. K., Foster, B. C., Charmley, L. L., Hartin, K. E., Coppock, R. W., & Albassam, M. A. (1994). Effects of feeding diets containing *Fusarium* (naturally) contaminated wheat or pure deoxynivalenol (DON) in growing pigs. *Canadian Journal of Animal Science, 74*(2), 361-369.

Trenholm, H. L., Thompson, B. K., Martin, K. E., Greenhalgh, R., & McAllister, A. J. (1985). Ingestion of vomitoxin (deoxynivalenol)-contaminated wheat by nonlactating dairy cows. *Journal of Dairy Science, 68*(4), 1000-1005.

Trigo-Stockli, D. M., Obaldo, L. G., Dominy, W. G., & Behnke, K. C. (2000). Utilization of deoxynivalenol-contaminated hard red winter wheat for shrimp feeds. *Journal of the World Aquaculture Society, 31*(2), 247-254.

Tuan, N. A., Manning, B. B., Lovell, R. T., & Rottinghaus, G. E. (2003). Responses of Nile tilapia (*Oreochromis niloticus*) fed diets containing different concentrations of moniliformin or fumonisin B1. *Aquaculture, 217*(1-4), 515-528.

Turner, N. W., Subrahmanyam, S., & Piletsky, S. A. (2009). Analytical methods for determination of mycotoxins: A review. *Analytica Chimica Acta, 632*(2), 168-180.

Ueno, Y. (1980). Trichothecene mycotoxins mycology, chemistry, and toxicology *Advances in nutritional research* (pp. 301-353): Springer.

Ueno, Y. (1984). Toxicological features of T-2 toxin and related trichothecenes. *Fundamental and Applied Toxicology, 4*(2, Part 2), S124-S132.

Ueno, Y. (1987). Trichothecenes in food. *Mycotoxins in food*, 123-147.

Ueno, Y., Sato, N., Ishii, K., Sakai, K., Tsunoda, H., & Enomoto, M. (1973). Biological and chemical detection of trichothecene mycotoxins of *Fusarium* species. *Applied microbiology, 25*(4), 699.

Vanyi, A., Timar, I., & Szeky, A. (1980). Fusariotoxicoses. IX. The effect of F-2 fusariotoxin (zearalenone) on the spermatogenesis of rams and bulls. *Magyar Allatorvosok Lapja, 35*(11), 777-780.

Voss, K. A., Riley, R. T., & Waes, J. G.-v. (2011). Chapter 53 - Fumonisins. In R. C. Gupta (Ed.), *Reproductive and Developmental Toxicology* (pp. 725-737). San Diego: Academic Press.

Voss, K. A., Smith, G. W., & Haschek, W. M. (2007). Fumonisins: toxicokinetics, mechanism of action and toxicity. *Animal Feed Science and Technology, 137*(3), 299-325.

Wang, E., Norred, W. P., Bacon, C. W., Riley, R. T., & Merrill, A. H. (1991). Inhibition of sphingolipid biosynthesis by fumonisins. Implications for diseases associated with *Fusarium* moniliforme. *Journal of Biological Chemistry, 266*(22), 14486-14490.

Weaver, G. A., Kurtz, H. J., Behrens, J. C., Robison, T. S., Seguin, B. E., Bates, F. Y., & Mirocha, C. J. (1986). Effect of zearalenone on the fertility of virgin dairy heifers. *American journal of veterinary research, 47*(6), 1395-1397.

Weibking, T. S., Ledoux, D. R., Brown, T. P., & Rottinghaus, G. E. (1993). Fumonisin Toxicity in Turkey Poults. *Journal of Veterinary Diagnostic Investigation, 5*(1), 75-83.

Whitlow, L. W., Hagler, J. R., & Diaz, D. E. (2010). Mycotoxin in feeds. *Feedstuffs,* 74-84.

Woodward, B., Young, L. G., & Lun, A. K. (1983). Vomitoxin in diets for rainbow trout (*Salmo gairdneri*). *Aquaculture, 35*, 93-101.

Worrell, N. R., Mallett, A. K., Cook, W. M., Baldwin, N. C. P., & Shepherd, M. J. (1989). The role of gut micro-organisms in the metabolism of deoxynivalenol administered to rats. *Xenobiotica, 19*(1), 25-32.

Woźny, M., Obremski, K., Jakimiuk, E., Gusiatin, M., & Brzuzan, P. (2013). Zearalenone contamination in rainbow trout farms in north-eastern Poland. *Aquaculture, 416–417*(0), 209-211.

Wu, F. (2007). Measuring the economic impacts of *Fusarium* toxins in animal feeds. *Animal Feed Science and Technology, 137*(3–4), 363-374.

Wyatt, R. D., Hamilton, P. B., & Burmeister, H. R. (1973). The effects of T-2 toxin in broiler chickens. *Poultry Science, 52*(5), 1853-1859.

Yegani, M., Smith, T. K., Leeson, S., & Boermans, H. J. (2006). Effects of feeding grains naturally contaminated with *Fusarium* mycotoxins on performance and metabolism of broiler breeders. *Poultry Science, 85*(9), 1541-1549.

Yildirim, M., Manning, B. B., Lovell, R. T., Grizzle, J. M., & Rottinghaus, G. E. (2000). Toxicity of moniliformin and fumonisin B1 fed singly and in combination in diets for young Channel Catfish *Ictalurus punctatus*. *Journal of the World Aquaculture Society, 31*(4), 599-608.

Young, L. G., McGirr, L., Valli, V. E., Lumsden, J. H., & Lun, A. (1983). Vomitoxin in corn fed to young pigs. *Journal of animal science, 57*(3), 655-664.

Zinedine, A., Soriano, J. M., Molto, J. C., & Manes, J. (2007). Review on the toxicity, occurrence, metabolism, detoxification, regulations and intake of zearalenone: an oestrogenic mycotoxin. *Food and Chemical Toxicology, 45*(1), 1-18.